Template O-1

Letter of Intent to Submit a Proposal

Response Template

RFP #: SP-17-0012

1.0 Letter of Intent to Submit a Proposal

The Vendor must complete this section stating the Vendor's intent to submit a Proposal in response to this RFP.

This section must be signed by an authorized Vendor representative.

Instructions: Provide the following information regarding the person responsible for the completion of the Vendor response. This person should also be the person OSP and DHS should contact for questions and/or clarifications.

Name	Patty Winton	Phone	501-680-1996
Address	IBM Corporation 111 Center Street Suite 800 Little Rock, AR 72201	Fax	501-370-2233
		E-mail	pwinton@us.ibm.com

Subject to acceptance by OSP and DHS, the Vendor acknowledges that by submitting this Letter of Intent to Submit a Proposal signed in the space indicated below, the Vendor intends to submit a formal offer to meet the requirements and intent of the RFP. The Vendor acknowledges that submission of a Proposal will contractually obligate them to comply with all items in this RFP, including included or referenced provisions, forms, documents, etc.

Failure to sign the Letter of Intent to Submit a Proposal or signing it with a false statement shall void the submitted Letter of Intent to Submit a Proposal, any formal offer, or any resulting Contract(s).

Patty Winton / 6-5-17

Signature of individual authorized to represent the Company / Date

Name (typed or printed)	Patty Winton
Title	Client Executive
Company name	IBM
Physical address	111 Center Street, Suite 800 Little Rock, AR 72201
State of Incorporation	New York

By signature hereon, the Vendor certifies that:

1. The Vendor will comply with all Federal and State laws, rules, and regulations that are in force currently or anytime during the term of any Contract arising from this RFP.
2. The Vendor is an authorized dealer in good standing of the products/services that will be included in its response to this RFP.

3. The Vendor and its principals are eligible to participate in this transaction and have not been subjected to suspension, debarment, or similar ineligibility determined by any Federal, state or local governmental entity and that the Vendor is in compliance with the State of Arkansas statutes and rules relating to procurement and not listed on the Federal government's terrorism watch list as described in Executive Order 13224. Entities ineligible for federal procurement are listed at http://www.epls.gov.

2.0 Vendor Information

Instructions: Complete the information in the following Table. Do not change any of the completed cells. Any changes to the completed cells could lead to the disqualification of the Proposal.

Table 1. Vendor Contact Information

COMPANY HEADQUARTERS INFORMATION:	
Company Name:	International Business Machines Corporation (IBM)
Address:	One New Orchard Road
City, State & Zip Code:	Armonk, NY 10504
Company Type (Check One):	☐Private X Public
Company Size:	More than 375,000 Globally
Annual Revenue:	2016 $79.9 Billion

STATE OF ARKANSAS
OFFICE OF STATE PROCUREMENT
1509 West 7th Street, Room 300
Little Rock, Arkansas 72201-4222

ADDENDUM 1

TO: Vendors Addressed
FROM: Shane Phillips, Buyer
DATE: June 6, 2017
SUBJECT: SP-17-0012 Integrated Eligibility and Benefits Management System

The following change(s) to the above-referenced RFP have been made as designated below:

__X__ Change of specification(s)
_____ Additional specification(s)
_____ Change of bid opening time and date
_____ Cancellation of bid
_____ Other

CHANGE OF SPECIFICATIONS

- Delete from Template T6- Functional Requirements, Instructions Tab, Solution Method and replace with the following:

Solution Method	**Vendor response to how the Functional Requirement will be met by the Vendor solution. Indicate how the requirement will be met by selecting one of:** * *Leveraged Functionality* - The State Requirement will be met by leveraging/enhancing the EEF Solution functionality already configured and implemented for MAGI Medicaid at DHS * *Configuration* - The State Requirement will be met by configuring the proposed Solution and/or any existing DHS Enterprise assets already in production * *Third Party Product* - The State Requirement will be met by commercially available third-party software or hardware assets and is included in this proposal. Note: In the "Suggested Clarifying Comments" column, indicate the name of the proposed third-party software vendor and proposed components and indicate its compliance to DHS' technology or architecture standards. * *New Development* - The State Requirement will be met through development of new software code to provide specific business or technical services where there are no leverageable off-the-shelf functionality or software assets. Note: This column is not included on the Sections (worksheets) where it does not apply

The specifications by virtue of this addendum become a permanent addition to the above referenced RFP. Failure to return this signed addendum may result in rejection of your proposal.

If you have any questions please contact Shane Phillips at Jordan.Phillips@dfa.arkansas.gov or (501) 324-9322.

Company: ______________________________

Signature: ______________________________

Date: ______________________________

STATE OF ARKANSAS
OFFICE OF STATE PROCUREMENT
1509 West 7th Street, Room 300
Little Rock, Arkansas 72201-4222

ADDENDUM 1

TO: Vendors Addressed
FROM: Shane Phillips, Buyer
DATE: June 23, 2017
SUBJECT: SP-17-0012 Integrated Eligibility and Benefits Management System

The following change(s) to the above-referenced RFP have been made as designated below:

__X__ Change of specification(s)
_____ Additional specification(s)
__X__ Change of bid opening time and date
_____ Cancellation of bid
_____ Other

BID OPENING DATE AND TIME

- The bid opening date and time have changed to **July 7, 2017 at 2:00 p.m. CDT**.

CHANGE OF SPECIFICATIONS

- Delete Template C1 Cost Workbook and Replace with Template C1 Cost Workbook Revised

The specifications by virtue of this addendum become a permanent addition to the above referenced RFP. Failure to return this signed addendum may result in rejection of your proposal.

If you have any questions please contact Shane Phillips at Jordan.Phillips@dfa.arkansas.gov or (501) 324-9322.

Company: ______________________________

Signature: ______________________________

Date: ________________________________

STATE OF ARKANSAS
OFFICE OF STATE PROCUREMENT
1509 West 7th Street, Room 300
Little Rock, Arkansas 72201-4222

ADDENDUM 3

TO: Vendors Addressed
FROM: Shane Phillips, Buyer
DATE: June 26, 2017
SUBJECT: SP-17-0012 Integrated Eligibility and Benefits Management System

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The following change(s) to the above-referenced RFP have been made as designated below:

___X___ Change of specification(s)
_______ Additional specification(s)
_______ Change of bid opening time and date
_______ Cancellation of bid
_______ Other

CHANGE OF SPECIFICATIONS

- <u>Delete Template C1 Cost Workbook Revised and replace with Template C1 Cost Workbook Revised Version 2.0</u>

The specifications by virtue of this addendum become a permanent addition to the above referenced RFP. Failure to return this signed addendum may result in rejection of your proposal.

If you have any questions please contact Shane Phillips at Jordan.Phillips@dfa.arkansas.gov or (501) 324-9322.

Company: ______________________________

Signature: ______________________________

Date: ________________________________

STATE OF ARKANSAS
OFFICE OF STATE PROCUREMENT
1509 West 7th Street, Room 300
Little Rock, Arkansas 72201-4222

ADDENDUM 4

TO: Vendors Addressed
FROM: Shane Phillips, Buyer
DATE: June 27, 2017
SUBJECT: SP-17-0012 Integrated Eligibility and Benefits Management System

The following change(s) to the above-referenced RFP have been made as designated below:

__X__ Change of specification(s)
______ Additional specification(s)
______ Change of bid opening time and date
______ Cancellation of bid
______ Other

CHANGE OF SPECIFICATIONS

- Delete Template C1 Cost Workbook Revised Version 2.0 and replace with Template C1 Cost Workbook Revised Version 3.0

The specifications by virtue of this addendum become a permanent addition to the above referenced RFP. Failure to return this signed addendum may result in rejection of your proposal.

If you have any questions please contact Shane Phillips at Jordan.Phillips@dfa.arkansas.gov or (501) 324-9322.

Company: ________________________________

Signature: ________________________________

Date: ________________________________

STATE OF ARKANSAS
OFFICE OF STATE PROCUREMENT
1509 West 7th Street, Room 300
Little Rock, Arkansas 72201-4222

ADDENDUM 5

TO: Vendors Addressed
FROM: Shane Phillips, Buyer
DATE: June 30, 2017
SUBJECT: SP-17-0012 Integrated Eligibility and Benefits Management System

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The following change(s) to the above-referenced RFP have been made as designated below:

___X___ Change of specification(s)
_______ Additional specification(s)
_______ Change of bid opening time and date
_______ Cancellation of bid
_______ Other

CHANGE OF SPECIFICATIONS

- Delete from Template C1 Cost Workbook Revised Version 3.0, Tab Packaged Software:
  The Vendor may leverage some of the software components already within the EEF environment and install additional software as required. The Vendor must include all packaged software that will be included in their proposed application (T1-T6 of the solution architecture outlined in Section 3.5 of the RFP). The Vendor must review the information in the Procurement Library to determine the current inventory available.

  For software components already owned by DHS which the Vendor's solution will leverage the Vendor must provide any additional licenses that must be purchased (licenses for both new modules and additional volumes/users) and anticipated ongoing costs for that software component (including both the newly acquired software and software already owned by DHS). The annual cost for software already within the EEF environment has been provided in Table 1. The vendors should add this cost to the maintenance cost of new licenses to calculate the "Additional Year <x> Costs" in Table 2. If the vendor anticipates not leveraging DHS' software licenses, the row corresponding to that software component should be left blank. The vendors should assume a 10% increase in cost annually.

  For any new software which the Vendor's solution will leverage the Vendor must include all one time, acquisitions, anticipated ongoing costs (Table 3) and specifications (in Table 4, Package Software Specifications table)

  The vendor must include all new packaged software in Table 4 and capture the manufacturer, brand name, module name and version number for the items being proposed. Costs shall include any licensing necessary to cover all environments (e.g., Development, Test, Training, Production). All costs associated with the purchase, delivery, installation, inspection, licenses and production of the software components must be included into the Software Cost.

  Vendors may insert additional rows as required. It is the responsibility of the Vendor to ensure spreadsheet calculations are correct. New Software items in Table 3, New Packaged Software Costs, must correspond to the Software Items in Table 4, New Packaged Software Specifications.

  DHS reserves the right to purchase any software directly or request the vendor purchase the software on DHS' behalf.

  Replace with:
  The Vendor may leverage some of the software components already within the EEF environment and install additional software as required. The Vendor must include all packaged software that will be included in their proposed application (T1-T6 of the solution architecture outlined in Section 3.5 of the RFP). The Vendor must review the information in the Procurement Library to determine the current inventory available.

For software components already owned by DHS which the Vendor's solution will leverage the Vendor must provide any additional licenses that must be purchased (licenses for both new modules and additional volumes/users) and anticipated ongoing costs for that software component (including both the newly acquired software and software already owned by DHS). The annual cost for software already within the EEF environment has been provided in Table 1. The vendors should add this cost to the maintenance cost of new licenses to calculate the “Additional Year <x> Costs” in Table 2. If the vendor anticipates not leveraging DHS’ software licenses, the row corresponding to that software component should be left blank. The vendors should assume an annual increase in cost not to exceed 10% annually.

For any new software which the Vendor's solution will leverage the Vendor must include all one time, acquisitions, anticipated ongoing costs (Table 3) and specifications (in Table 4, Package Software Specifications table)

The vendor must include all new packaged software in Table 4 and capture the manufacturer, brand name, module name, and version number for the items being proposed. Costs shall include any licensing necessary to cover all environments (e.g., Development, Test, Training, Production). All costs associated with the purchase, delivery, installation, inspection, licenses and production of the software components must be included into the Software Cost.

Vendors may insert additional rows as required. It is the responsibility of the Vendor to ensure spreadsheet calculations are correct. New Software items in Table 3, New Packaged Software Costs, must correspond to the Software Items in Table 4, New Packaged Software Specifications.

DHS reserves the right to purchase any software directly or request the vendor purchase the software on DHS’ behalf.

The specifications by virtue of this addendum become a permanent addition to the above referenced RFP. Failure to return this signed addendum may result in rejection of your proposal.

If you have any questions please contact Shane Phillips at Jordan.Phillips@dfa.arkansas.gov or (501) 324-9322.

Company: ______________________________

Signature: ______________________________

Date: ______________________________

Template T-1

Cover Letter and Executive Summary

Response Template RFP #: SP-17-0012

Template T-1

Cover Letter and Executive Summary

Response Template

RFP #: SP-17-0012

Table of Contents

List of Tables

List of Figures

1.0 Submission Cover Sheet

The Vendor must include the following Cover Letter sheet provided in this section 1.0, and an individual authorized to legally bind the Vendor must sign the Cover Letter in ink and include it in the Proposal copy labeled "Original Proposal."

This section 1.0 with the legally binding signature, only applies to the "Original Proposal" and not to the remaining copies of the proposal being submitted. However, all other sections in this Template T-1, from Section 2.0 to Section 6.0 must be provided both with the "Original Proposal" as well as with all other proposal copies.

Instructions: Provide the following information regarding the person responsible for the completion of the Vendor response. This person should also be the person OSP and DHS will contact for questions and/or clarifications.

Name:	IBM Patty Winton	Phone:	501-680-1996
Address:	111 Center Street Suite 800	Fax:	501-370-2233
	Little Rock, AR 72201	E-mail:	pwinton@us.ibm.com

Subject to acceptance by OSP and DHS, the Vendor acknowledges that by submitting a response AND signing in the space indicated below, the Vendor is submitting a formal offer to meet the requirements and intent of the RFP. In addition, should a Contract result from this RFP with said Vendor, the Vendor shall be contractually obligated to comply with all items in this RFP. While the Vendor is directed to list clarifications on appropriate templates, all such clarifications shall be subject to OSP's and DHS' acceptance and/or further negotiation. If no clarifications are noted, none will apply. The Vendor agrees that it will not later take clarification to any item agreed to by this signature. Failure to sign the Submission Cover Sheet or signing it with a false statement shall void the submitted response and any resulting Contract(s).

____ / 07/07/2017

Original signature of individual authorized to legally bind the Company / Date

Name (typed or printed):	Patty Winton
Title:	Client Executive
Company name:	International Business Machines Corporation (IBM)
Physical address:	111 Center St. Suite 800
	Little Rock, AR 72201-4402
State of Incorporation:	New York

By signature hereon, the Vendor certifies that:

1. All statements and information prepared and submitted in response to this RFP are current, complete and accurate.
2. The proposed Solution meets all the requirements of this RFP and the stated intentions of the Project.
3. The Vendor will comply with all Federal and State laws, rules, and regulations that are in force currently or anytime during the term of a resulting Contract.
4. The company or companies represented here is/are authorized dealer(s) in good standing of the products / services included in this response.
5. The Vendor and its principals are eligible to participate in this transaction and have not been subjected to suspension, debarment, or similar ineligibility determined by any Federal, State or local governmental entity and that the Vendor is in compliance with State of Arkansas statutes and rules relating to procurement, and that the Vendor is not listed on the Federal government's terrorism watch list as described in Executive Order 13224. Entities ineligible for Federal procurement are listed at http://www.epls.gov.

2.0 Submission Cover Letter

The Vendor should also provide the following information as part of the Submission Cover Letter:

- A statement regarding the Vendor's legal structure, federal tax identification number, and principal place of business
- Applicable W-9 forms (http://www.irs.gov/pub/irs-pdf/fw9.pdf)
- A list of the people who prepared the Vendor’s Proposal, including their titles
- A list of all subcontractors, if any, that the Vendor will use on the Project, if DHS selects to contract with the Vendor
  - For each proposed subcontractor, the Vendor should attach a letter from the subcontractor, signed by an individual authorized to legally bind the subcontractor, with the following included in the letter:
    - The subcontractor’s legal status, tax identification number, and principal place of business address
    - The name, phone number, fax number, email address, and mailing address of a person who is authorized to legally bind the subcontractor to contractual obligations
    - A description of the work the subcontractor will do
    - A commitment by the subcontractor to do the work if the Vendor is selected
    - A statement that the subcontractor has read and understood the RFP and will comply with the requirements of the RFP
    - A statement that the subcontractor will maintain any permits, licenses and certifications required to perform its portion of the work

Instructions: Provide a Cover Letter that includes the information required above.

International Business Machines Corporation
111 Center Street Suite 800
Little Rock, Arkansas 72201

July 7, 2017

Mr. Shane Phillips
Office of State Procurement
1501 West 7th Street, Room 300
Little Rock, AR 72201

Dear Mr. Phillips:

I am privileged to provide the State of Arkansas with IBM's response to **Request for Proposal SP-17-0012 for the Department of Human Services (DHS) Integrated Eligibility and Benefit Management Solution (IE-BM).** We share your vision for a person-centric delivery model, where clients can "tell their story" once and receive the appropriate array of services efficiently and effectively to help them achieve self-sufficiency. We also recognize how important it is for the Integrated Eligibility and Benefit Management solution (IE-BM) to be delivered correctly, within time and budget and at low risk. To that end, we designed your IE-BM solution to achieve the following actions:

- Align with DHS' business needs delivering meaningful business value quickly and providing additional functionality quickly through multiple releases.
- Provide DHS with a single point of accountability, eliminating the counterproductive finger pointing that often occurs between system integrator and software vendor.
- Reduce your risk-adjusted total cost of ownership using your existing hardware and software investments, bringing proven assets and artefacts from other projects to reduce risk and cost and optimizing maintenance and operations over time.

Over the last 80 years, IBM has delivered solutions to the State of Arkansas, with offices and personnel based in Little Rock and supported by IBM's leading and far-reaching technical and Health and Human Services (HHS) experience. We know the State of Arkansas has made great strides in deploying the Eligibility and Enrollment Framework (EEF) through difficult circumstances. We believe the IBM team is qualified to help you build on that success. As a leader in supporting HHS agencies worldwide, the largest Cúram systems integrator in the world and a long-time partner to the State of Arkansas, IBM and its teaming partner, Northrup Grumman, look forward to bringing the full depth and breadth of our technical and HHS experience to the IE-BM project. Attached is the information specified in 2.0 Submission Cover Letter; feel free to contact me with any questions regarding our response. We have read the RFP, understand the requirements and are committed to the State of Arkansas DHS, this project, and your constituents, and we eagerly await the opportunity to discuss capabilities and insights with you.

- IBM's legal structure is a corporation with headquarters in Armonk, New York, US. The federal tax identification is 13-0871985. IBM has worldwide operations, while our local office is located at 111 Center Street Suite 800, Little Rock, Arkansas 72201.
- The applicable W-9 is attached.

Form **W-9**
(Rev. December 2014)
Department of the Treasury
Internal Revenue Service

Request for Taxpayer Identification Number and Certification

Give Form to the requester. Do not send to the IRS.

Print or type
See Specific Instructions on page 2.

1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.
International Business Machines Corporation

2 Business name/disregarded entity name, if different from above

3 Check appropriate box for federal tax classification; check only one of the following seven boxes:
☐ Individual/sole proprietor or single-member LLC ☑ C Corporation ☐ S Corporation ☐ Partnership ☐ Trust/estate
☐ Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=partnership) ▶
Note. For a single-member LLC that is disregarded, do not check LLC; check the appropriate box in the line above for the tax classification of the single-member owner.
☐ Other (see instructions) ▶

4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):
Exempt payee code (if any) 5
Exemption from FATCA reporting code (if any)
(Applies to accounts maintained outside the U.S.)

5 Address (number, street, and apt. or suite no.)
North Castle Drive, c/o IBM Income Tax Department

Requester's name and address (optional)

6 City, state, and ZIP code
Armonk, NY 10504

7 List account number(s) here (optional)

Part I **Taxpayer Identification Number (TIN)**

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the Part I instructions on page 3. For other entities, it is your employer identification number (EIN). If you do not have a number, see How to get a TIN on page 3.

Note. If the account is in more than one name, see the instructions for line 1 and the chart on page 4 for guidelines on whose number to enter.

Social security number
_ _ _ – _ _ – _ _ _ _
or
Employer identification number
1 3 – 0 8 7 1 9 8 5

Part II **Certification**

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
3. I am a U.S. citizen or other U.S. person (defined below); and
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions on page 3.

Sign Here Signature of U.S. person ▶ Angela M. [illegible] Date ▶ Jan. 4, 2016

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. Information about developments affecting Form W-9 (such as legislation enacted after we release it) is at www.irs.gov/fw9.

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following:

- Form 1099-INT (interest earned or paid)
- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)
- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding? on page 2.

By signing the filled-out form, you:

1. Certify that the TIN you are giving is correct (or you are waiting for a number to be issued),
2. Certify that you are not subject to backup withholding, or
3. Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of effectively connected income, and
4. Certify that FATCA code(s) entered on this form (if any) indicating that you are exempt from the FATCA reporting, is correct. See What is FATCA reporting? on page 2 for further information.

Cat. No. 10231X Form **W-9** (Rev. 12-2014)

- The following list includes names and the titles of those that prepared this proposal:
  - Pat Douglas VP and Partner, Public Sector, Watson Health
  - Walter Szyperski Partner, Public Sector, Cúram
  - Stuart Venzke Associate Partner, Human Services
  - Nelson Smither Associate Partner, Public Sector, Cúram

- Bola Oyedijo — Delivery Leader, Health and Human Services
- Mike Karkula — Account Executive, Watson Health, Cúram
- Patty Winton — Client Executive
- Diane Wolfe — Cúram Services Practice Lead, Watson Health
- William Destache — Cúram Services Executive, Watson Health
- Zakir Hussain — Associate Partner, Human Services
- Ken Wolsey — Associate Partner, Delivery Program Manager

- IBM has teamed with Northrup Grumman to develop the solution outlined in this proposal. The required letter from Northrup Grumman is below.

Sincerely,

Patty Winton
Client Executive
IBM Arkansas
pwinton@us.ibm.com
111 CENTER ST
LITTLE ROCK, AR 72201-4402
1-501-370-2230 (Office)
1-501-370-2312 (Fax)

NORTHROP GRUMMAN

Northrop Grumman Systems Corporation
Technology Services
System Modernization & Services Division
7575 Colshire Drive
McLean, VA 22102

June 21, 2017

Mr. Shane Phillips, OSP Buyer
Office of State Procurement
1509 West 7th Street, Room 300
Little Rock, AR 72201-4222

REFERENCE: Bid Number SP-17-0012 for Integrated Eligibility and Benefit Management Solution (IE-BM) due June 30, 2017 at 2:00 PM CDT

SUBJECT: Subcontractor Letter

Dear Mr. Phillips,

Northrop Grumman Corporation is the parent company and 100% owner of Northrop Grumman Systems Corporation, which is the legal entity for this subcontractor proposal response. Northrop Grumman System Corporation's Federal Identification Number is 95-1055798 and principal place of business is 7575 Colshire Drive, McLean, VA 22102.

The person who is authorized to legally bind Northrop Grumman Systems Corporation for this effort is Jeanette Frank, Senior Contract Administrator and my contact information is 7575 Colshire Drive, McLean, VA 22102; (703) 566-1694 – Office and (844) 874-3861 - Fax

Northrop Grumman is serving as subcontractor to IBM GBS as part of proposal to extend IBM Cúram platform to meet IE-BM requirements. If IBM is awarded the contract, Northrop Grumman will perform data conversion, fill the Security Expert position and assign additional resources to support both DDI and M&O activities.

Northrop Grumman Systems Corporation has read and understands the RFP and will comply with the requirements of the RFP. Additionally, Northrop Grumman is committed to do the work if IBM is selected for the aforementioned procurement and will obtain or maintain the appropriate permits, licenses and certifications required to perform its portion of work.

Cordially,

Jeanette Frank
Sr. Contracts Administrator

3.0 Table of Contents

Instructions: Provide a Table of Contents for the Proposal. This should include all parts of the Proposal, including response forms and attachments, and should be identified by volume and page number. The structure of the Proposal should match the structure of the Response Templates for ease of Proposal evaluation. The Table of Contents should identify all sections, figures, charts, graphs, etc.

Refer to the Table of Contents listed previously on page i of this response.

4.0 Executive Summary

IBM understands that the State of Arkansas' Department of Human Services (DHS) desires a **person- and family-centric model** of practice using technology to improve consumer self-service and satisfaction, increase access to data and information for clients and staff, decrease technology risk, improve operational efficiency and effectiveness, and establish an integrated platform of reusable components for a decreased total cost of ownership (TCO). *IBM's proposal will provide the foundation to meet these objectives.*

A **person- and family-centric care model** has different meaning for both the client and the system user:

- **Client**: Provides a holistic determination of eligible benefits, initiating the proper steps to start receiving those benefits promptly, regardless of which department or program representative is encountered first – "No Wrong Door" approach.
- **System user**: Provides an integrated solution across multiple benefit programs, which lends to an accurate and complete 360-degree view of client needs and eligibility.

We also recognize that this procurement of the IE-BM is meant to extend the EEF to integrate MAGI Medicaid, traditional Medicaid, SNAP functionality, and several additional State programs. This effort will further the State's vison of transforming service delivery from siloes of program-specific services to a more self-service, person- and family-centric care model that focuses on client outcomes.

The IBM team is best qualified to deliver the IE-BM project successfully.

IBM has a long-established partnership with the State of Arkansas. In 1936, we opened our first office in Little Rock and in 1950, an office in Fayetteville. Currently, we have offices in Little Rock and Bentonville. At the end of 2014, IBM employed 129 people residing in Arkansas. Our estimated statewide payroll was more than $13 million, and over 400 IBM retirees make Arkansas their home. We are also an active member of the community, and we have a vested interest in the constituents served by the IE-BM. As the global leader in Cúram implementations, we bring skilled resources, proven methods, assets, and artifacts from similar projects to deliver IE-BM within your time frame, at a low cost and risk.

IBM has the world's largest committed Cúram solutions delivery team with a dedicated global practice of professionals having direct access to Cúram product development. In fact, the Lead of Product Development has reviewed our solution for IE-BM to verify its alignment to today's purpose-built functionality, along with the future Cúram roadmap. To some of our competitors, Cúram implementations are viewed opportunistically. Accenture, as an example, has not proposed a Cúram solution in nearly a decade. For IBM, Cúram is central to how we support HHS clients, as we continue investing in both the product and our abilities to successfully deliver solutions to our clients. IBM has helped clients turn around struggling programs of similar scope in Missouri, Minnesota, and South Carolina. Additionally, we have recently been engaged by the State of Rhode Island to help them with a troubled HHS eligibility project run by Deloitte.

To address your goals, IBM has architected a technical solution that uses DHS' investment in the IBM Cúram software, your EEF architecture, and IBM's HHS Connect360 platform with master data management (MDM). As both the Cúram product vendor and the world's leading Systems Integrator (SI) of this technology, IBM employs a single point of accountability when successfully implementing HHS solutions like IE-BM. The following table includes our qualifications as a prime SI:

Table 1: IBM's dedicated Cúram implementation practice delivers projects of similar size and scope successfully

Project	Description
Missouri Eligibility Determination and Enrollment System (MEDES) program	MEDES is a series of coordinated projects geared towards the replacement of existing eligibility determination, plan enrollment, and premium billing and collections systems with a single solution. In May 2015, IBM stepped in as the SI. Using our experience, a hybrid agile development methodology, and a seamless transition of Maintenance and Operations (M&O), we quickly stabilized the system and put the program structure in place to successfully implement ongoing enhancements and complex functionality such as change in circumstance.
County of San Diego (CoSD) Health and Human Services Agency	CoSD Health and Human Services Agency embarked on a 24-month journey to implement a Cúram-based solution to support their Live Well San Diego vision. With IBM as the prime SI, CoSD has successfully implemented the ConnectWellSD solution that uses MDM, interoperability, and IBM Cúram technology to deliver person-centered care. Our three-phased capability release and highly collaborative hybrid agile methods, resulted in on time and on budget deployments without a single severity 1 or severity 2 defect experienced in production.
South Carolina Department of Health and Human Services (SCDHHS)	In 2012, the SCDHHS procured IBM Cúram to replace their legacy Medicaid Eligibility Determination System. Fall 2016, IBM stepped in as the prime SI for MMRP to forge a path forward on program management, system stabilization, ongoing M&O, and the design, development, and implementation (DDI) of additional Medicaid functionality. IBM's scope of services also involved organizational change management and training. Results to date include a successful transition of M&O services with the rebadging of numerous subcontractors local to the area and the incremental release of system enhancements to production.

Our IE-BM solution uses your existing hardware and software investments to deliver meaningful business value quickly.

The IE-BM solution, architected by IBM, is illustrated in the following figure. Our solution expands EEF to be a fully integrated, self-service and person- and family-centric service delivery system, which meets DHS' mandatory and preferred requirements. The foundation of our solution is data interoperability, which begins with the Information Exchange that allows legacy State of Arkansas systems to integrate with IE-BM in a secure, standards based manner. IBM has developed an authorization module that manages both consent from the individual to share sensitive personal information (SPI) and the rules established across departments and agencies in how their data can be shared. Access to this data is further controlled at the user level based on their role and need to know.

MDM is the tool that applies advanced algorithms to the Information Exchange, establishing the "Golden Record," the single view of a client and the elements that surround them. With this information, the State worker will see a 360-degree view of their client, which allows them to focus holistically on the services and programs their client needs and are eligible to receive.

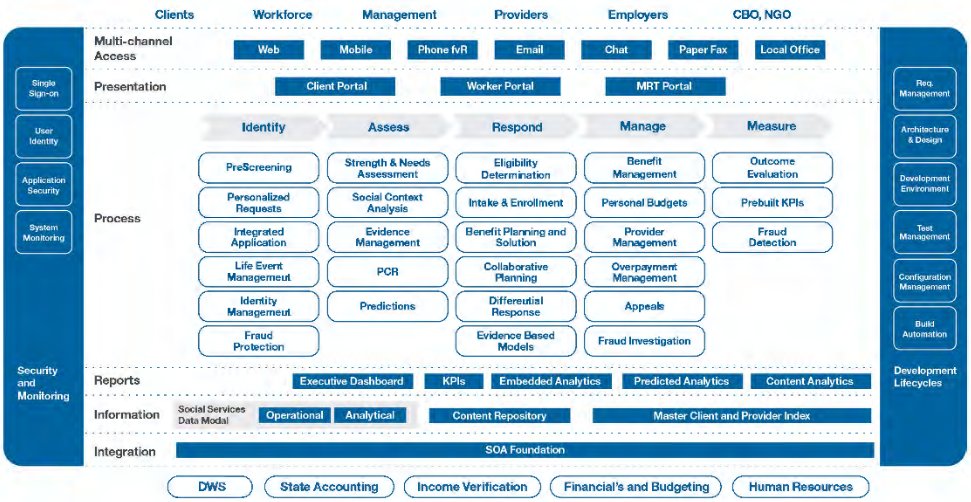

Figure 1: Proposed optimized architecture for IE-BM delivers best value to DHS

Successful delivery of the IE-BM solution will require close collaboration during the project lifecycle paired with our hybrid agile methodology to promote transparency and inclusion; this will drive efficiency focusing on system deliverables, requirements, designs with fewer iterations, increased document and system quality, increased innovation, and responsiveness to change. Our approaches to program management, organizational change management, training, and Maintenance and Operations (M&O) transition are based on successful experiences with past clients. IBM will use assets developed by or for those clients in the IE-BM Solution.

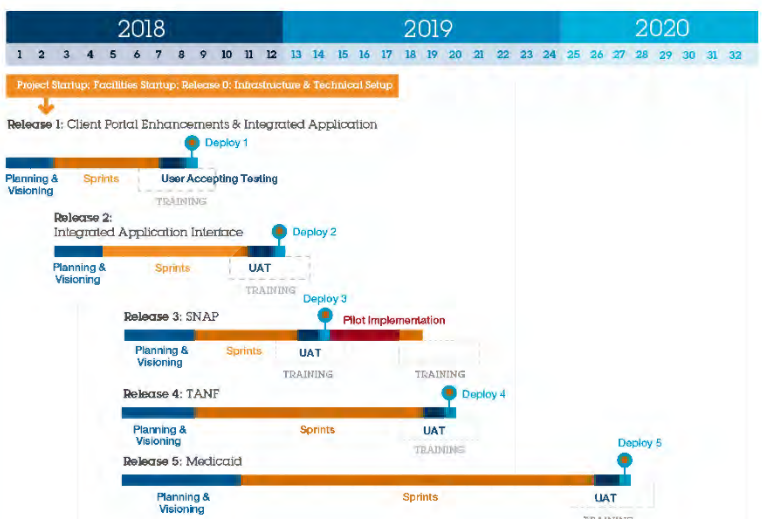

Figure 2: Delivering a proposed integrated application in the first eight months and more value sooner

IBM delivers meaningful business value quickly and full implementation in 32 months.

Our project and release schedule concentrates on speed to value, business impact, efficiency, and risk, with three main program areas: Integrated Application, SNAP and TANF, and Medicaid. The initial release will go live within the first eight months, addressing your goal to use technology to improve customer satisfaction through self-service. The scope of the release focuses on improving client experience with capabilities to support "No Wrong Door," pre-screening, unified application, documentation upload, and foundational MDM. In addition, we recommend that SNAP and TANF/TEA go live together, based on our understanding of administration, size, and complexity; this will avoid adding increased workloads to users that administer both programs by eliminating dual system entry. This will also minimize complexity and risk associated with data conversion and interfaces, while achieving efficiencies in user acceptance testing (UAT). Our expectation is to work with you during the Planning phase to finalize the release strategy and timeline as your input and IBM's flexibility is imperative. Overall, IBM's timeline is aimed at helping the State gain "quick wins" in regard to your goals and help you get off the mainframe as quickly as possible.

IBM's experienced consultants have delivered Cúram-based projects elsewhere.

Table 2: Our extensive and relevant SI leadership is key to the successful IE-BM program

Name	Proposed role	Experience
Walter Szyperski	Engagement Director for DDI and M&O	28 years
Ennapadam Padmanabhan	Project Manager	20 years
Yogi Ganesan	Integration Manager and Functional Lead	15 years
James Collier	Training Lead	5.5 years
Guarang Mavani	Test Lead	6 years
Devananda Muthakana	Architect Lead	15 years
Santharam Hanumandhan	Operations Manager	6 years
Siva Kumar Veluru	Technical Lead for M&O	10 years
James Scholz	Security Expert for DDI and M&O	15 years
Ramchandra Takkar	Technical Lead for DDI	12 years

The State of Arkansas will have multiple proposals to consider. IBM is a US-based company with a long history of using our strong Arkansas presence to develop thoughtful solutions. We also understand the importance of a smooth transition and the potential risk it can pose. Companies like Infosys are heavily dependent on H-1B resources and face uncertainty in their ability to serve clients as they struggle with changing immigration policies. IBM and NGC will quickly assess local talent in Arkansas to assimilate the most experienced resources in performing a majority of the work on site in Little Rock. In addition to our own deeply skilled pool of resources, IBM's long-established relationships with Tier 2 suppliers such as eSystems, D2 Solutions, Healthcare IT Leaders, and Diona Technologies enables us to lead a team of top professionals in successfully delivering IE-BM to DHS staff and the clients they serve. Our Innovation Center in Columbia, South Carolina serves as the offsite location, where similar eligibility and enrollment programs are supported by skilled Cúram developers and business analysts. We will use this center for IE-BM to collaborate and share both talent and assets with programs such as SC MMRP and MO MEDES.

The proposed team is structured to provide lowest risk. Our experience and lessons learned from turnaround situations for eligibility systems in Missouri, South Carolina, and Minnesota will be used to benefit the State. The risk in transition is a focus item. IBM has unprecedented experience in seamlessly taking over M&O for systems like EEF, while ramping up and driving forward Design, Development and Implementation (DDI) programs like IE-BM. Our experience is recent, relevant, and unmatched by other competitors.

IBM has teamed with Northrop Grumman Corporation (NGC); we have worked together for nearly five decades and successfully collaborated on programs such as NASA on the Apollo-1 Space Program. In the HHS space today, IBM and NGC continue working together on projects in several US states. We will leverage NGC's experience as the AR-ISS contractor, where they provide a host of services and support Arkansas' legacy applications. The State will also continue to benefit from IBM Watson Health Lab Services, who will provide strategic architectural recommendations, which have resulted in better solutions and more successful delivery for the EEF project along with accelerated delivery of fixes, proactive engagement of the IBM Cúram support organization, and previews of upcoming releases. Given the need for integration with many of the NGC-supported legacy applications, who better to join forces? We believe our relationship provides a synergy to DHS' goals. Our proposed team includes key personnel from both IBM and NGC that have contributed to our leading HHS implementations in Arkansas and across the US.

Our proposal lends multiple advantages to DHS.

We believe the State should select IBM, given we are the only vendor that can fully satisfy the five criteria established by Gartner as your best option for IE-BM:

- **Aligns fully to DHS business needs**: Our approach conforms to DHS' desire for a more self- service person- and family-centered delivery model with a release plan that includes an integrated application. The State will gain a single view across programs, an integrated rule set, with evidence brokering, thus improving timeliness and accuracy, reducing fraud, errors, and data integrity issues, and enabling outcome-based service delivery.
- **Offers a single point of accountability**: With IBM, the State will have one firm responsible for both the application software and implementation, mitigating integration, data integrity, user adoption, and functional and technical risks. Our experienced Cúram resources and hybrid agile methodology will enhance user buy in, reduce errors, provide greater visibility, and deliver meaningful business results.
- **Offers the lowest risk-adjusted TCO**: We will use the existing Cúram framework and optimize long-term M&O costs by implementing the CGIS module, adhering to Cúram coding guidelines to minimize customization and upgrade costs, and using advanced tools and the US-based Innovation Center to reduce costs, streamline M&O, and exploit experience, while maintaining a substantial local presence in Little Rock.
- **Maximizes DHS' investment to support future modernization**: We will implement CGIS in your existing Cúram instance using existing infrastructure, which is designed to support a wide range of HHS programs; for example, Cúram's child welfare module can support a modern CCWIS solution. The State will also benefit from functional and program enhancements that can support multiple programs with self-service mobility and Cognitive Analytics. With the release of Cúram v7.0.1 in June 2017, the Cúram user interface (UI) can be viewed on tablet devices for both citizens and case workers, and we will quickly follow that up with the delivery of a responsive UI to service any mobile device.
- **Delivers meaningful business value quickly:** Our CGIS module uses our hybrid agile methodology and a COTS package that is proven in San Diego; this method will engage users early and iterate quickly to provide functionality and design to support users within Cúram guidelines with sprints, which allow IBM to deploy over multiple releases, delivering benefits faster.

Summary

IBM is dedicated to the State of Arkansas, and we believe in the DHS vision to adopt a more self-service, person- and family-centric delivery model to increase satisfaction, decrease risk, improve operations, and establish a platform for reusability and lower cost. Our approach focuses on collaboration with DHS to tailor the delivery time frame, SOW, and agile iterations to suit your goals. We are committed to getting you off the mainframe faster using proven assets and agile sprints, using your previous EEF investments to support future modernization and mitigate risk, and helping you gain a lower TCO by optimizing long-term M&O costs. IBM's commitment, proposed team, and ability to meet all five of Gartner's criteria make us the right System Integrator for the State of Arkansas DHS.

5.0 Vendor Contact Information

Instructions: Complete the following information regarding the Vendor's headquarters and primary contact for any questions pertaining to the Vendor's responses to this RFP. Do not change any of the completed cells. Any changes to the completed cells could lead to the disqualification of the Proposal.

Table 3: Vendor Contact Information

COMPANY HEADQUARTERS INFORMATION:			
Company Name:	International Business Machines Corporation (IBM)		
Address:	1 New Orchard Road		
City, State & Zip Code:	Armonk, NY 10504-1722		
Company Type (Check One):	☐Private ☒Public		
Company Size:	IBM is one of the world's largest IT companies operating in more than 170 countries with over 375,000 employees. IBM releases employee data in our Annual Report and considers further detail of our personnel resources data proprietary and confidential.		
Annual Revenue:	[redacted]		
PRIMARY CONTACT INFORMATION:			
Name:	Patty Winton	Title:	Client Executive, IBM Global Markets, Public Sector
Address:	111 Center St. Suite 800		
City, State & Zip Code:	Little Rock, AR 72201-4402		
Phone:	501-680-1996	Fax:	501-370-2233
E-mail:	pwinton@us.ibm.com		
REGIONAL OR LOCAL OFFICE INFORMATION:			
Company Name:	International Business Machines Corporation (IBM)		
Region Name:	International Business Machines Corporation (IBM)		
Address:	111 Center St. Suite 800		

City, State & Zip Code:	Little Rock, AR 72201-4402		
Primary Contact:	Patty Winton		
Phone:	501-680-1996	Fax:	501-370-2233
E-mail:	pwinton@us.ibm.com		

5.1 Subcontractor Contact Information (If applicable)

Instructions: Complete the following information regarding the subcontractor's contact information. If more than one subcontractor is proposed, add more Tables as necessary. Do not change any of the completed cells. Any changes to the completed cells could lead to the disqualification of the Proposal.

Table 4: Subcontractor Contact Information

COMPANY INFORMATION:			
Company Name:	Northrop Grumman Systems Corporation		
Address:	7575 Colshire Dr.		
City, State & Zip Code:	McLean, VA 22102		
Company Type (Check One):	☐Private ☒Public		
Company Size:	Approximately 65,000 employees		
Annual Revenue:	[redacted]		
PRIMARY CONTACT INFORMATION:			
Name:	Jeanette Frank	Title:	Senior Contract Administrator
Address:	7575 Colshire Dr.		
City, State & Zip Code:	McLean, VA 22102		
Phone:	703-556-1694	Fax:	Fax to Mail 844-874-3861
E-mail:	Jeanette.frank@ngc.com		

6.0 Minimum Mandatory Qualifications

The Vendor must provide clear, compelling justification that it meets all of the Minimum Mandatory Qualifications. The Vendor is encouraged to provide ample references to information contained in the Proposal that supports its attestation. Vendors that fail to provide clear, sufficient evidence that they meet the Minimum Mandatory Qualifications may be subject to disqualification. DHS may ask for additional clarifications relating to the Minimum Mandatory Qualifications prior to determination of compliance.

Instructions: Complete the following information regarding the Vendor's ability to meet the Minimum Mandatory Qualifications. Provide specific references to Proposal locations that support the Vendor's assertions that it meets the Minimum Mandatory Qualifications. Do not change any of the completed cells. Any changes to the completed cells could lead to the disqualification of the Proposal.

Table 5: Minimum Mandatory Qualifications

#	QUALIFICATION ITEM	DOES THE VENDOR MEET QUALIFICATION ITEM?		REFERENCE TO PROPOSAL RESPONSE SECTION
1	The Vendor (Prime only) must have experience with three (3) engagements similar in size, complexity and scope to this procurement in the last five (5) years. (Vendor responses to Template T-3 will be used to confirm this)	YES ☒	NO ☐	T-3 Vendor References
2	The Vendor's team (Prime only) must have proven experience implementing and maintaining State human services systems with at least three (3) implementations in the past five (5) years. (Vendor responses to Template T-3 shall be used to confirm this)	YES ☒	NO ☐	T-3 Vendor References
3	The Vendor (Prime) must have annual revenue of at least $100M	YES ☒	NO ☐	T-2 Vendor Experience

Template T-2

Vendor Experience

Response Template RFP #: SP-17-0012

Template T-2

Vendor Experience

Response Template

RFP #: SP-17-0012

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1.0 Vendor Organization Overview

The Vendor should include details of the Vendor's Experience in this section. The details should include Vendor organization overview; corporate background; Vendor's understanding of the relevant domain; and Vendor's experience in the public sector.

Instructions: Provide all relevant information regarding the general profile of the Vendor**.** Do not change any of the completed cells. Any changes to the completed cells could lead to the disqualification of the Proposal.

Table 1. Vendor Organization Profile

VENDOR ORGANIZATION PROFILE:	
Company Name	International Business Machines Corporation (IBM)
Name of Parent Company	Not applicable. IBM is the parent company.
Industry (NAICS) (North American Industry Classification System)	334111
Type of Legal Entity	IBM is a corporation.
Company Ownership (i.e., Private/Public, Joint Venture)	IBM is a publicly traded corporation on the NYSE in the US and other financial markets (www.ibm.com).
Arkansas Economic Development Commission Minority Business Certification Number (if applicable)	IBM is a publicly held company and is not a diverse (minority, women, disabled, HUB Zone, or veteran) owned and controlled business. IBM is committed to identifying and developing business relationships with qualified minority and women-owned businesses within IBM, our subsidiaries, and all IBM related organizations that purchase products or services. IBM has a broad Supplier Diversity Program in place.
Minority Business Number (if applicable)	Not Applicable.
Number of Full Time Employees	IBM is one of the world's largest IT companies operating in more than 170 countries with approximately 380,000 employees in 2015. IBM releases employee data in our Annual Report and considers further detail of our personnel resources data proprietary and confidential.
Last Fiscal Year Company Revenue	[redacted]
Last Fiscal Year Company Net Income	[redacted]

VENDOR ORGANIZATION PROFILE:	
% of Revenue from State and Local Government Clients in the United States	IBM's client base includes many worldwide enterprises, from small and medium businesses to the world's largest organizations and governments, with a significant portion of revenue coming from global clients in the financial services, public, and small and medium business sectors. Many Fortune 100, 500, and 1000 companies use the services and solutions IBM delivers, investing in new technologies and services to become "on demand" enterprises. IBM is changing both the way we work with clients and our strategy for delivering capabilities to them. Regardless of their age, size, or industry, IBM clients share a conviction that IT can be marshaled to create tangible competitive advantage, and they are willing to transform essential aspects of their operations to use our IT power.
% of Revenue from IT Design/ Implementation, and Operations Support Services	IBM's Global Business Services (GBS) organization provides IT Design / Implementation as one of its offerings. IBM GBS 2016 revenues were $16.7 B or 21% of IBM's overall revenue. IBM's Global Technology Services (GTS) organization provides Operations Support Services as one of its offerings. IBM GTS 2016 revenues were $35.3 B or 44% of IBM's overall revenue. IBM does not report percent of revenue at the lower level requested and does not release financial information outside of what is published in the annual report. IBM's annual report, along with all other publicly released information on IBM finances, can be found at the following URL: http://www.ibm.com/annualreport/
Number of Years in Business	IBM has been in business for 105 years.
Number of Years Vendor has been Providing the Type of Services Specified in the RFP	IBM has been continuously investing in the Cúram software and implementing HHS solutions with Cúram at the center for over 20 years. IBM was the first Tier 1 systems integrator to implement Cùram software, and remains the largest Cùram implementer globally. IBM provides services in the design, development, and delivery of a range of hardware, software, services, and maintenance offerings. IBM is a manufacturer of leading, compatible, and reliable hardware and software.

VENDOR ORGANIZATION PROFILE:	
Number of Employees Providing the Type of Services Specified in the RFP	IBM will draw on a vast pool of resources across many disciplines to deliver the IE-BM project successfully. These resources include: • More than 300 Cùram-skilled technical resources organized into a national delivery practice, supported by a global IBM Cùram Center of Competence • IBM's practice of several thousand consultants focuses on optimizing maintenance and operations In addition, IBM has formal teaming relationships with several firms to supply specialized expertise or additional resources should the need arise.
Headquarters in the USA	1 New Orchard Road Armonk, NY 10504-1722
Locations in the USA	IBM has 426 locations in the US and 1,900 internationally for 2,326 active locations.
Office Servicing this Account	We maintain offices at 111 Center Street, Suite 800 Little Rock, AR 72201-4402.

1.1 Subcontractor Organization Overview (If applicable)

The Vendor should only complete this section if proposing subcontractors as part of the Proposal.

Instructions: Provide all relevant information regarding the profile of each subcontractor. This section should be duplicated in its entirety for each subcontractor included. Do not change any of the completed cells. Any changes to the completed cells could lead to the disqualification of the Proposal.

Table 2. Subcontractor Organization Profile

SUSBCONTRACTOR ORGANIZATION PROFILE	
Subcontractor Name	Northrop Grumman Systems Corporation is a wholly owned subsidiary of Northrop Grumman Corporation.
Type of Legal Entity	Corporation incorporated under the laws of Delaware
Company Ownership (i.e., Private/Public, Joint Venture)	Publicly traded corporation on the NYSE in the US (www.northropgrumman.com)
Arkansas Economic Development Commission Minority Business Certification Number (if applicable)	Not applicable

SUSBCONTRACTOR ORGANIZATION PROFILE	
Headquarters Location	7575 Colshire Drive, McLean, VA
Date Founded	Northrop Grumman was incorporated in 1985 and has been in business just over 31 years.
Number of Employees	Northrop Grumman has approximately 65,000 employees.
Last Fiscal Year Company Revenue	[redacted]
Last Fiscal Year Company Net Income	[redacted]
Services to be Provided	Data Conversion, Reporting and Maintenance and Operations Support
Experience of Subcontractor in Performing the Services to be Provided	Northrop Grumman has been performing services related to the Arkansas IE-BM project for just over 31 years. Please refer to Template 3, Section 2.1, Subcontractor References, for details about Northrop Grumman's experience providing Maintenance & Operations (M&O), Conversion, and Business Intelligence & Reporting services.
Brief Description and Number of Projects that Vendor has Partnered with this Subcontractor on	Northrop Grumman has worked with IBM on the M&O of the California Child Welfare Services / Case Management System (CWS/CMS) since 2009. Northrop Grumman is working with IBM on the South Carolina project in the Project Management Office.
Locations Where Work is to be Performed	Our work primarily will be performed in IBM's Little Rock office. Additional work may be performed in our Northrop Grumman, Technical Services, Little Rock Program Office with organizational oversight in McLean, Virginia, USA.

2.0 Vendor Corporate Background and Experience

2.1 Vendor's Corporate Background

The Vendor should describe its corporate background to provide context of the organization that will be providing the products and services in this RFP.

Instructions: Describe the Vendor's corporate background as it relates to projects similar in scope and complexity to the project described in this RFP.

IBM is a globally integrated technology and consulting company headquartered in Armonk, New York. With operations in more than 170 countries, IBM attracts and retains some of the world's most talented people to help solve problems and provide an edge for businesses, governments, and non-profits.

Today, IBM is much more than a hardware, software, or services company. IBM is now emerging as a cognitive solutions and cloud platform company. IBM dramatically accelerated the growth of our strategic imperatives, Data and Analytics, Cloud, Mobile, Social, and Security, to help our clients become digital.

IBM employees work with customers around the world to apply business consulting, technology, and research and development experience to enable systems of engagement that deliver dynamic insights for businesses and governments worldwide.

In section T3 – Vendor References, IBM has detailed our experience and background with project of similar scope and complexity as those detailed by the State of Arkansas in the IE-BM solicitation.

A simple mission drives IBM: we strive to lead in the creation, development, and manufacture of the industry's most advanced IT. The following figure shows the highlights of our corporate history:

Figure 1: High-level overview of IBM history

IBM focuses on applying advanced technologies into tangible business value for our clients, using the experience and expertise of our worldwide, leading services professionals, all of whom share values closely aligned with the State of Arkansas' values.

2.2 Vendor's Understanding of Human Services

Instructions: Describe the Vendor's understanding of Human Services. Discuss the Vendor's strategies and areas of focus related to this service. Discuss key trends affecting Human Services in the next three (3) to five (5) years with specific focus on how the Vendor will translate these trends in its solution to benefit DHS.

IBM has worked with Human Services clients since the 1930s. We support Health & Human Services organizations in nearly 80 countries and almost every US state. Over the last five years, we have completed hundreds of HHS projects in the states. They are a critical part of our business and producing results for clients like Arkansas is an important obligation for IBM.

Human services departments are engaged in the delivery of critical safety net programs such as SNAP, TANF, Medicaid, and Child Welfare. They are also responsible for dozens of state-level programs – each with unique eligibility, program management, and reporting requirements.

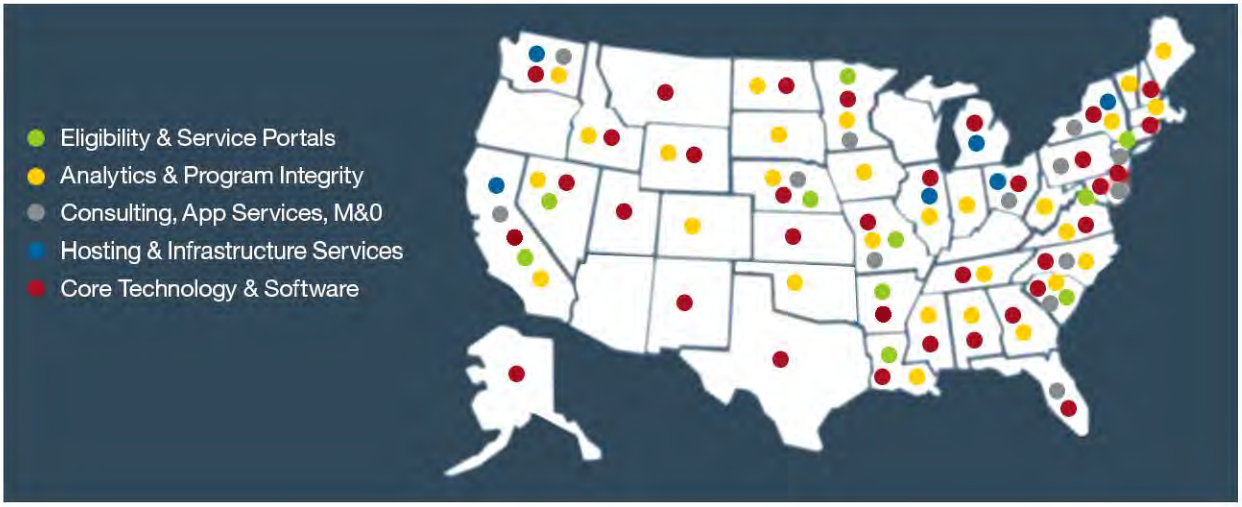

Figure 2: IBM's recent HHS experience

IBM is a leader in helping HHS agencies provide more efficient, effective and responsive services.

Industry leadership and the IBM Social Programs Centers of Excellence

IBM has supported government HHS clients for more than 80 years. It is a pillar of our Government business. To maintain a close understanding of the HHS industry and to both define and support trends in Human Services, IBM has created several Centers of Excellence spanning the US, Europe, and Asia Pacific region. These centers capture leading practices, monitor trends, and share ideas and insights across clients. The centers host large and small forums, while team members write white papers and work with clients to collect and redistribute leading practices. The goal is to help HHS organizations achieve their objectives.

Since 2005, IBM has convened social program leaders from across the US and around the world to share insights and practices. Last summer, leaders from more than 15 countries met at our conference in Berlin, Germany. European leaders were joined by peers from Australia, North America, and the Asia Pacific region.

In addition to leading our own worldwide thought leadership initiatives, IBM is an active leader in US HHS industry organizations, including the following organizations:

- American Public Human Services Association (APHSA)
- Human Services Technology Advisory Group
- HIMSS
- Various state and county welfare directors' associations

Our teams include dozens of recognized industry experts, who speak at large and small conferences and events each year.

Discuss key trends affecting Human Services in the next three (3) to five (5) years with specific focus on how the Vendor will translate these trends in its solution to benefit the Department of Human Services (DHS)

Through our work with HHS agencies in the United States and globally, we see HHS agencies wrestling with the same issues over the next three to five years:

- Flat or shrinking budgets, which put additional pressure on delivery services that work, and do so cost-effectively

- Increasing emphasis on measuring outcomes and impacts, rather than inputs and outputs
- Increasing complexity of cases, often complicated by cultural and language issues, that require more personalized approaches
- Antiquated processes and systems that hamper rather than support efficient and effective service delivery
- Shift from siloed service delivery and IT systems to person- or family-centered services and systems
- Rapidly changing rules, policy and practice that make it difficult for agencies and human services professionals to stay current
- Ongoing demand to reduce improper payments

These trends may be driven by different dynamics, but adapting to these changes requires the same basic capabilities:

- IT systems designed to support client-centered care across the HHS enterprise rather than just single programs, and to be flexible enough to adapt to a rapidly changing environment
- Business intelligence and analytics systems that allow HHS agencies to glean meaningful insight from the data they collect about clients, providers and programs, and to translate that insight into action
- Training and organizational change management to prepare and empower the workforce to recognize and adapt to these changes, ultimately to deliver more effective and efficient services to clients in need

Below we describe how IBM can help DHHS prepare for these trends over the next few years. Please note some of these options may not be included in the scope of this procurement.

Flat or shrinking budgets. Flat or shrinking budgets require DHHS to find ways to "do more with less." IBM can help DHHS do more with less by:

- Streamlining workflow and business processes to help make eligibility workers and other human services professionals more efficient, increasing their productivity
- Enabling effective self-service, such as an integrated application, that allows clients to apply for benefits and submit changes in circumstances with minimal intervention from DHHS staff
- Supporting advanced analytics of program and operational data, to help DHS identify and address issues such as where it has operational bottlenecks that hamper efficiency, which programs are most cost-effective in achieving outcomes and what array of services is most likely to be effective for clients in different circumstances

Increasing emphasis on measuring outcomes and impacts. Taxpayers are generally supportive of health and human services programs as long as they know they work. Unfortunately, too often human services programs have focused on measuring inputs and outputs (e.g., how many applications were processed) rather than on the outcomes from that work (how many families achieved permanent self-sufficiency). IBM can help DHS assess outcomes and impacts by providing an enterprise platform for advanced analytics, allowing DHS to do sophisticated analysis of program outcomes.

Increasing complexity of cases. Increasingly, HHS agencies are recognizing that human services issues are inextricably linked to broader health and social issues, so addressing the human services agency requires addressing these broader issues. For example, a chronic health condition like asthma, without appropriate medical care, can become an almost insurmountable barrier to achieving self-sufficiency. IBM's Cúram Social Program Management software is designed specifically to help agencies engage clients across the broader health and human services holistically, through functions like multi-disciplinary teams and outcome planning. In addition, IBM can help DHS use advanced analytics to identify complex cases earlier, and to recommend interventions that are proven effective in similar circumstances.

Antiquated processes and systems. Most HHS agencies rely on business processes and supporting IT systems designed to enforce a way of doing business that is no longer considered best practice. Rather than supporting workers in applying best practice, these systems often hamper their ability to work effectively. IBM can help DHHS by modernizing its supporting application to provide the flexibility DHS will require to support evolving best practice. In addition, IBM can help DHS develop and implement an effective mobile strategy to help workers in the field be more productive and effective.

Shift from siloed service delivery and IT systems. For a variety of reasons, including federal funding rules and organizational structure, HHS agencies tend to operate in program silos, which treat a client in isolation of any other need they might have or program in which they are engaged. Over the next few years, however, we expect to see a trend away from silos to person- or family-centered systems, which treat the client collaboratively and holistically. IBM Cùram Social Program Management is designed specifically to break down traditional program silos and support client-centered care. One specific barrier to achieving more client-centered care is there is usually no clear view of a client's information and their engagement across multiple programs. IBM's Health and Human Services Connect 360 solution provides interoperability across multiple HHS systems, so any authorized human services professional can see a complete record of a client across all relevant programs.

Rapidly changing rules, policy and practice. The pace of change in health and human services is only accelerating, as government at every level look to experiment with different practices and models to drive better client outcomes, streamline processes or reduce improper payments. IBM can help DHS adapt to this pace of change by leveraging the native flexibility of Cùram, which is designed to adapt quickly and easily to changes in rules, workflow and policy. In addition, IBM's organizational change management and training capabilities can help prepare human services professionals for these changes, minimizing the disruption caused by any significant change. Finally, we can share, on a regular basis, the insights we gain by being a global leader in supporting HHS agencies.

Ongoing demand to reduce improper payments. Studies show the public is generally supportive of social safety net programs, as long as they believe the programs work, and are not subject to fraud, waste or abuse. Therefore, reducing improper payments is a critical element to maintaining support for these programs. IBM can bring an array of solutions to help DHS minimize improper payments, reduce its Food Stamp error rate reduce improper payments generally.

At IBM, our business is applying innovative technology to help solve the most challenging business issues. Rather than tear down what DHs has already put in place, we work to enhance and augment those investments to transform the experience for DHS clients and workers. We look forward to the opportunity to bring our expertise, our insight and our technology to help DHS prepare for the future.

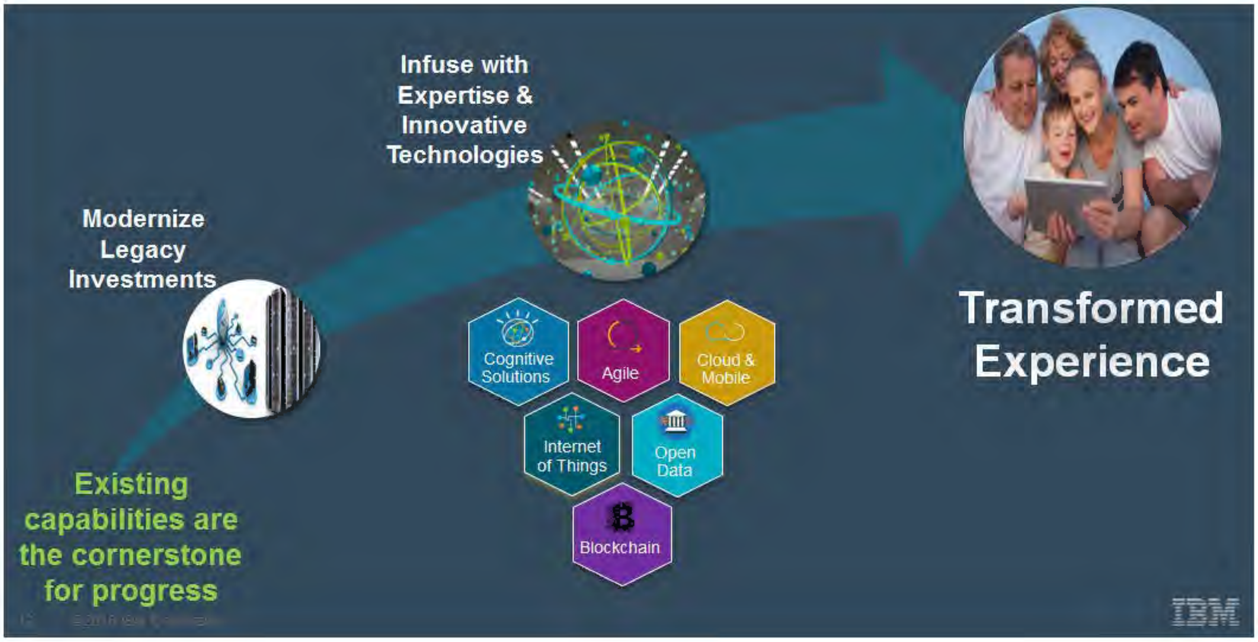

Figure 3: IBM approach to helping DHS prepare for the future

IBM brings expertise, insight and innovative technology to enhance DHS' existing capabilities and transform its business

2.3 Integrated Eligibility and Benefit Management (IE-BM) Engagements Completed in the Public Sector in the Last Five Years

The Vendor should list all engagements that were completed/finished or were active in the last 5 years in the Public Sector (in particular for Health and Human Services and similar to the Arkansas IE-BM). This includes all engagements where the Vendor was providing DDI and M&O support services and/or providing services to implement application enhancements. **Instructions:** Provide a listing and contact information for all similar HHS engagements in the last five (5) years. Denote any that are pending litigation or have been terminated for cause or convenience. Provide the same information for each subcontractor, associated company, consultant and entity that will be involved in any phase of this engagement. **Duplicate the table for each entity in the Proposal**. Do not change any of the completed cells. Any changes to the completed cells could lead to the disqualification of the Proposal.

Below in Table 3, IBM has provided a listing of similar HHS engagements over the last five years along with the appropriate client contacts from those engagements. In addition, IBM's reputation in the marketplace as a premier provider of person/family-centered HHS solutions along with the Cúram software provides a good indication of our ability to maintain high levels of client satisfaction across our customer base. IBM has also provided references in Section T-3 and can arrange for either a conference call or other suitable means of communication with our references at the appropriate time during this evaluation.

Table 3. IE-BM Engagements Completed in the Last Five (5) Years

REF #	ENGAGEMENT NAME	CUSTOMER NAME	CUSTOMER CONTACT	PROJECT DURATION	BUSINESS DISPUTE?	
1	Missouri Eligibility Determination and Enrollment System (MEDES)	State of Missouri	Paula Peters MEDES Project Director, Paula.peters@oa.mo.gov	May 2015 - present	YES ☐	NO ☒
2	North Carolina Families Accessing Services through Technology (NC FAST)	North Carolina Department of Health and Human Services	Angela Taylor, Director, Information Technology Division, Office of NC FAST Angela.taylor@dhhs.nc.gov	August 2009 - present	YES ☐	NO ☒
3	South Carolina, Member Management Replacement Program (MMRP)	South Carolina Department of Health and Human Services (SCDHHS)	Jim Coursey, CIO, Jim.coursey@scdhhs.gov	December 2016 - present	YES ☐	NO ☒
4	State of New York, Health Homes	State of New York	Greg Allen, Director, Financial Planning and Policy at NYSDOH gregory.allen@health.ny.gov	May 2014-present	YES ☐	NO ☒
5	ConnectWellSD	County of San Diego	Carrie Hoff, Deputy Director, Health and Human Services Agency Carrie.Hoff@sdcounty.ca.gov	February 2015-present	YES ☐	NO ☒
6	WA ACES	State of Washington	Cristie Fredrickson, IT Solutions Director, Economic	2000-present	YES ☐	NO ☒

REF #	ENGAGEMENT NAME	CUSTOMER NAME	CUSTOMER CONTACT	PROJECT DURATION	BUSINESS DISPUTE?	
			Services Admin, DSHS cristie.fredrickson@dshs.wa.gov 360.664.4866			
7	State of Minnesota – MNSure (recently changed to METS)	State of Minnesota	Deb Tibstra Application Services, Director MN.IT Services @ Department of Human Services/MNsure deb.tibstra@state.mn.us	June 2013-present	YES ☐	NO ☒
8	State of Arkansas DHS Eligibility and Enrollment Framework (EEF)	State of Arkansas - Department of Information Systems (Pass-thru to Department of Human Services)	Jeff Dean, CIO DHS Jeff.Dean@dhs.arkansas.gov	January 2016 - present	YES ☐	NO ☒

2.4 Vendor's Work Locations

The Vendor Key Project Personnel associated with the IE-BM engagement must be available to participate in-person for project-related meetings as scheduled by DHS during normal business hours, Monday through Friday 8:00 a.m. to 5:00 p.m. CST, except Federal, State and local holidays.

At no time shall the Vendor maintain, use, transmit, or cause to be transmitted information governed by privacy laws and regulations outside of the United States and its territories.

Instructions: Describe the locations where the Vendor proposes performing work associated with this RFP. Indicate the site(s) from which the Vendor will perform the relevant tasks identified in this Proposal. If the site(s) for a specific task changes during the Contract term, provide a timeline reflecting where the task will be performed during each time period.

Specifically identify where the Key Project Personnel identified in the RFP will be physically located for the duration of the Contract.

For each of the deliverables identified in the RFP, provide the percentage of work to be done in the State.

IBM has offices in Little Rock at 111 Center Street.

For work associated with this RFP, upon award, IBM will procure space in the Regions Building at 400 Capitol Avenue, Little Rock, AR 72201

IBM will perform a minimum of 75% of each deliverable within the State. Up to 25% of each deliverable's work may be done outside the state, primarily from IBM's Center of Competence in South Carolina.

2.5 Existing Business Relationships with the State of Arkansas

Instructions: Describe any existing or recent (within the last five (5) years) business relationships the Vendor or any of its affiliates and proposed subcontractors has with the State.

IBM's relationship with the State of Arkansas

The State of Arkansas has been a long time valued client if IBM. As such, IBM has worked with multiple State Agencies, providing hardware, software and services solutions to the state for many years.

Specific to DHS, IBM supplies the Cùram Software, Infrastructure Software including database and application server, Reporting Software, as well as the Power Hardware technology the solution runs on. In addition, the IBM Watson Health Cúram Lab Services organization has been supporting the DHS Eligibility and Enrollment Framework (EEF) project since 2013.

The scope of IBM's responsibilities on the EEF project include:

- Maximize DHS' investment in the Cúram software by minimizing customizations and aligning required customization with Cúram guidelines to reducing upgrade efforts and time to implement.
- Provide technical and functional implementation guidance on the Cúram software for the EEF project team
- Provide guidance and direction on the functional and technical designs in order to best leverage Cúram's capabilities given the State's requirements
- Brief Arkansas DHS and DIS leadership monthly on status of EEF project, IBM activities and IBM recommendations.

To support the EEF project IBM:

- Contributes to the technical design and review meetings
- As an active member of Architecture Committee meetings by providing input on Cúram related architectural decisions including; infrastructure design, performance, and security issues
- Facilitates for the State the management of critical IBM Cúram PMR's
- Provides development, test and production support in regard to rapid problem identification and co-ordination with IBM L2 and L3 for critical issues.
- Attends State Governance and other management meetings such as the Technical Review Board.
- Works in conjunction with State PMO to and partner with the EEF project team to provide mitigation strategies for risks and issues.
- Provides enhanced information on new IBM Cúram software releases, beyond the release notes, and in the context of EEF project requirements
- Continuously performs WebSphere health check, design, configuration and troubleshooting tasks which have significantly increased system performance.
- Sized and planned with the State on the EEF Test and Production environments hardware upgrades
- Provided design direction and development resources to the State on the EEF Person Match functionality

Most recently IBM has been working with the EEF Project Team on:

- Upgrade EEF to Cúram v7.0.0.0 release
- Arkansas Works requirements
- Evidence Sharing
- Implemented WebSphere v8.5.5 upgrade across all environments

IBM provides Dept. of Information Systems with both hardware technology (mainframe, mid-range and storage) and Infrastructure software including storage, database and application server software in support of applications such as SAP and DHS' legacy applications.

IBM provides maintenance services for both hardware and software used by State agencies such as DHS, DIS, DE&A, Dept. of Education etc.

IBM hosts and provides support to DF&A's AMCS (Arkansas Motor Carrier System) solution.

Northrop Grumman's relationship with the State of Arkansas

The State of Arkansas DHS is a valued Northrop Grumman client. Northrop Grumman has successfully engaged with DHS for 20 years, enhancing the Human Service delivery system for the DHS staff and citizens of Arkansas. Northrop Grumman has worked side by side, forming positive business relationships with DHS technical, business, and administrative leaders. They have demonstrated their commitment to the success of DHS' mission by being a trusted partner supporting basic and strategic technology needs to the State of Arkansas.

Since July 1996, Northrop Grumman has provided information systems support for Arkansas DHS, supporting 16 different DHS divisions and over 7,200 DHS employees. This includes supporting 15 core mission critical applications and other applications that provide vital client services and program administration for Arkansas's most vulnerable individuals. Individuals include those seeking and receiving public assistance, child welfare, child care, and adult services. Northrop Grumman supports DHS by introducing new technologies to meet changing business needs and keeping critical legacy systems properly maintained and operational.

The primary contract vehicles used for the DHS and Northrop Grumman partnership over this tenured relationship have been DHS Information System Support (ISS) and Facility Support Project, baseline and above baseline versions. Since the 1996 award, DHS has renewed three times, most recently in 2016. During this time, Northrop Grumman has become intimately familiar with the tools, processes, and systems used by DHS, business owners and the business drivers. This has enabled the team to not only identify and implement efficiencies, but also anticipate new technology needs for more effective program administration and improved service delivery. One example is the modification to child welfare system, CHRIS, to include a differential response process, so staff can more effectively prioritize work in this critical area. Specifically, these changes allowed staff to identify reports of specific, low-risk allegations, separate from traditional investigative reports.

Additionally, the Northrop Grumman Enterprise Data Warehouse team transformed a report developed in silos, based upon independent business knowledge to a dynamic user-driven solution that provides a financial breakdown of beneficiary payments by aid category and category of service. This innovation provided the agency with an automated method to balance their "Book of Numbers" report, which includes $6.2 billion of claims, non-claims, and financial transactions to within $1.14 (which differs as a result of rounding).

Northrop Grumman's relationship with DHS enabled them to facilitate discussions between DHS and the University of Arkansas Little Rock to establish a partnership aimed at expanding the pool of technical resources with skills aligned with DHS' technical roadmap. Their relationships with local community colleges enable them to respond to expanding needs with local college graduates. In May 2014, the Northrop Grumman Arkansas Little Rock team was honored with the State of Arkansas Corporate Community Service Award by the DHS Division of Community Service and Nonprofit Support. This award recognized Northrop Grumman's work in Arkansas on Science, Technology, Engineering, and Mathematics (STEM) programs, Rice Depot food distribution, youth home support, and other community services over the years.

The following table outlines Northrop Grumman's history performing on the ISS and Facility Support project:

Table 4. Northrop Grumman's history with the State of Arkansas' ISS and Facility Support project

Agency relationship	Project name	Project start	Project end
State of Arkansas Department Human Services	*Arkansas Department Human Services (DHS) Information System Support/Facility Support Project - 2016-2017*	7/1/2016	06/30/2017
State of Arkansas Department Human Services	*Arkansas Department Human Services (DHS) Information System Support/Facility Support Project - Baseline 2015-2016*	7/1/2015	6/30/2016
State of Arkansas Department Human Services	*Arkansas Department Human Services (DHS) Information System Support/Facility Support Project - Above Baseline 2015-16*	7/1/2015	6/30/2016
State of Arkansas Department Human Services	*Arkansas Department Human Services (DHS) Information System*	7/1/2014	6/30/2015

Agency relationship	Project name	Project start	Project end
	Support/Facility Support Project - Baseline 2014-15		
State of Arkansas Department Human Services	*Arkansas Department Human Services (DHS) Information System Support/Facility Support Project - Above Baseline 2014-15*	7/1/2014	6/30/2015
State of Arkansas Department Human Services	*Arkansas Department Human Services (DHS) Information System Support/Facility Support Project - Baseline 2013-14*	07/01/13	06/30/2014
State of Arkansas Department Human Services	*Arkansas Department Human Services (DHS) Information System Support/Facility Support Project - Above Baseline 2013-14*	07/01/13	06/30/2014
State of Arkansas Department Human Services	*Arkansas Department Human Services (DHS) Information System Support/Facility Support Project - Baseline 2012-13*	07/01/12	06/30/2013
State of Arkansas Department Human Services	*Arkansas Department Human Services (DHS) Information System Support/Facility Support Project - Above Baseline 2012-13*	07/01/12	06/30/2013
State of Arkansas Department Human Services	*Arkansas Department Human Services (DHS) Information System Support/Facility Support Project - Baseline 2011-12*	07/01/11	06/30/2012
State of Arkansas Department Human Services	*Arkansas Department Human Services (DHS) Information System Support/Facility Support Project - Above Baseline 2011-12*	07/01/11	06/30/2012

In addition to the ISS and Facility Support project baseline and above baseline support, Northrop Grumman’s team expanded its knowledge of DHS systems and business relationships by supporting additional departmental initiatives and projects through the years. For example, as the State moved forward with its Eligibility and Enrollment Framework (EEF) project, Northrop Grumman provided targeted support, such as system reports using their knowledge of the DHS business and technical environment.

Additionally, Northrop Grumman has engaged with other Departments in the State to provide technology support. This includes the Department of Workforce Services and the Department of Health. The work with the Department of Health was within the last five years, providing support for an application tracking initiative and is reflected in the following table.

The following table provides data for the additional state projects, over the last five years, that the Northrop Grumman team engaged with directly to provide support:

Table 5. Additional State projects

Agency relationship	Project name	Project start	Project end
State of Arkansas Department Human Services	*EEF ANSWER TRANS FY 2015-16*	7/1/2013	6/30/2016
State of Arkansas Department Human Services	*EEF Reporting FY 2015-16*	7/1/2013	6/30/2016
State of Arkansas Department Human Services	*EEF SNAP Support FY 2015-16*	7/1/2013	6/30/2016
State of Arkansas Department Human Services	*Arkansas SNAP DOD*	9/17/2010	1/31/2012
State of Arkansas Department of Human Services	*Arkansas CHRIS Extension*	12/1/2011	06/30/12
State of Arkansas Department of Health	*Arkansas Department of Health Technical Support on Applicant Tracking*	09/19/2011	06/30/12

In addition to supporting DHS through direct contracts and task orders, Northrop Grumman worked as a subcontractor to Computer Aid performing direct division work to support and innovate for critical tasks orders not covered under the ISS and Facility Support project.

The following table provides data for the additional state projects, over the last five years, during which Northrop Grumman engaged as a subcontractor to provide services to DHS:

Table 6. Northrop Grumman additional State projects as a subcontractor

Agency relationship	Project name	Project start	Project end
State of Arkansas Department Human Services	Arkansas CAI UA Expansion	7/1/2013	6/30/2015
State of Arkansas Department Human Services	Arkansas CAI EEF Expansion	7/1/2013	6/30/2015
State of Arkansas Department Human Services	Arkansas CAI DMS EDW PII	7/1/2013	6/30/2015
State of Arkansas Department Human Services	Arkansas CAI DDS CMS Support	7/1/2013	6/30/2015
State of Arkansas Department Human Services	Arkansas CAI DCCECE PDR	7/1/2013	6/30/2015
State of Arkansas Department Human Services	Arkansas CAI EDW DMS	7/1/2013	6/30/2015

Agency relationship	Project name	Project start	Project end
State of Arkansas Department Human Services	Arkansas CAI ASH HER	7/1/2013	6/30/2015
State of Arkansas Department Human Services	Arkansas CAI DSB Aware Conversion	7/1/2013	6/30/2015
State of Arkansas Department Human Services	Arkansas CAI DHS Funds Management	7/1/2013	6/30/2015
State of Arkansas Department Human Services	EEF Data Conversion FY 2015-16	7/1/2013	6/30/2015
State of Arkansas Department Human Services	Arkansas CAI DHS TAPP Registry	7/1/2013	06/30/2014
State of Arkansas Department Human Services	Arkansas CAI DHS CCLAS	7/1/2013	06/30/2014
State of Arkansas Department Human Services	Arkansas CAI Universal Assessment	7/1/2013	06/30/2014
State of Arkansas Department Human Services	Arkansas CAI Transition Framework	7/1/2013	06/30/2014
State of Arkansas Department Human Services	Arkansas CAI UA Expansion	7/1/2013	06/30/2014

2.6 Business Disputes

Instructions: Provide details of any disciplinary actions and denote any that are pending litigation or Terminated for Cause or Convenience and associated reasons. Also denote any other administrative actions taken by any jurisdiction or person against the Vendor. List and summarize all judicial or administrative proceedings involving sourcing activities, claims of unlawful employment discrimination and anti-trust suits in which the Vendor has been a party within the last five (5) years. If the Vendor is a subsidiary, submit information for all parent companies. If the Vendor uses subcontractors, associated companies and consultants that will be involved in any phase of this engagement, provide the same information for each of these entities.

IBM represents that there is no pending litigation that would prevent IBM from discharging our obligations under a contract finally awarded to IBM, including all obligations related to the provisions of IBM Products and Services thereunder. Information that does exist is in Form 10 - K, Part I, Item 3 - Legal Proceedings in the annual report filed with the Securities and Exchange Commission. Refer to the following website for more information: www.ibm.com/annualreport.

Northrop Grumman Systems Corporation, is a wholly-owned subsidiary of Northrop Grumman Corporation, a publicly traded entity (Trading Symbol: NOC). Northrop Grumman Corporation, including its affiliates, is a $26.5B company that performs work in 50 states and several countries. It is impossible to list every single activity. Matters that are material are disclosed in our public filings. Northrop Grumman files consolidated financial statements with the Securities and Exchange Commission, which are available on the investor relations section of Northrop Grumman's website: www.northropgrumman.com. There is no pending litigation or other activities that would affect Northrop Grumman's ability to perform this contract. Northrop Grumman has no filings or petitions for bankruptcy.

3.0 Financial Stability

3.1 Dun & Bradstreet Ratings

The Vendor should provide the industry standard Dun & Bradstreet (D&B) Ratings that indicates the firm’s financial strength and creditworthiness, assigned to most US and Canadian firms (and some firms of other nationalities) by the US firm D&B. These ratings are based on a firm's worth and composite credit appraisal. Additional information is given in credit reports (published by D&B) that contain the firm's financial statements and credit payment history. Additional information may be requested regarding financial stability for the Vendor and any subcontractors proposed. **Instructions:** Provide a D&B Ratings report.

The IBM Dun and Bradstreet number is 00-136-8083. Through an agreement with Dun and Bradstreet, IBM cannot provide D&B rating reports.

Northrop Grumman’s industry standard Dun & Bradstreet (D&B) report indicates its financial strength and creditworthiness. The D&B reports can be found at the end of this section.

DNBi Risk Management

Printed By: Jeanette Frank
Date Printed: May 23, 2017

Live Report : NORTHROP GRUMMAN SYSTEMS CORPORATION

D-U-N-S® Number: 79-301-8888
Trade Names: NORTHROP GRUMMAN INFORMATION SYSTEMS - CYBER SYSTEMS
Endorsement/Billing Reference: Jeanette.frank@ngc.com

D&B Address

Address 2340 Dulles Corner Blvd
Herndon, VA, US - 20171
Phone 703 968-1000
Fax

Location Type Branch >> **Headquarters**
Web

Added to Portfolio: 08/04/2016
Last View Date: 05/23/2017
Endorsement : Jeanette.frank@ngc.com

Company Summary

Currency: Shown in USD unless otherwise indicated

Score Bar

PAYDEX®	Unavailable	
Commercial Credit Score Percentile	57	Moderate Risk of severe payment delinquency.
Financial Stress Score National Percentile	26	Moderate to High Risk of severe financial stress.
D&B Viability Rating	4 5 B Z	View More Details
Bankruptcy Found	No	
D&B Rating	Unavailable	

Detailed Trade Risk Insight™

Days Beyond Terms Past 3 Months

8
Days

Dollar-weighted average of **653** payment experiences reported from **187** Companies

Recent Derogatory Events

	Mar-17	Apr-17	May-17
Placed for Collection	-	-	-
Bad Debt Written Off	-	1 on 1 acct	1 on 1 acct

D&B Viability Rating Summary for Headquarters

4	Viability Score: 4
5	Portfolio Comparison: 5
B	Data Depth Indicator: B
Z	Company Profile: Z Subsidiary

D&B Company Overview

1

Do not confuse with with other other divisions at same address
This is a **branch** location. All information is for the branch except the D&B Viability Rating, Financial Stress, Credit Score and D&B Credit Limit information, which is provided for the **headquarters (HQ)** location.

Branch Manager	JACK M MARTIN JR, DIR
SIC	3721
Line of business	Mfg aircraft
NAICS	336411

FirstRain Company News

- Northrop Grumman to modernize U.S. Air
  2017-05-23T12:16:30 EST 12:16 PM-Military
- NORTHROP GRUMMAN CORP /DE/ FILES (8-K)
  2017-05-22T16:08:23 EST 4:08 PM-Equities.com
- After Saudi arms deal, defense shares fly
  2017-05-22T13:31:46 EST 1:31 PM-Quad-City Times
- Mu Investments Decreased Northrop Grumman
  2017-05-22T05:42:35 EST 5:42 AM-What's On
- Northrop Grumman to modernize turbine
  2017-05-19T14:59:16 EST 2:59 PM-United Press
- Northrop Grumman Opens Australian Support
  2017-05-19T03:29:44 EST 3:29 AM-FlyingNews.com
- Northrop Grumman Corporation Delivers for
  2017-05-17T14:39:09 EST 2:39 PM-Investor Place
- Northrop Grumman Wins $304 Million US
  2017-05-17T06:53:02 EST 6:53 AM-
- US Navy awards Northrop Grumman $303M for
  2017-05-17T05:58:56 EST 5:58 AM-Naval Today
- NGC Selected to Present Next-Gen Maritime
  2017-05-17T05:17:21 EST 5:17 AM-ASD News
- Sandia Labs called a critical asset in an
  2017-05-17T00:55:07 EST 12:55 AM-ABQjournal
- Northrop Grumman Increases Quarterly
  2017-05-16T18:12:01 EST 6:12 PM-Nasdaq
- Air Force B-21 Bomber's Secrecy to Be
  2017-05-15T12:03:49 EST 12:03 PM-Bloomberg
- Boeing Picks St. Louis for Potential Jet Plant
  2017-05-15T11:31:23 EST 11:31 AM-Morningstar
- Raytheon moves forward with 3DELRR radar to
  2017-05-15T10:38:40 EST 10:38 AM-Military &
- Northrop Grumman Announces $AUD 50
  2017-05-14T20:27:39 EST 8:27 PM-FlyingNews.com
- PM to announce 500 jobs for western Sydney
  2017-05-14T18:29:01 EST 6:29 PM-Sky News

2

- 2017-05-12T12:47:53 EST 12:47 PM-The Street
- Globalstar, Inc. (GSAT) Reaches $2.18 After
  2017-05-12T12:40:53 EST 12:40 PM-What's On
- Airbus to Launch Drone-Services Unit Focused
  2017-05-10T09:22:40 EST 9:22 AM-The Wall Street
- Dekabank Deutsche Girozentrale Cut By $8.57
  2017-05-10T07:43:40 EST 7:43 AM-What's On
- 1st G/ATOR Production System Delivered to
  2017-05-10T02:17:11 EST 2:17 AM-ASD News
- Darren Ghanayem Unloaded 800 shares of
  2017-05-09T16:37:41 EST 4:37 PM-What's On
- 01 Communique Laboratory (ONE) EPS
  2017-05-05T15:41:32 EST 3:41 PM-What's On
- Deals this week: Raytheon Missile Systems,
  2017-05-05T04:26:25 EST 4:26 AM-naval-
- Narwhal Capital Management Holds Position in
  2017-05-03T12:08:52 EST 12:08 PM-Sleek Money
- U.S. Testing ICBM Interceptor Amid N. Korea
  2017-05-03T06:28:43 EST 6:28 AM-
- As North Korea ramps up its ballistic missiles,
  2017-05-02T23:54:23 EST 11:54 PM-The Economic
- Emerson Electric Co. (NYSE:EMR) Files An 8-K
  2017-05-02T16:53:28 EST 4:53 PM-Market Exclusive
- Emerson Names Gloria Flach to Board of
  2017-05-02T12:43:00 EST 12:43 PM-Business Wire
- Trellus Management Company Has Decreased
  2017-05-02T11:42:47 EST 11:42 AM-What's On
- Winch Advisory Services Cut Northrop
  2017-05-02T09:42:23 EST 9:42 AM-What's On
- Students to Debate Divestment at George
  2017-04-29T20:42:45 EST 8:42 PM-Ops & Blogs -
- OST Recognized By Northrop Grumman
  2017-04-29T05:09:07 EST 5:09 AM-Virtual Strategy
- Northrop Grumman Appoints Jennifer M.
  2017-04-29T03:27:45 EST 3:27 AM-FlyingNews.com
- 2017 California State Science Fair Winners
  2017-04-28T14:13:37 EST 2:13 PM-PR Newswire
- Northrop Grumman Announces Winners of
  2017-04-27T23:28:45 EST 11:28 PM-
- Northrop Grumman Releases First Quarter
  2017-04-26T21:27:53 EST 9:27 PM-FlyingNews.com
- Northrop Grumman Co. (NYSE:NOC) reported
  2017-04-26T09:51:30 EST 9:51 AM-Market Exclusive
- Northrop Grumman Q1 17 Earnings
  2017-04-26T07:09:03 EST 7:09 AM-Nasdaq

3

- 2017-04-26T06:31:04 EST 6:31 AM-Reuters India
- Northrop Grumman profit rises 15.1 percent
  2017-04-26T06:13:45 EST 6:13 AM-Reuters
- Northrop Grumman Raises Earnings Outlook;
  2017-04-26T06:10:03 EST 6:10 AM-Nasdaq
- Northrop Grumman Corporation (NYSE:NOC)
  2017-04-26T05:49:54 EST 5:49 AM-Market Exclusive
- Northrop Grumman Wins $99M Technical
  2017-04-26T02:56:53 EST 2:56 AM-
- Northrop Grumman to Install Infrared
  2017-04-26T01:29:36 EST 1:29 AM-Sputnik
- Growth Seen for Air and Missile Defense
  2017-04-25T17:52:03 EST 5:52 PM-Microwave & RF
- Northrop Grumman to Showcase Innovative
  2017-04-24T19:27:59 EST 7:27 PM-FlyingNews.com
- Northrop Grumman Opens New, Hi-Tech
  2017-04-21T15:28:10 EST 3:28 PM-FlyingNews.com
- Northrop War-Planning Network Halted by U.S.
  2017-04-20T13:03:05 EST 1:03 PM-Bloomberg

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Public Filings

No public filings data is currently available.

Corporate Linkage

This is a **Branch** location

NORTHROP GRUMMAN SYSTEMS CORPORATION
Herndon , VA
D-U-N-S® Number 79-301-8888

The Domestic Ultimate is
NORTHROP GRUMMAN CORPORATION FALLS CHURCH
D-U-N-S® Number 96-735-8127

The Headquarter is
NORTHROP GRUMMAN SYSTEMS CORPORATION
FALLS CHURCH, Virginia
D-U-N-S® Number 00-825-5408

Predictive Scores

Currency: Shown in USD unless otherwise indicated

D&B Viability Rating Summary

The D&B Viability Rating uses D&B's proprietary analytics to compare the most predictive business risk indicators and deliver a highly reliable assessment of the probability that a company will go out of business, become dormant/inactive, or file for bankruptcy/insolvency within the next 12 months. The D&B Viability Rating is made up of 4 components:

4	**Viability Score (HQ)**	Lowest Risk: 1 Highest Risk: 9

Compared to All US Businesses within the D&B Database:

- Level of Risk: **Low Risk**
- Businesses ranked 4 have a probability of becoming no longer viable: **5 %**
- Percentage of businesses ranked 4: **14 %**
- Across all US businesses, the average probability of becoming no longer viable: **14 %**

5	**Portfolio Comparison (HQ)**	Lowest Risk: 1 Highest Risk: 9

Compared to All US Businesses within the same MODEL SEGMENT:

- Model Segment : **Established Trade Payments**
- Level of Risk: **Moderate Risk**
- Businesses ranked 5 within this model segment have a probability of becoming no longer viable: **5 %**
- Percentage of businesses ranked 5 with this model segment: **11 %**
- Within this model segment, the average probability of becoming no longer viable: **5 %**

B	**Data Depth Indicator (HQ)**	Predictive Data: A Descriptive Data: G

Data Depth Indicator:

Rich Firmographics
Extensive Commercial Trading Activity Basic Financial Attributes
✓
Greater data depth can increase the precision of the D&B Viability Rating assessment.

Z	**Company Profile (HQ)**	**Subsidiary**

3.2 Financial Capacity

Vendors should submit an Independent Auditor's Report and audited financial statements, including any management letters associated with the Auditor's Report with the applicable notes, OMB A-133 Audit (if conducted) for the last three (3) fiscal years (an Audit Receipt Letter from Contract Support for each year is acceptable), balance sheet, statement of income and expense, statement of changes in financial position, cash flows and capital expenditures.

Most current financial statements (may be unaudited) should be provided on a separate USB Memory Stick, labeled "Financial Capacity Information Template T-2 – 3.2" to be provided as part of the Technical Proposal. If the Vendor has not had an audit conducted within the past three (3) fiscal years, then the Vendor should provide the following un-audited financial statements for the last three (3) fiscal years:

a) State of Financial Position (Balance Sheet)

b) Statement of Activities (Income Statement)

c) Statement of Cash Flows

If the Vendor is a corporation that is required to report to the Securities and Exchange Commission (SEC), it should submit its two (2) most recent SEC Forms 10K, Annual Reports. If any change in ownership is anticipated during the twelve (12) months following the Proposal due date, the Vendor should describe the circumstances of such change and indicate when the change is likely to occur.

Additional information may be requested regarding financial stability for the Vendor and any subcontractors proposed.

Instructions: Supply evidence of financial stability sufficient to demonstrate reasonable stability and solvency appropriate to the requirements of this procurement.

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IBM does not release financial information outside of what is published in the annual report. The report, along with all other publicly released information on IBM finances, can be found at the following URL: http://www.ibm.com/annualreport/.

Northrop Grumman's financial capacity

Northrop Grumman Systems Corporation is a wholly owned subsidiary of Northrop Grumman Corporation. Northrop Grumman is a leading global company providing innovative systems, products, and solutions in aerospace, electronics, information systems, and technical services to government and commercial customers. Northrop Grumman Corporation is publicly traded (trading symbol NOC) and files consolidated, audited annual reports with the SEC. The financial results provided in the annual report convey Northrop Grumman's stability and fiscal strength. Northrop Grumman Annual Reports can be found at the following website: http://investor.northropgrumman.com/phoenix.zhtml?c=112386&p=irol-financialreports.

The Independent Auditor's Report and audited financial statements, including any management letters associated with the Auditor's Report with the applicable notes are included in the 2016 Annual Report and 10k SEC Report.

Northrop Grumman's record of strong cash flow exemplifies their financial stability and capacity to finance operations and meet the obligations without risk to the State of Arkansas. Table 7 below summarizes Northrop Grumman Corporation's financial highlights for the past 3 years.

Table 7. Northrop Grumman financial highlights

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3.3 Financial References

The Vendor should provide references that can verify the standing of the Vendor.

Instructions: List credit references of the Vendor. Do not change any of the completed cells. Any changes to the completed cells could lead to the disqualification of the Proposal.

Table 8. Credit References

INSTITUTION	ADDRESS	PHONE NUMBER
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3.4 Corporate Guarantee

If the Vendor is substantially owned or controlled, in whole or in part, by one or more other legal entities, the Vendor should submit the information required under the “Financial Capacity” section above for each such entity, including the most recent financial statement for each such entity. The Vendor should also include a statement that the entity or entities will unconditionally guarantee performance by the Vendor for each and every obligation, warranty, covenant, term and condition of the Contract. If DHS determines that an entity does not have sufficient financial resources to guarantee the Vendor’s performance, DHS may require the Vendor to obtain another acceptable financial instrument or resource from such entity, or to obtain an acceptable guarantee from another entity with sufficient financial resources to guarantee performance.

Instructions: Provide any additional information requested, and the unconditional guarantee by the owning/controlling entities.

Not applicable.

4.0 General Assumptions

Instructions: Document the assumptions related to this Response Template in the following Table. Add rows as necessary. Do not change any of the completed cells. Any changes to the completed cells could lead to the disqualification of the Proposal.

Table 9. Vendor Experience Assumptions

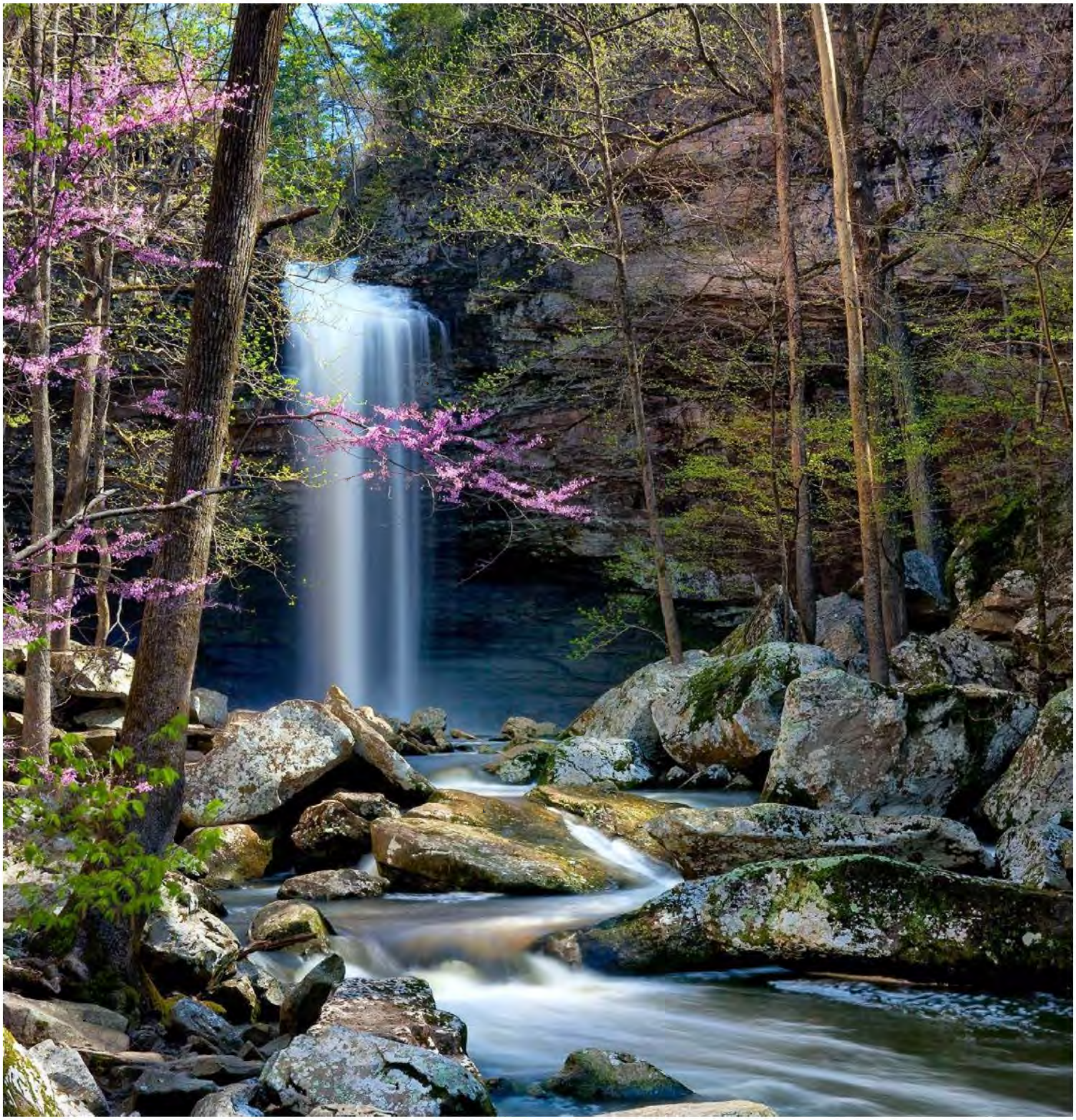
ITEM #	REFERENCE (Section, Page, Paragraph)	DESCRIPTION	RATIONALE
1.			
2.			
3.			

IBM made no assumptions regarding this response template.

Template T-3

Vendor References

Response Template RFP #: SP-17-0012



Template T-3

Vendor References

Response Template

RFP #: SP-17-0012

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Template T-4

Vendor Engagement Organization and Staffing

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Template T-4

Vendor Engagement Organization and Staffing

Response Template

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1.0 Engagement Organization and Staffing Plan

The Vendor should describe the integrated Project Organization and Staffing Plan required to execute the proposed approach and create the deliverables required for the Engagement. This section should include details of the Vendor's team, proposed use of subcontractors, and the Vendor's expectations of DHS resources. This section should include a visual representation of the Vendor engagement including the reporting structure. The Vendor should also describe the required staffing of business and technical resources DHS must provide to support the delivery of the services and creation of all deliverables. The Plan should include the number of resources (both business and technical), anticipated role and responsibilities, level of participation and necessary capabilities/skills for both DHS and Vendor resources. The Staffing Plan should highlight the staff performing the roles required to deliver the scope of services outlined in the RFP.

Key Project Personnel identified in the Proposal for the engagement are considered to be the core Vendor resources and are therefore expected to be the major participants in all procurement activities (e.g. oral presentations) and services delivery activities. If the Vendor is selected, its Key Project Personnel cannot be replaced without prior DHS approval during the life cycle of the Project.

DHS has the right to require Vendor replacement of Key Personnel or any person in the Vendor's team (including subcontractors) for any reason not limited to inadequate skills, team work, and responsive attitude etc. barring EEO guidelines.

Instructions: Provide a Staffing Plan and associated organization chart detailing the number of personnel, level, roles and responsibilities, and team reporting relationships, and identify the approach to providing "shoulder-to-shoulder" links for key staff roles between Vendor staff and DHS staff. Show proposed Vendor personnel hours by phase, by personnel level, and by role for the entire engagement. Identify all Key Project Personnel for the Vendor, personnel for DHS and their proposed roles. Additionally, the response should include an assessment of DHS' current staffing plan (outlined in the RFP).

At IBM, we understand that the quality delivery of a project depends on the organization of the project resources in a structure that is well defined and yet flexible. Our proposed organizational framework is built on structured roles and clearly identified responsibilities. Our organizational structure promotes continuous learning and increases resource use through sharing of resources and assets across teams. This structure forms the framework for the distribution of project tasks and the measurement and reporting of progress of these tasks against the planned project schedule.

Project success is based on the following key factors:

- Assembling the right group of people.
- Defining roles and responsibilities.
- Communicating and collaborating.

We will enable success by assembling the right team, with the right skill sets, and the right resources at the right time. To achieve this, we will forecast and assign resources based on needs aligned to the project plan and schedule. Full time employees (FTEs) are based on hours forecasted during months in which the personnel are assigned to the project. We have estimated a typical month to range between 160-180 hours.

Our organizational breakdown structure identifies the team organization and defines the following areas:

- The hierarchical reporting relationships within the proposed structure.
- The project tasks for which each team is responsible.
- The grouping of specialized skills within the project teams.

The following figure represents the IBM team organizational structure for the IE-BM project:

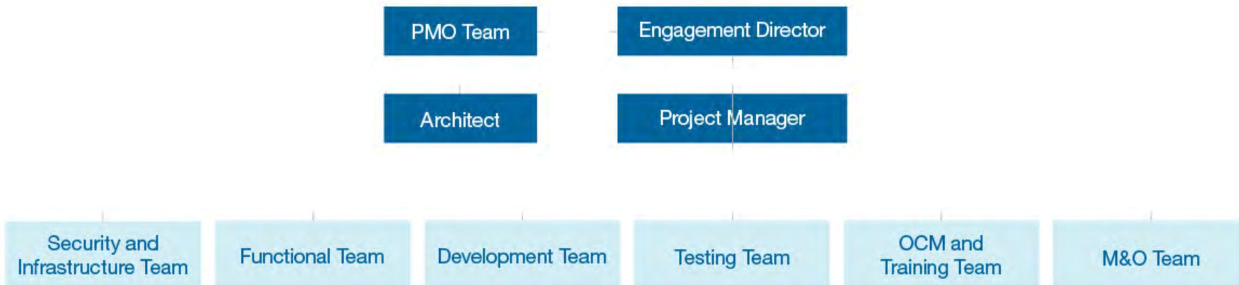

Figure 1: IBM team organization chart

We have structured our organization to have clear accountability for tasks, while sharing resources and experience across the project, as needed.

The organizational structure listed illustrates each position in terms of the other and their hierarchy. The structure also identifies the various units that comprise the project team.

In the section below, we describe the job descriptions of the various roles and how they contribute to the overall project success.

A brief description of the individual teams and the tasks and deliverables they are responsible for producing is described in the following paragraphs. The Master Schedule includes these tasks along with the timeline and the responsible party.

Engagement Director

The Engagement Director on the IBM side works closely with the IE-BM Executive team on the Cúram Investment Roadmap and the strategic and tactical priorities of the Integration Vision. Organizational, financial, and technical decision-making authority and committing the team to the planned tasks is the prerogative of the IBM Engagement Director, a seasoned veteran with oversight authority on similar large-scale Cúram HHS engagements and a day-to-day contact with C-level executives within the State organization.

Project Management Office (PMO) team

The PMO team works closely with the stateside executives and the IBM project leadership and helps manage the contract as prescribed in the Service Level Agreements (SLAs) and as stipulated by the contract deliverables management list. The PMO team has primary responsibility of managing the project schedule, is also responsible for collecting the statuses from the various teams, and producing the consolidated weekly and monthly status reports that include the planned vs actual reporting, cost, and schedule variances, risk, and issues identified. The PMO team is also responsible for updating the project plans that include risk management plan, communications management plan, stakeholder management plan, deliverables management plan, schedule management plan, quality management plan, staffing plan, implementation plan, change management plan, and turnover and operations management plan. The PMO team is made up of the PMO lead, the Master Scheduler, and the Office Assistant, which can be seen below.

Figure 2: PMO Team

The PMO team will be responsible for managing the project administrative duties.

Project Manager

The IBM Project Manager is a hands-on leader, communicator, and a Cúram-centric practitioner that works directly with the stateside Project Manager and manages the day-to-day affairs of the project personnel and monitors and reports on the progress made against the planned tasks. Project risk and issues are analyzed and resolved by the Project Manager in close coordination with the stateside counterpart. This may involve assigning additional resources to a task, approving alternate approaches to not deviate from the vision or the project schedule, and motivating the labor force.

Architect

The Cúram Architect has hands-on experience in using the Cúram out-of-the-box (OOTB) functionality through configurations and minimal customizations to meet the organizational and customer needs of a service organization. The Architect is a senior SOA Architect that advises the state on architectural decisions and tool selections and configurations that affect the ability to deliver and monitor the IE-BM implementation to the contractual standards and industry leading practices using the Cúram platform

Infrastructure Team

The Infrastructure team enables the realization of the Functional team vision through the development team tasks. The infrastructure team handles the automation of certain repeatable tasks like automating the deployment process and controlling access to environments and monitoring the health or the various technical environments. The team works very closely with the development team and reports directly to the Project Manager. Continuous process improvement through automation is one of the primary objectives of the Infrastructure team.

Figure 3: Infrastructure Team: The Infrastructure team will be responsible for managing the deployments and controlling access.

Functional team

The Functional team is made up of practitioners familiar with multiple social programs and policy and with Cúram OOTB functionality including Intelligent Evidence Gathering (IEG), evidence brokering, rules, workflow and tasks, and other CMS, FNS, and ACF guidelines. The Functional team leads the requirements gathering and verification sessions and formulates the functional design. They play the role of the Scrum Master during the Sprint cycle and work closely with the Development team and the State Functional Subject Matter Experts (SMEs) who play the role of Product Owners. They stay involved through the entire project lifecycle to facilitate that requirements are being met and the system functions as designed when implemented.

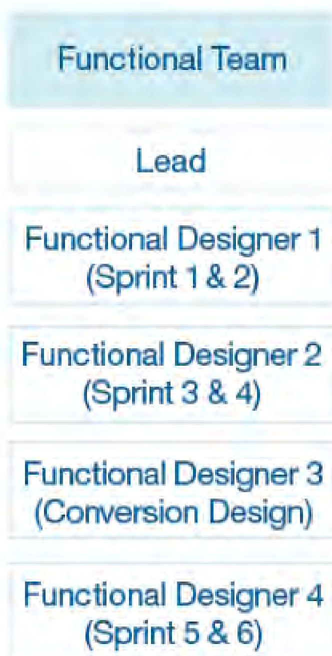

Figure 4: Functional Team: Play the role of Scrum Mater during the Sprint cycles.

Development team

The Development team is made up of skilled Cúram Developers, who are very familiar with Cúram OOTB functionality and have hands-on experience integrating the modules in other Cúram implementations. The Development team is responsible for the configuration of the Cúram platform and helping the design stay close to the OOTB functionality except when the State policies and procedures are different. The Development team is familiar with the MITA seven standards and conditions and will follow the architectural pattern and development standards established by IE-BM. The Development team is responsible for unit testing of their code modules before deploying to higher environments. The Development team is also responsible for the Date Warehousing and BI report development and the ETL workflows.

Figure 5: Development Team -The Development team will be responsible for managing the configuration and coding to meet the requirements.

Testing team

The Testing team is comprised of system testers, who are familiar with the Cúram functions and the automated test tool suites. The Testing team works with the Functional and Development teams to identify the appropriate test scenarios and work with the State testing team to setup the Systems Integration Test (SIT) test cases and the automation for the regression test suites.

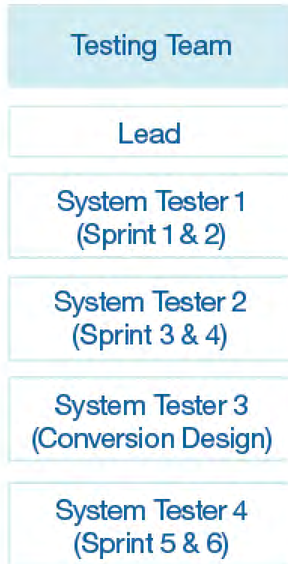

Figure 6: Testing Team - The Testing team will be responsible for managing the end-to-end testing and capability of system.

Organizational Change Management and Training team

The Organizational Change Management (CMO) and Training team reports to the IBM Project Manager and is responsible for assessing the impacts of the proposed solution to existing organizational policies and procedures and to the various user groups affected by the IE-BM integration. The OCM team then proposes an OCM strategy and a training plan based on the needs identified. The OCM team works closely with the functional and technical teams to understand the proposed system functionality so that they can develop job aids and design and develop the training curriculum. The team also collaborates with identified stateside field and training staff in developing the Curriculum and delivering the Train the Trainer sessions.

Figure 7: OCM & Training Team - The OCM & Training team will be responsible for managing the communication of our solution to the end users.

Although the organization structure is grouped by functional alignment the structure behaves more like a matrix organization with individual Sprint Teams operating almost autonomously through the implementation phases.

In the figure below, the Sprints are comprised of multi-disciplinary practitioners working together from Visioning to Deployment. For example, Sprint 1 could be aligned with a program (SNAP, TANF, Medicaid) or a feature (interface, Mobility, Integrated Application); for example, Integrated Application. Sprint 1 uses a dedicated IBM Business Analyst as Scrum Master and Developers and Test Engineers and State Functional SME who assumes the role of the Product

Owner (serialized in the diagram). The Database Administrator (DBAs), Security Analysts and the State Technical SMEs are shared resources who may split their time across multiple Sprints based on the needs of a particular Sprint and the skills sets of the team member. A DBA in this example supports multiple Sprints at the same time to maximize their utilization. This structure can be seen below.

Implementation Phase 1

Sprint 1	IBM Business Analyst (Scrum Master) 1	Developer 1	DBA	Security	Test Engineer 1	Trainer 1	State Business SME (Product Owner)	Technical SMEs
Sprint 2	IBM Business Analyst (Scrum Master) 2	Developer 2	DBA	Security	Test Engineer 2	Trainer 2	State Business SME (Product Owner)	Technical SMEs
Sprint 3	IBM Business Analyst (Scrum Master) 3	Developer 3	DBA	Security	Test Engineer 3	Trainer 3	State Business SME (Product Owner)	Technical SMEs
Sprint n …								

Implementation Phase 2

Sprint 1	IBM Business Analyst (Scrum Master) 1	Developer 1	DBA	Security	Test Engineer 1	Trainer 1	State Business SME (Product Owner)	Technical SMEs
Sprint 2	IBM Business Analyst (Scrum Master) 2	Developer 2	DBA	Security	Test Engineer 2	Trainer 2	State Business SME (Product Owner)	Technical SMEs
Sprint 3	IBM Business Analyst (Scrum Master) 3	Developer 3	DBA	Security	Test Engineer 3	Trainer 3	State Business SME (Product Owner)	Technical SMEs
Sprint n …								

Figure 8: Sprint Team Structure

This type of an organization promotes collaboration within the teams and between teams and leads to maximum resource utilization.

Once the functionality related to a particular Sprint is successfully deployed the practitioners move on to the next planned Sprint cycle. The IBM Organization structure is flexible and scalable. We will augment the teams as needed based on our staffing projections. If additional developers are needed, we will tap into our deep bench strength. If additional testers are needed, we will bring them onboard to support testing planning and execution. The IBM Organizational Structure listed in Figure 1 will remain the same throughout the project although the size of the individual teams may vary depending on the project staffing needs.

The IBM Project team is made up of practitioners with specialized skills playing specific roles within the organizational structure. The table below provides a description of the role and the types of skills needed to perform that role and the services on the contract delivered by the roles.

Table 1: IBM Roles – Skills Description and Services Rendered

Vendor Role	Services on the Contract	Description
Engagement Director for DDI and M&O	Project Management, Contract Management, Scope Management, Change Management, Risk Management, Stakeholder Management, Vendor Management	The IBM Engagement Manager works closely with the State Executive team on the Cúram Investment Roadmap and the strategic and tactical priorities of the IE-BM project. Integration Vision. Organizational, financial, and technical decision-making authority and committing the team to the planned tasks is the prerogative of the IBM Engagement Manager, who is typically a seasoned veteran with oversight authority on similar large-scale Cúram HHS engagements and a day-to-day contact with C-level executives within the State organization.
Project Manager	Project Management, Contract Management, Scope Management, Change Management, Risk Management, Deliverables Management, DDI Process Management, Facilities Management, Personnel Management	The IBM Project Manager is a hands-on leader, communicator, and a Cúram-centric practitioner that works directly with the stateside Project Manager and manages the day-to-day affairs of the project personnel and monitors and reports on the progress made against the planned tasks. Project risk and issues are analyzed and resolved by the Project Manager in close coordination with the stateside counterpart. This may involve assigning additional resources to a task, approving alternate approaches to not deviate from the vision or the project schedule, and motivating the labor force.
PMO Leader	Project Management, Contract Management, Deliverables Management, Facilities Management, Vendor Management, Personnel Management	The PMO Leader works closely with the stateside executives and the IBM project leadership and helps manage the contract as prescribed in the SLAs and as stipulated by the contract deliverables management list. The PMO Leader has primary responsibility of managing the

Vendor Role	Services on the Contract	Description
		project schedule and is also responsible for collecting the statuses from the various teams and producing the consolidated weekly and monthly status reports that include the planned vs actual reporting, cost, and schedule variances, risk, and issues identified. The PMO Leader is also responsible for updating the project plans that include risk management plan, communications management plan, stakeholder management plan, deliverables management plan, schedule management plan, quality management plan, staffing plan, implementation plan, change management plan, and turnover and operations management plan.
Security Infrastructure Lead	Security Access Management, HIPAA, Design, Development., Deployment, Transition	Works with the Technical Director and the Functional and Development Team Leads in developing protocols and process to control access to sensitive PII and PHI data Is responsible for developing the System Security Plan. Works closely with the State Security Administrators on security provisioning for the MMRP Phase 2 project.
Architecture Lead	DDI Process Management, Risk Management, Security Access Rights Management, Configuration Management, Technical Design Document Management	Advises the State Executive team and the project team regarding decisions related to the Cúram framework and roadmap and planned customizations that may deviate the implementation from the OOTB solution. Works collaboratively with the State on reducing Technical risks related to the development tasks. Shares lessons learned from other states doing similar Cúram Integration work. Is up to date on technology in the Integrated Eligibility space including mobility, no touch

Vendor Role	Services on the Contract	Description
		eligibility and business intelligence and analytics.
Integration Manager and Functional Lead	Design, Development, Solution Testing, Deliverables Management, Risk Escalation, Cúram OOTB, Medicaid SNAP, TANF Policy, IE-BM Policies	The Integration Manager is a seasoned practitioner familiar with Medical Assistance, Cash and Food Stamps policy and programs and with Cúram OOTB functionality including IEG, evidence brokering, rules, workflow and tasks, and other CMS, FNS and ACF guidelines. The Functional Lead is primary responsible for the requirements gathering and verification sessions and formulates the functional design. Works closely with the Development team to develop the technical design specifications. The Lead stays involved through the entire project lifecycle to facilitate that requirements are being met and the system functions as designed when implemented.
Business Analyst	Design, Development, Solution Testing, Deliverables, Management, Risk Identification, Cúram OOTB, Medicaid Policy	The Business Analyst has 5 or more years of experience with medical assistance policy and programs and with Cúram OOTB functionality including IEG, evidence brokering, rules, workflow and tasks, and other CMS guidelines. The Senior Business Analyst is also responsible for the requirements gathering and verification sessions and formulates the functional design. They work closely with the Development team to develop the technical design specifications.
Development - Lead	Design, Development, Solution Testing, Deliverables, Management, Risk Escalation, Cúram OOTB, Coding Standards, IEG, Rules SLA’s, ESB, ETL, Cognos	Technologist who has lead teams of 5 or more people in previous HCR/CGIS (Health Care Reform/Cúram Global Income Support) implementations in other states. Provides leadership and guidance to the development team and helps them code to standards and performance metrics set for in

Vendor Role	Services on the Contract	Description
		the Arkansas SLA's. Works closely with the Functional and Testing team leads to clarify and guide design decisions and testing scenarios. Possesses good written and verbal communication skills and can identify risks to schedule and costs and escalates them to Management attention. Intimately familiar with configuration management and the deployment process.
Cúram Developer	Design, Development, Solution Testing, Risk Identification, Defect Fixes, Cúram OOTB, Coding Standards, SLA's, ESB, ETL, Cognos, Cúram IEG, Rules	Technologist with 7+ years of experience in previous Cúram HCR/CGIS implementations in other states. Intimately familiar with configuration management and the deployment process as well as Cúram development standards and guidelines. Experience in the full life cycle of requirements through functional design and testing.
Interface Developer	Design, Development, Solution Testing, Cúram OOTB, Coding Standards, SLA's, ESB, IBM Integration Bus	Interface developer with 7+ years of experience developing integrations in the social enterprise management application industry. Has experience with full lifecycle development activities from requirements through design and testing.
Testing Lead	Design, Development, Solution Testing, Defect Categorization, JIRA, Change Management	The Testing Lead is familiar with the Cúram functions and the automated test tool suites. The Testing Lead works with the Functional and Development teams to identify the appropriate test scenarios and works with the State testing team to obtain the approvals needed to facilitate adequate test coverage. The Test Lead works with the other Team leads to coordinate and communicate activities during the implementation phases.

Vendor Role	Services on the Contract	Description
Tester	Design, Development, Solution Testing, Defect Categorization, JIRA	Conducts SIT and Joint SIT Testing. Drafts the test cases. Updates the automated test suites. Documents defects with adequate detail in the Test tool suite. Supports User Acceptance Testing (UAT) testing.
Training Lead	Cúram Knowledge, Communication Management, IE-BM Policies, Curriculum Development, Coordination with State Testing team, Deliverables Management	Works with the Functional, Testing and State Policy and Training teams to develop the Training curriculum. Leads the Trainer the Trainer sessions. Supports the State Testing team on the End User Training Delivery. Incorporates the feedback from the training sessions into the curriculum.
Training Developer	Cúram Knowledge, Communication Management, IE-BM Policies, Curriculum Development, Draft Training related deliverables	Works with the Functional, Testing and State Policy and Training teams to assist in developing the Training curriculum. Supports the Trainer the Trainer sessions. Incorporates the feedback from the training sessions into modifying the curriculum.

We will map the IBM team's project organization to the State's organization to allow for linkages between key stakeholders and their IBM team counterparts. This process will create an integrated project team that provides team members with details concerning proper points of contact and an understanding of the project organization and decision-making authority. An integrated project team facilitates communication and collaboration between the various stakeholders. By reporting statuses from each of these teams, a holistic view of the project status can be obtained and the dependencies between critical tasks within a team and across teams managed appropriately. With singular points of contact identified from the State and the vendor organizations for tasks, assigning responsibility and ownership will become clear.

The Arkansas and IBM joint team structure showing the shoulder-to-shoulder view is shown in in the figure below. We will align the State and IBM team members with similar skill sets to encourage collaboration and effective communication.

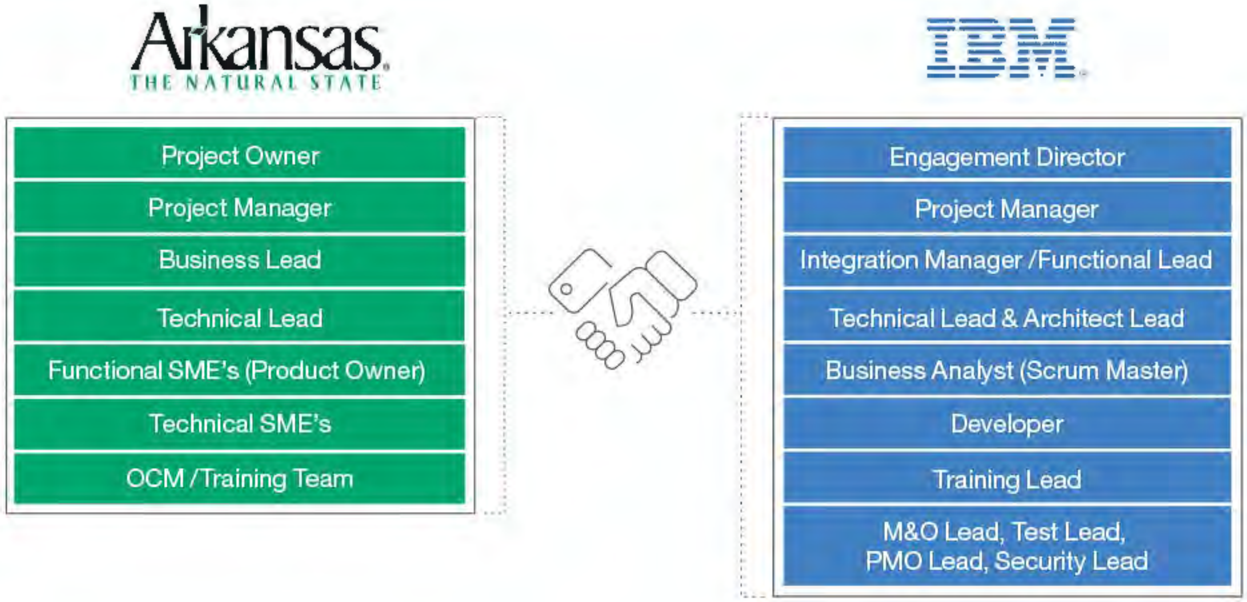

Figure 9: A Joint IE-BM Team – IBM and the State Stakeholders: Shoulder to Shoulder

The table below lists the suggested skills for the State team roles to contribute to the project team success.

Table 2. Recommended Skills

State Roles	Recommended Skills
Project Owner	Works closely with the IBM Engagement Director. Sets the vision for the Project. Actively participates in the Steering Committee Meetings. Mitigates Risks and Issues. Actively works to remove roadblocks if encountered by the Project team
Project Manager	Works with the IBM Project Manager. Oversee day-to-day operations. Manages the progress of tasks, reestablishes priorities, and reallocates resources, as needed, based on progress of critical tasks. A leader and a communicator.
Business Lead	Well versed in programs and policies across multiple programs. Has hands on experience in Cúram and the Legacy systems. Is very familiar with the field operations. Communicates and collaborates with the Federal Agencies including CMS, FNS and ACF. Escalates risks and issues to Project Management. Works well with the other teams namely Development and Testing.
Technical Lead	Works with the IBM Development Lead and the M&O Lead on a day to day basis. Has a good understanding of Service Oriented Architecture concepts. Is very familiar with the existing technology landscape. Communicates with the Design and Testing teams. Escalates risks and issues to the Management team. Understands the SLA's. Working knowledge of the Cúram platform.
Functional SMEs (Product Owner)	Actively Participates in the Sprints as the Product Owner. Understands the product backlog and the minimum viable product and the iterative and incremental nature of the Agile Sprints.

State Roles	Recommended Skills
	Provides the necessary feedback to the Sprint teams. Identifies risks and issues and logs them in the risk register. Communicates with the other Sprint Teams.
Technical SMEs	Has a good understanding of Service Oriented Architecture concepts. Is very familiar with the existing technology landscape. Identifies risks and issues to the Management team. Understands the SLA's. Working knowledge of the Cúram platform, Mainframe legacy systems, Data Warehouse and Business Intelligence, Cognos reporting.
OCM/Training Team	Possesses good communication skills. Understands adult learning principles. Familiar with the programs and policies. Understands Cúram functionality and navigation. Knowledgeable with field operations and procedures.

The IBM team has reviewed the State Project team Staffing requirements as listed in Table 10 of the RFP. We have compared your staff levels with the Stateside staffing requirements projected from our Staffing Plan. Using this comparison and based on our experience in previous engagements of the same size and complexity, IBM is satisfied with the projected numbers for the State team. Here are a few recommendations related to staffing that we would like to propose for your consideration:

- State Functional SME's will play the role of the Product Owner during the Sprint Cycles. The Functional SME will need to have a good grasp of the overall design approach and Cúram OOTB functionality and be willing to actively participate in the Daily Stand-Up meetings.
- There will be multiple Sprints for each Project Release with a State Functional SME actively participating in each of the Sprints.
- Since there are multiple programs identified in the scope of this RFP we recommend that Functional SME's are drawn from different program areas.
- Since Cúram will be the worker facing system, experience and knowledge of the Cúram system by the Functional Business Analysts (BA) is preferred.
- During the UAT phase IBM recommends that end users participate as testers so that they can get an early feel of the new solution and carry forward the knowledge gained from testing to the field and play a role in championing the system and supporting their colleagues post go-live. This type of approach worked well in our ConnectWellSD San Diego project.
- The IBM team assumes the State UAT testers familiarity with the defect categorization and defect logging processes for effective UAT defect resolution.
- IBM recommends Functional and Technical SMEs that are knowledgeable with the legacy data structure for participation in the Conversion related design sessions.
- The IBM Train-the-trainer sessions requires in-person participation of the State Trainers for the duration of these sessions. IBM will work with the State in setting up the schedule but assumes full and active participation from the State trainers for effective delivery of the course content.
- Availability of policy and program specialists on an as needed basis during the Vision sessions so that eligibility rules can be formulated to meet Arkansas policies and statutes.
- Availability of State technical resources for infrastructure and configuration management troubleshooting and collaboration tasks.

- State Project Management support and availability for Risks and Issues Management and regular cadence of the Change Control Board.

2.0 Vendor Key Personnel

The Vendor should identify Key Personnel for the Engagement, as described in the RFP, including:

- Name
- Position in Vendor organization
- Proposed role on Engagement
- Focus of work effort
- % of time dedicated to the Engagement
- Experience in the proposed role
- Qualifications for the proposed role
- Role in the last three (3) projects

Instructions: Complete the following Table detailing the Key Personnel identified for this Engagement. Add rows as necessary. Do not change any of the completed cells. Any changes to the completed cells could lead to the disqualification of the Proposal.

The key personnel will fill in the roles of the organizational structure depicted earlier. The figure below shows these key personnel and their roles within the IBM structure. The reporting hierarchy is also clearly represented.

Figure 10: Organizational Structure with Key Personnel

The key personnel from this organizational structure will allow for greater of knowledge sharing and promote escalation strategies.

Table 3. Proposed Vendor Key Personnel

Name	Position In Organization	Proposed Role On Engagement	Focus Of Work Effort	% Of Time Proposed On Engagement	Experience In Proposed Role (Years)	Qualifications For Proposed Role	Role In Last 3 Projects
Walter Szyperski	IBM Public Sector Cúram Delivery Partner	Engagement Director for DDI and M&O	Program Management	20	Fifteen	• 28 years of professional experience in client support and project management. • 28 years of direct project oversight and authority over ongoing relationships with clients implementing enterprise solutions in excess of 10 million. • Management of integrated eligibility accounts that have included both DDI and M&O for multiple projects including successful and ongoing Cúram programs in	• Program Executive • Program Executive • Program Executive

Name	Position In Organization	Proposed Role On Engagement	Focus Of Work Effort	% Of Time Proposed On Engagement	Experience In Proposed Role (Years)	Qualifications For Proposed Role	Role In Last 3 Projects
						Missouri, New York, Nebraska, and California	
Ennapadam A Padmanabhan	Associate Partner	Project Manager	Project Management	100	Twenty	• 20 years of project management experience. • 14 years of experience leading the implementation of enterprise solutions on similar technologies. • Seven years of experience implementing solutions of similar functional scope. • PMP certified professional specializing in ERP delivery management and project management (Cúram, SAP, and Oracle) with over 25 years of	• Project Executive • Project Manager • Integration Manager

Name	Position In Organization	Proposed Role On Engagement	Focus Of Work Effort	% Of Time Proposed On Engagement	Experience In Proposed Role (Years)	Qualifications For Proposed Role	Role In Last 3 Projects
						professional experience in both the public and private sectors. • Four years of Cúram experience.	
Yogi Ganesan	Senior Managing Consultant	Integration Manager and Functional Lead	DDI	100	Fifteen	• 18 years of experience in the Health and Human Services domain. • 15 years leading various phases of the implementation of enterprise solutions on J2EE, .NET and Cloud platforms. • 15 years of experience implementing solutions Custom and COTS of similar functional scope. • Project Management	• Integration Manager and Functional Lead • Integration Manager and Functional Lead • Quality Assurance Management Advisor

Name	Position In Organization	Proposed Role On Engagement	Focus Of Work Effort	% Of Time Proposed On Engagement	Experience In Proposed Role (Years)	Qualifications For Proposed Role	Role In Last 3 Projects
						Professional (PMP) certified. • Certified Scrum Master (CSM) from Scrum Alliance.	
James Collier	Senior Managing Consultant	Training Lead	Training	100	Five and a half	• 18 years of training development experience. • Over 5.5 years of Training Lead experience. • Training strategies and methodologies SME. • Three years of Cúram experience.	• Training Lead • Training Lead • Training Lead
Gaurang Mavani	Senior Managing Consultant	Test Lead	Testing	100	Over six	• Over six years of experience as a Testing Lead for projects similar in size and complexity to the IE-BM solution. • Proven track record of leading	• Lead Business Analyst • Test Manager • Functional Lead

Name	Position In Organization	Proposed Role On Engagement	Focus Of Work Effort	% Of Time Proposed On Engagement	Experience In Proposed Role (Years)	Qualifications For Proposed Role	Role In Last 3 Projects
						testing teams for IBM on complex system implementations such as the ConnectWellSD project. • IBM Cúram Certified Business Analyst v6.0.	
Ramchandra Takkar	Senior Managing Consultant	Technical Lead	Development	100	Twelve	• 12 years of Experience as a Technical Lead. • Ten years of experience as a Technical Lead on complex projects. • Nine years of experience in management. • Seven years of experience architecting and designing enterprise solutions.	• Solution Architect • Technical Lead • Development Lead

Name	Position In Organization	Proposed Role On Engagement	Focus Of Work Effort	% Of Time Proposed On Engagement	Experience In Proposed Role (Years)	Qualifications For Proposed Role	Role In Last 3 Projects
						• Ten years of Cúram experience. • Cúram Technical Lead for the Arkansas EEF project.	
Devananda Muthakana	Senior Enterprise Architect	Architect Lead	System Architecture	100	Twelve	• TOGAF (The Open Group) Certified Master Architect. • 20 plus years of overall IT experience. • 16 years of Cúram experience. • 15 years of experience in health and human services domain. • 14 years of experience architecting and designing solutions. • 12 years of experience as	• Senior Enterprise Architect • Enterprise Architect • Enterprise Architect

Name	Position In Organization	Proposed Role On Engagement	Focus Of Work Effort	% Of Time Proposed On Engagement	Experience In Proposed Role (Years)	Qualifications For Proposed Role	Role In Last 3 Projects
						an Architect Lead.	
Santharam Hanumandhan	Delivery Project Executive	Operations Manager	M&O	100	Six	• Six years of experience managing an M&O team for an enterprise solution within a public-sector client. • Over 13 years of experience in M&O. • Project Management Professional (PMP) certified. • 1.5 years of Cúram experience.	• Delivery Project Executive • Maintenance and Enhancement Manager • Business Area Manager
Siva Kumar Veluru	Senior Managing Consultant	M&O Technical Lead	M&O	100	Eight	• 12 years of experience architecting and designing enterprise solutions. • Ten years of experience in Health and	• Technical Architect • Technical Architect • Technical Architect

Name	Position In Organization	Proposed Role On Engagement	Focus Of Work Effort	% Of Time Proposed On Engagement	Experience In Proposed Role (Years)	Qualifications For Proposed Role	Role In Last 3 Projects
						Human Services industry. • Implemented and supported multiple Cúram Projects in an M&O capacity • Project Management Professional (PMP) certified. • Cúram Technical Architect for the Arkansas EEF project.	

2.1 Subcontractor Key Personnel

The Vendor should identify the Subcontractor Key Personnel for the Engagement including:

- Name
- Position in subcontractor organization
- Proposed role on Engagement
- Focus of work effort
- % of time for that work effort
- Experience in the proposed role
- Qualifications for the proposed role
- Role in the last three (3) projects

This section should also detail the past work each listed person has had with the Vendor or their staff.

Instructions: Provide a listing of the Subcontractor Key Personnel. This Table should be replicated for each Subcontractor used. Add rows as necessary. Do not change any of the completed cells. Any changes to the completed cells could lead to the disqualification of the Proposal.

Table 4. Proposed Subcontractor Key Personnel

Name	Position In Organization	Proposed Role On Engagement	Focus Of Work Effort	% Of Time Proposed On Engagement	Experience In Proposed Role (Years)	Qualifications For Proposed Role	Role In Last 3 Projects
James Scholz	Infrastructure Security Manager	Security Expert for DDI and M&O	Security	100	20	• Certified Chief Information Security Officer (C|CISO - CC-JS-786), and Certified Homeland Security Level IV (CHS-IV -106680) in addition to a Certified Information Systems Security Professional (CISSP – 33371). • Over 40 years implementing and managing security in an enterprise environment.	• Lead Cyber Security Architect • Senior Security Analyst • Project Manager/ Cyber Subject Matter Expert

3.0 Staff Management

The Vendor should describe internal standards, policies and procedures regarding hiring, professional development and human resource management, including processes for ensuring that the Engagement will not be affected by fluctuations in Vendor staffing and other assignments. The response should also include a discussion of the Vendor's management of subcontractor staffing.

Instructions: Provide descriptions of the Vendor's Staff Management approach.

IBM's resource management approach will support project continuity and stability through staff retention and replacement. Our three core tenets to resource management are shown in the following table.

Table 5. IBM's three tenets for resource management

Approach	Description
A Commitment from key personnel to be ready on day one	• We have assembled a team that is highly committed to the success of the State's implementation. • The key personnel resources have a history of successfully seeing projects through to completion.
Strategies to minimize the impact if staff members leave the project	• We will employ disciplined archiving of work products and deliverables, redundancies where necessary, and succession strategies for key personnel.
A culture that promotes a long-term, satisfying, career-focused environment	• We offer competitive benefit packages, internal and external training and education programs, proactive management development programs, career development centered on empowerment, team-building, and a supportive environment that builds trust and confidence.

The following figure illustrates IBM's structured approach for staffing the Arkansas IE-BM project. This approach is straightforward and fast to eliminate adverse impacts to the project schedule. This process works well, whether assembling the initial team or ramping up to meet increased staffing needs.

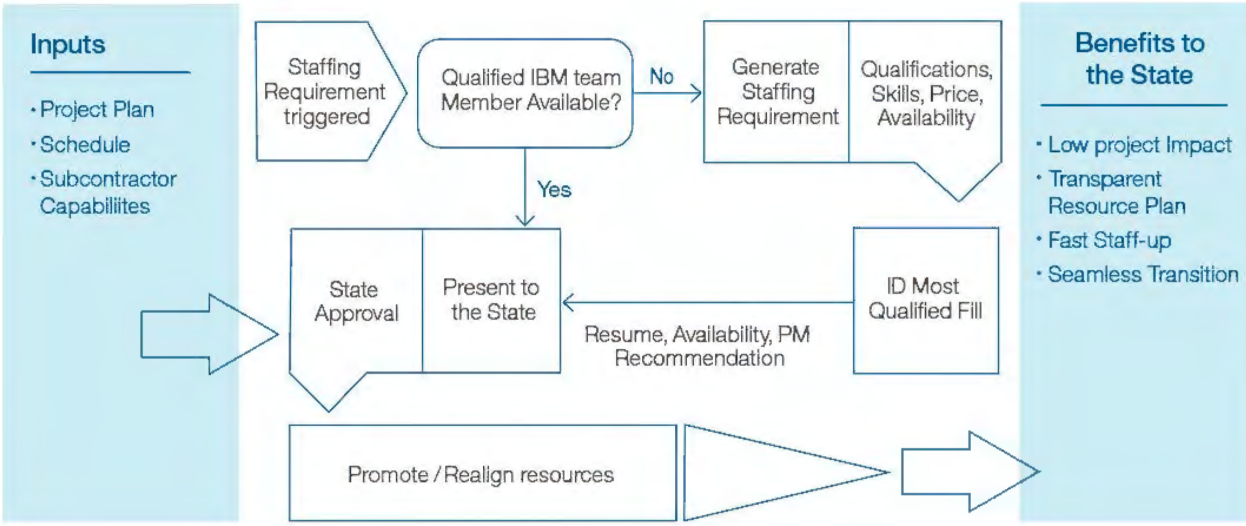

Figure 11: IBM Staffing Plan: Staff on Demand from a pool of IBM and Contracted Cúram Practitioners

It is no secret that Cúram technical experience is a very niche group of skill-sets. Resources with the requisite skills are both limited industry-wide and highly coveted. Fortunately, as the services arm of IBM Cúram, we have the strongest pool of resources available to support the Arkansas Department of Human Services (DHS) Integrated Eligibility and Benefit Management (IE-BM) implementation, of our competitors. Today, IBM has over 400 technical leaders supporting Cúram engagements. We continue to grow and develop our Cúram delivery practice, requiring certifications and continuing education of our staff. Typically, IBM strives to rotate technical staff from project to project annually, therefore, continually exposing our leading resources to new and greater challenges.

Unlike our competition, IBM does not require subcontractors to obtain and retain the highly specialized Cúram skillsets required to meet project requirements for IE-BM. Very few firms have the necessary skills and IBM certified personnel do support Cúram engagements. However, for most, the ones that do have the requisite skills, it should be noted that IBM maintains good relationships and master service agreements for sub-contract support. On occasion, IBM will engage these firms for staff augmentation project support. A partial list of contract firms that IBM has active agreements with currently and through which, we can easily provide surge Cúram staff include RedMane, eSystems, D2Sol, Diona, Stewards of Change, and CMA.

For this specific engagement with IE-BM, IBM has chosen to primarily staff and execute this contract with most internal IBM Cúram professionals with staff augmentation support from our teaming partner D2Sol. D2Sol is already aligned with an IBM core supplier and provides a steady stream of highly-skilled Cúram resources to IBM projects around the world today. IBM will also bring on key incumbent eSystems personnel, at the State’s discretion.

4.0 Training Policies and Procedures

The Vendor should describe its policies and procedures for providing education and training for its personnel, both initially and ongoing.

Instructions: Describe Vendor's approach for training and ongoing education of its personnel.

IBM staff and subcontractors are drawn from select resources who are regularly evaluated and trained to provide relevant skill remain current and new skills are acquired.

High project performance begins with an effective, compliant, “one badge” onboarding approach. In collaboration with the State, resource needs are identified based on system, process, and resource skill requirements.

- Key resources will be reviewed and approved by the State prior to selection
- Non-key resources are selected by project and team leadership to fill the identified slots

Resources who join the project team will receive onboarding training which includes background details and motivations for the project effort and outlines the scope and timeline of the project from a high-level perspective. The project PMO will assign and track completion of necessary Data Security & Privacy (DS&P), HIPPA, and project specific training required by both IBM and the State.

- Yearly training requirements will be coordinated by the PMO
- Periodic training will be administered as determined necessary by the PMO, team leads, and the State

Training is the same for both IBM and subcontractor staff and may include meetings, calls, review of printed material, digital communications, and training documentation. The onboarding effort will result in:

- Improved performance and productivity
- Improved confidence, reduced stress and confusion
- Higher retention rates

5.0 Staff Retention

The Vendor should provide assurances that it will retain the appropriate level of staff to complete the scope of this engagement throughout the contract period. The Vendor should describe its approach to staff retention, with specific attention to ensuring staff consistency throughout the duration of the Engagement.

Instructions: Describe Vendor's process and methodology for retaining Vendor personnel and ensuring that Key Personnel are consistently engaged on this Engagement. The Vendor should also discuss steps they have/will take to minimize staff turn-over to avoid costly re-training of Engagement resources.

To retain high-caliber personnel, we use retention techniques such as competitive salaries, spot bonuses, preferential choice of assignment, promotions, and exceptional benefits. Many industry studies have shown that compensation is just one factor in overall job satisfaction. Other factors that have a high correlation with job satisfaction include teamwork and a collaborative environment, open communications, feedback, opportunities for growth, and recognition, and we strive to provide these to our staff. For our leadership professionals, IBM invests in leadership development programs that lead the industry and are recognized by Forbes, ChiefExecutive.net, and others. Our Project Manager will use the following techniques to support staff retention:

- Professional, accessible, and fair management: Our management team is available to staff for discussion and resolution of issues, whether they are personal or business related.
- Performance standards: Our team will communicate performance standards to each employee throughout their employment. Our experience shows that letting an employee know exactly what is expected helps employees meet those expectations. We have found that maintaining very high standards can lead to a sense of success and pride, key elements in retention.
- Regular performance feedback: The Project Manager will monitor team performance from observation, project results, and using feedback from the State. This feedback is shared with the employee, thereby providing positive reinforcement for recognized superior performance or providing the opportunity for performance improvement in targeted areas.
- Continuing education and training support: Our team encourages education for applicable certifications and for degrees from accredited universities and colleges to equip our employees with the latest qualifications and tools to achieve success.
- Recognition for exemplary performance employee reward and incentive program: As a further retention and team-building tool, we will reward performance that exceeds the normal job response.

IBM has been recognized as an employer of choice by many organizations and journals. We have a local presence here in Little Rock and a history of working with many Arkansas Businesses and Government Agencies. IBM was announced as an Employer of Choice for Women (EOCFW) by the Equal Opportunity for Women in the Workplace Agency for the ninth consecutive year in 2016.

IBM is one of only 15 organizations to have received the EOCFW citation every year since 2001, having demonstrated excellence in areas such as maternity leave, flexible work arrangements, female manager representation and pay equity.

With IBM as your trusted advisor for this mission critical engagement, your staffing and turnover related risks are minimized from the day we start the project, to the day we successfully turnover the steady state operations to you.

6.0 Engagement Organization and Staffing Assumptions

Instructions: Document all assumptions related to the response for Engagement Organization and Staffing in the following Table. Add rows to the Table as necessary. Do not change any of the completed cells. Any changes to the completed cells could lead to the disqualification of the Proposal.

Table 6: Engagement Organization and Staffing Assumptions

ITEM #	REFERENCE (Section, Page, Paragraph)	DESCRIPTION	RATIONALE
1.	**Template T-11** Implementation Requirements Approach **Section 1.1** Project Management	Designated State Staff understanding of the Agile mindset, the IBM methodology and their role and responsibilities within the Sprint Cycles.	An understanding of the Agile mindset including self-organizing teams, feedback loops, people over process, minimum viable product, iterative and incremental development cycles is essential for the success of the Sprint Cycles and the overall project.
2.	**Template T-11** Implementation Requirements Approach **Section 2.0** Approach to Planning the Software Development Life Cycle (SDLC)	Designated State Staff who play the critical role of the Product Owner are available for Daily Stand up meetings and actively participate in ceremonies and backlog grooming activities.	Business SMEs typically take on the role of the Product Owner during a Sprint Cycle. The Product owner plays an active role in ceremonies and backlog grooming activities.
3.	**Template T-11** Implementation Requirements Approach **Section 2.0** Approach to Planning the Software Development Life Cycle (SDLC)	The IBM and State teams can co-locate as a single team during the sprint cycle.	To enable constant feedback loop and improve the efficiencies and effectiveness of the Sprint Teams, IBM assumes that Sprint team members can be in the same physical location.
4.	**Template T-11** Implementation Requirements Approach **Section 4.1** Requirements Validation and System Design Methodology	Action Items and parking lot issues identified during the Visioning sessions are resolved in a timely manner by the responsible owners.	IBM Project Schedule assumes the timely decision making during the Sprint cycle for the completion of the targeted user

ITEM #	REFERENCE (Section, Page, Paragraph)	DESCRIPTION	RATIONALE
			stories and not have leave behinds.
5.	**Template T-11** Implementation Requirements Approach **Section 4.1** Requirements Validation and System Design Methodology	Deliverables are approved on time by the State reviewers within the timeframes agreed upon as part of the PMO Deliverables Management Plan.	IBM Project team assumes timely approval of deliverables by the state review team to meet its milestones and timelines.
6.	**Template T-9** Technical Requirements Approach Section **3.4.2** Data Integration, Quality and ETL (Extraction, Transformation and Load)	Legacy data gaps and data quality issues identified during mock conversion are resolved in a timely manner by State Functional and Technical SME's that are familiar with the policies and the data structures in the Mainframe system.	The identification of the data gaps is the responsibility of the IBM-NG team. IBM assumes that data cleansing related tasks in the source systems are performed by the stateside SME's so that data conversion and cutover to Cúram is smooth and supports the new features and functions.
7.	**Template T-11** Implementation Requirements Approach **Section 1.2** Risks and Issues Management	Project Risks and Issues that are escalated are addressed by State Leadership in a timely and effective manner.	Identification of risks is the responsibility of the project team. IBM will work with the State Leadership on the management of the risks throughout the project lifecycle. However, IBM assumes that roles and responsibilities clearly identified are followed so that risk owners can execute the mitigation strategies on time.
8.	**Template T-11** Implementation Requirements Approach **Section 3.2.1** Change/Release/Configuration	Project Change Requests are analyzed for impacts and are addressed in the Change Control Board meetings that occur in regular cadence.	IBM assumes that the approval of change requests and the deployment of approved change requests to production

ITEM #	REFERENCE (Section, Page, Paragraph)	DESCRIPTION	RATIONALE
			deployments are based on impacts to the business, system components, project timeline and costs and will not introduce any risks.
9.	**Template T-11** Implementation Requirements Approach **Section 3** User Acceptance Testing	Availability of State staff that are familiar with the design decisions and the defect categorization definitions during the UAT phase.	IBM recommends end users to participate in the UAT phase so that the operational issues and potential gaps in the system design can be identified and addressed. End users also gain a better understanding of the system and can act as Super users post deployment and serve as ambassadors of the system.
10.	**Template T-9** Technical Requirements Approach **Section 2.8.1** Solution Administration	Availability of Stateside technical resources including DBAs, Network Administrators for troubleshooting and coordination needed to adhere to the SLAs	The IBM project team ability to meet and exceed SLA's hinges on timely communication and collaboration with the Stateside Infrastructure specialists to troubleshoot and resolve issues.
11.	**Template T-11** Implementation Requirements Approach **Section 7.3.2** Training Plan	Availability of State trainers for Train the Trainer sessions scheduled by the IBM Training team	The IBM Training team will schedule multiple sessions to deliver the Train the Trainer approach sessions and assumes that the entire State training team be able to participate in-person during this hands-on training sessions.
12.	**Template T-11** Implementation Requirements	Availability of State Policy and Operations staff to	The IBM OCM team works hand in hand

ITEM #	REFERENCE (Section, Page, Paragraph)	DESCRIPTION	RATIONALE
	Approach **Section 7.1** Organizational Change Management	review and finalize the OCM communications to field staff during and after production deployments.	with the State Policy and Operations team to deliver timely messages about system deployments, new and improved functionality, changes to processes and known system issues and work-arounds. Timely approval of their draft work is vital in getting the message to the field on time.
13.	**Template T-9** Technical Requirements Approach **Section 2.8.1** Solution Administration	Availability of technical and functional staff members from external agencies during Interface Testing.	The IBM team assumes that the external vendors will be available for Interface testing and assumes that the State team will be responsible for sharing the project timelines and coordinating with these external parties.
14.	**Template T-7** Functional Requirements Approach **Section 1.3** Approach to Pre-Screening	Timely decision making and availability of Community Action Agencies staff for LIHEAP application processing	The IBM Team assumes that the Community Action Agencies can consume the LIHEAP application information sent to them from the IE-BM system and are able to process the applications for timely delivery of the LIHEAP services.

Template T-1

Staff Experience

Response Template RFP #: SP-17-0012

Template T-5

Staff Experience

Response Template

RFP #: SP-17-0012

Table of Contents

List of Tables

1.0 Staff Experience

The Vendor should provide a completed Staff Experience reference form (see **Error! Reference source not found.**) for each proposed Key Personnel as indicated in the RFP (includes both the Vendor and subcontractor staff).

Instructions: For each reference listed, indicate the client name and client contact information, whether the engagement was for a public sector agency, project name, start and end dates the team member performed the role, duration of the experience and an overview of the project scope, focused on how it relates to the scope of this RFP. Duplicate Table 1 in its entirety, once per Key Personnel. Do not change any of the completed cells. Any changes to the completed cells could lead to the disqualification of the Proposal.

Table 1. DDI & M&O Engagement Director: Walter P. Szyperski

Team Member Name:	**Walter P. Szyperski**		
Description of Skill Sets and Experience	Walter is a Partner within IBM's Global Business Services (GBS) group. He currently leads the GBS Watson Health Cúram practice. Walter has 28 years of experience successfully helping clients design and implement transformational IT systems. Much of his career has been focused on delivery excellence, which is an array of activities to help facilitate solutions, estimates, and implementation meet or exceed client expectations. Walter will ultimately be responsible for the success of the IE-BM implementation and has the following characteristics: • Walter has 20 years of direct project oversight and authority over ongoing relationships with clients implementing enterprise solutions ranging from $40 million to $80 million. • 20 years managing integrated eligibility accounts that have included both Design, Development, Implementation (DDI) and Maintenance and Operations (M&O) for multiple projects similar in scope to IE-BM including successful and thriving Cúram programs in Missouri, New York, and California. • 28 years of professional experience in implementations and client support.		
Proposed Project Role for RFP #: SP-17-0012	Engagement Director	Subcontractor (Y/N)?	N
Years' Experience in Role:	15		
REFERENCES			
REFERENCE 1			
Client Name	County of San Diego		
Client Point of Contact	Nick Macchione – Director of Health and Human Services Agency		

Client Address	1600 Pacific Highway, Suite 206, San Diego, CA 92101				
Client Phone	(619) 515-6545				
Client Email	nick.macchione@sdcounty.ca.gov				
# of Employees	6,000	Public Sector (Y/N)?	Y	Project Name and Description	Connect Well San Diego – Person- centric care solution.
Date/Duration of Staff Involvement	Start (MM/YYYY)	04/2015		End (MM/YYYY)	Present
Project Scope	In early 2015, the County of San Diego (CoSD) Health and Human Services Agency embarked on a 24-month journey to implement a Cúram based solution to support their Live Well San Diego vision. Teamed with IBM as the prime Systems Integrator, CoSD has successfully implemented the ConnectWellSD solution that uses Master Data Management (MDM), interoperability, and purpose built Commercial Off the Shelf (COTS) technology to deliver person-centric care to their clients. This was accomplished through a three-phased capability release using our highly collaborative hybrid agile methods, resulting in on time and on budget deployments without a single severity 1 or severity 2 defect experienced in production. As the Project Executive, Walter serves as the primary point of contact for CoSD leadership, governance bodies, and other executive sponsors for activities related to contract administration, overall project management, and scheduling, correspondence between CoSD and IBM, dispute resolution, and status reporting to CoSD for the duration of contract. Walter is authorized to commit resources on this engagement and is responsible for addressing issues that cannot be resolved with IBM's Project Manager and managing and overseeing subcontractor relationships.				
Staff Role on the Project	Engagement Director				
REFERENCE 2					
Client Name	County of San Diego				
Client Point of Contact	Carrie Hoff – Deputy Director of Health and Human Service Agency				
Client Address	1255 Imperial Avenue, Suite 843, San Diego, CA 92101				
Client Phone	(619) 338-2862				
Client Email	carrie.hoff@sdcounty.ca.gov				
# of Employees	6,000	Public Sector (Y/N)?	Y	Project Name and Description	Connect Well San Diego – Person- centric care solution.
Date/Duration of Staff Involvement	Start (MM/YYYY)	04/2015		End (MM/YYYY)	Present

Project Scope	In early 2015, the County of San Diego (CoSD) Health and Human Services Agency embarked on a 24-month journey to implement a Cúram-based solution to support their Live Well San Diego vision. Teamed with IBM as the prime Systems Integrator, CoSD has successfully implemented the ConnectWellSD solution that uses Master Data Management (MDM), interoperability, and purpose built Commercial Off the Shelf (COTS) technology to deliver person-centric care to their clients. This was accomplished through a three-phased capability release using our highly collaborative hybrid agile methods, resulting in on time and on budget deployments without a single severity 1 or severity 2 defect experienced in production. As the Project Executive, Walter serves as the primary point of contact for CoSD leadership, governance bodies, and other executive sponsors for activities related to contract administration, overall project management, and scheduling, correspondence between CoSD and IBM, dispute resolution, and status reporting to CoSD for the duration of contract. Walter is authorized to commit resources on this engagement and is responsible for addressing issues that cannot be resolved with IBM's Project Manager and managing and overseeing subcontractor relationships.				
Staff Role on the Project	Engagement Director				
REFERENCE 3					
Client Name	County of San Diego				
Client Point of Contact	Jack Pellegrino - Director, Department of Purchasing & Contracting				
Client Address	5560 Overland Avenue, San Diego, CA 92123				
Client Phone	(858) 505-6565				
Client Email	jack.pellegrino@sdcounty.ca.gov				
# of Employees	6,000	Public Sector (Y/N)?	Y	Project Name and Description	Connect Well San Diego – Person- centric care solution.
Date/Duration of Staff Involvement	Start (MM/YYYY)	04/2015		End (MM/YYYY)	Present
Project Scope	In early 2015, the County of San Diego (CoSD) Health and Human Services Agency embarked on a 24-month journey to implement a Cúram-based solution to support their Live Well San Diego vision. Teamed with IBM as the prime Systems Integrator, CoSD has successfully implemented the ConnectWellSD solution that uses Master Data Management (MDM), interoperability, and purpose built Commercial Off the Shelf (COTS) technology to deliver person-centric care to their clients. This was accomplished through a three-phased capability release using our highly collaborative hybrid agile methods, resulting in on time and on budget deployments without a single severity 1 or severity 2 defect experienced in production.				

	As the Project Executive, Walter serves as the primary point of contact for CoSD leadership, governance bodies, and other executive sponsors for activities related to contract administration, overall project management, and scheduling, correspondence between CoSD and IBM, dispute resolution, and status reporting to CoSD for the duration of contract. Walter is authorized to commit resources on this engagement and is responsible for addressing issues that cannot be resolved with IBM's Project Manager and managing and overseeing subcontractor relationships.	
Staff Role on the Project	Engagement Director	
INDIVIDUAL QUALIFICATIONS		
Certifications (if applicable)		
PMI/PMP	Member ID#: 2325934	
	Earned Date: 03/05/2012	Expiration Date: 03/31/2018
Other	Member ID#:	
	Earned Date:	Expiration Date:

Table 2. Project Manager: Ennapadam A. Padmanabhan

Team Member Name:	**Ennapadam A. Padmanabhan**		
Description of Skill Sets and Experience	Pad is an Associate Partner and Program Executive in IBM's GBS - Public Sector Enterprise Applications practice. His skill sets and experiences include the following components: • 22 years of experience leading the implementation of enterprise solutions. These include Eligibility and Enrollment Systems at the State of Missouri (MEDES Project) and the State of Minnesota (MNSure). Both engagements successfully implemented the Cúram product. Additionally, Pad has worked at the Federal Level at the Center for Medicare and Medicaid (CMS) and the USDA implementing Oracle solutions. • Seven years of experience implementing solutions of similar functional scope as IE-BM. Both at the State of Minnesota (MNSure) and at the State of Missouri (MEDES), Pad implemented Cúram solutions focusing on the Affordable Care Act (ACA) and MAGI functionality. The overall scope of the State of Missouri MEDES program is roughly similar in size and complexity to the State of Arkansas IE-BM program as envisioned in the RFP. • 22 years of client support and project management experience.		
Proposed Project Role for RFP #: SP-17-0012	Project Manager	Subcontractor (Y/N)?	N
Years' Experience in Role:	22		
REFERENCES			

<table>
<tr><th colspan="6">REFERENCE 1</th></tr>
<tr><td>Client Name</td><td colspan="5">State of Missouri</td></tr>
<tr><td>Client Point of Contact</td><td colspan="5">Paula Peters - Project Director, Information Technology Services Division</td></tr>
<tr><td>Client Address</td><td colspan="5">301 West High Street, Room 280, PO Box 809, Jefferson City, MO 65102-0809</td></tr>
<tr><td>Client Phone</td><td colspan="5">(573) 526-5214</td></tr>
<tr><td>Client Email</td><td colspan="5">Paula.peters@oa.mo.gov</td></tr>
<tr><td># of Employees</td><td>150</td><td>Public Sector (Y/N)?</td><td>Y</td><td>Project Name and Description</td><td>MEDES – A complex MAGI implementation for the State of Missouri.</td></tr>
<tr><td>Date/Duration of Staff Involvement</td><td>Start (MM/YYYY)</td><td colspan="2">05/2015</td><td>End (MM/YYYY)</td><td>Present</td></tr>
<tr><td>Project Scope</td><td colspan="5">In Missouri, IBM assumed the role of lead System Integrator (SI) in May of 2015. Missouri purchased the full suite of Cúram modules in 2013 and embarked on a journey to implement HCR (MAGI), CGIS, SNAP, TANF, and other modules over a multi-year schedule. Missouri decided in May 2015 to replace their SI, and IBM was awarded that work. The MEDES project includes the implementation of MAGI functionality including Change in Circumstance functionality for the MO-MEDES program and Maintenance and Operations (M&O) support of the MEDES system in production.

Under Pad's leadership as the Project Executive, IBM has successfully managed the M&O function since taking over as the SI. Since the Fall of 2015, IBM has released new functionality every four to six weeks. Additionally, MEDES went live in August 2016 with the complex Change in Circumstance functionality. The base Cúram system was upgraded to version 6.2 in December 2016. The current plan calls for implementation of several new programs by 3Q 2017 including the following list:

• Reasonable Opportunity Functionality.
• Single Sign-on Functionality.
• Quick Denial Functionality.
• Transitional Medicaid.
• Presumptive Eligibility.
• Prior Quarter Functionality.
• Annual Renewals.
• Show Me Healthy Babies.
• Verify Lawful Presence (VLP 2 and 3).

During his tenure at MEDES, Pad successfully assumed responsibilities for all the items required in the IE-BM RFP. Specifically, Pad functioned as the single point of contact for IBM with the State executives. On several occasions, Pad provided innovative solutions to keep the program moving on</td></tr>
</table>

	State-mandated aggressive schedules. These included the following components: • Aggressively employing the IBM product organization to resolve key defects in accelerated fashion. • Managing the resource load to dynamic spikes and lull during the program. • Establishing priorities in a collaborative fashion through regular meetings with the stakeholders and regular reporting on progress. • Establishing an agile development framework to accelerate remediation of defects by business priority. Pad's work on the program resulted in the following key benefits for the State: • Effective account transfer interface with CMS with the failing records reduced by 96% compared to when IBM assumed responsibilities. • Implementation of key MAGI functionality in an extremely aggressive timeline (see previous list). • Reduced records on the bypass file, a workaround employed by the prior contractor, by over 80%. • Key state performance metrics all showed vast improvement over the two years. • Redeployment of 30% of staff to other productive tasks because of IBM deployed functionality. • Efficient management of subcontractor staff allowing IBM to staff project with required talent for the State's complex programs (Cúram, rules, Informatica, data analysis, project management, and testing automation).				
Staff Role on the Project	Project Executive				
REFERENCE 2					
Client Name	State of Missouri				
Client Point of Contact	John McCarver				
Client Address	301 West High Street, Room 280, PO Box 809, Jefferson City, MO 65102-0809				
Client Phone	(573) 680-5971				
Client Email	John.e.McCarver@dss.mo.gov				
# of Employees	150	Public Sector (Y/N)?	Y	Project Name and Description	MEDES – A complex MAGI implementation for the State of Missouri.
Date/Duration of Staff Involvement	Start (MM/YYYY)	02/2015		End (MM/YYYY)	Present
Project Scope	In Missouri, IBM assumed the role of lead System Integrator (SI) in May of 2015. Missouri purchased the full suite of Cúram modules in 2013 and				

	embarked on a journey to implement HCR (MAGI), CGIS, SNAP, TANF, and other modules over a multi-year schedule. Missouri decided in May 2015 to replace their SI, and IBM was awarded that work. The MEDES project includes the implementation of MAGI functionality including Change in Circumstance functionality for the MO-MEDES program and Maintenance and Operations (M&O) support of the MEDES system in production. Under Pad's leadership as the Project Executive, IBM has successfully managed the M&O function since taking over as the SI. Since the Fall of 2015, IBM has released new functionality every four to six weeks. Additionally, MEDES went live in August 2016 with the complex Change in Circumstance functionality. The base Cúram system was upgraded to version 6.2 in December 2016. The current plan calls for implementation of several new programs by 3Q 2017 including the following list: • Reasonable Opportunity Functionality. • Single Sign-on Functionality. • Quick Denial Functionality. • Transitional Medicaid. • Presumptive Eligibility. • Prior Quarter Functionality. • Annual Renewals. • Show Me Healthy Babies. • Verify Lawful Presence (VLP 2 and 3). During his tenure at MEDES, Pad successfully assumed responsibilities for all the items required in the IE-BM RFP. Specifically, Pad functioned as the single point of contact for IBM with the State executives. On several occasions, Pad provided innovative solutions to keep the program moving on State-mandated aggressive schedules. These included the following components: • Aggressively employing the IBM product organization to resolve key defects in accelerated fashion. • Managing the resource load to dynamic spikes and lull during the program. • Establishing priorities in a collaborative fashion through regular meetings with the stakeholders and regular reporting on progress. • Establishing an agile development framework to accelerate remediation of defects by business priority. Pad's work on the program resulted in the following key benefits for the State: • Effective account transfer interface with CMS with the failing records reduced by 96% compared to when IBM assumed responsibilities. • Implementation of key MAGI functionality in an extremely aggressive timeline (see previous list). • Reduced records on the bypass file, a workaround employed by the prior contractor, by over 80%.

	• Key state performance metrics all showed vast improvement over the two years. • Redeployment of 30% of staff to other productive tasks because of IBM deployed functionality. • Efficient management of subcontractor staff allowing IBM to staff project with required talent for the State's complex programs (Cúram, rules, Informatica, data analysis, project management, and testing automation).				
Staff Role on the Project	Project Executive				
REFERENCE 3					
Client Name	State of Minnesota				
Client Point of Contact	Deb Tibstra				
Client Address	540 Cedar Street, St Paul, MN, 55155				
Client Phone	(651) 755-7326				
Client Email	deb.tibstra@state.mn.us				
# of Employees	70	Public Sector (Y/N)?	Y	Project Name and Description	MNSure - Implementation of MAGI functionality and the MNHIX exchange for the State of Minnesota.
Date/Duration of Staff Involvement	Start (MM/YYYY)	06/2014		End (MM/YYYY)	02/2015
Project Scope	MNSure is an implementation of MAGI functionality and the Health Care Exchange (MNHIX) exchange for the State of Minnesota. Pad functioned as the Project Manager and Executive for a highly-visible ACA State MNHIX implementation using Cúram. He successfully directed a 60-member team to implement important exchange functionality and eligibility functionality involving the case worker and the citizen portal. This implementation also included integration with several Federal sources such as MMIS and the Federal Data Hub. Pad managed relationships with diverse vendors and state teams to reach consensus on scope and manage and deliver to the agreed upon project plan. Under Pad's leadership as the Project Executive, IBM successfully turned around the MNHIX program, and was instrumental in a very successful open enrolment on MNHIX for the year 2015. This led to successful renewals in each of the following years. Pad discharged all the responsibilities outlined in this RFP for the IE-BM Project Manager including aggressively managing the IBM resources and activities to enable a very successful outcome for the State. Pad has been meticulous in maintaining constant contact at the State management and executive levels in reporting status, issues, and options to remedy issues. Pad functioned as the single point of contact for IBM with the State executives. On several occasions, Pad provided innovative solutions to				

	keep the program moving on State-mandated aggressive schedules. These included the following: • Aggressively employing the IBM product organization to resolve key defects in accelerated fashion. • Managing the resource load to dynamic spikes and lull during the program. • Establishing priorities in a collaborative fashion through regular meetings with the stakeholders and regular reporting on progress. • Establishing an agile development framework to accelerate remediation of defects by business priority.	
Staff Role on the Project	Project Executive	
INDIVIDUAL QUALIFICATIONS		
Certifications (if applicable)		
PMI/PMP	Member ID#: 1726320	
	Earned Date: 06/27/2014	Expiration Date: 06/26/2020
Other	Member ID#:	
	Earned Date:	Expiration Date:

Table 3. Integration and Functional Lead Yogi Ganesan

Team Member Name:	**Yogi Ganesan**		
Description of Skill Sets and Experience	Yogi has worked in implementations for Health and Human Services (HHS) for 18 years of a similar functional scope as IE-BM. For 12 of those years, he has been leading project teams on complex system implementations. The following list showcases his skill sets and experiences: • Project Management Professional (PMP) certified. • Certified Scrum Master and Scrum Alliance. • Integrated Eligibility Systems. • Legacy conversion and cut-over. • COTS implementations. • Patient Protection and Affordable Care Act (PPACA). • Child Welfare and Child Care Licensing Systems. • Date Warehousing and Business Intelligence. • Agile methodology.		
Proposed Project Role for RFP #: SP-17-0012	Integration and Functional Lead	Subcontractor (Y/N)?	N
Years' Experience in Role:	12		
REFERENCES			
REFERENCE 1			
Client Name	Ohio Department of Job and Family Services		

Client Point of Contact	Bill Ennis, Data Warehousing Manager				
Client Address	4200 E. Fifth Ave. Columbus, OH 43219				
Client Phone	25				
Client Email	Y				
# of Employees	25	Public Sector (Y/N)?	Y	Project Name and Description	Ohio SACWIS Enhancements and Data Warehousing Project - An automated case management tool that supports social workers' foster care and adoptions assistance case management practice.
Date/Duration of Staff Involvement	Start (MM/YYYY)	02/2011		End (MM/YYYY)	11/2012
Project Scope	The Ohio Statewide Automated Child Welfare Information System (SACWIS) is an automated case management tool that supports social workers' foster care and adoptions assistance case management practice. The system tracks an average of 250,000 intakes per year and payments totaling $450 million per annum that are paid out to service providers and adoptive parents. An iterative test-driven development approach has been adopted and the monthly deployments add value to the caseworkers and management staff alike. As the Deputy Project Manager and Functional Manager, Yogi was responsible for day-to-day operations, deliverables, and invoices totaling $6 million per annum. He coordinated testing and development efforts with cross functional teams using an iterative, incremental agile approach using the HP Quality Center tool. Yogi managed the monthly on time, under budget product release cycles that address all functional requirements. He also led the Joint Application Design (JAD) Sessions with State SMAs and performed technical and business systems analysis of project requirements that exceeded the overall project objectives. Furthermore, Yogi helped develop use case scenarios, prepared status reports and delivered presentations to project sponsors. He provided organizational transformation and improvement; data warehouse and master data management to support Business Intelligence initiatives to measure program performance and deliver superior client services and formulate new public policies. In addition, he managed development of reporting cubes and created a robust and dynamic user reporting capability using the Query Studio tool and coordinated data governance strategies with State Project Management Office (PMO).				
Staff Role on the Project	Deputy Project Manager and Functional Manager				

<table>
<tr><th colspan="6">REFERENCE 2</th></tr>
<tr><td>Client Name</td><td colspan="5">Maine Department of Human Services</td></tr>
<tr><td>Client Point of Contact</td><td colspan="5">Anthony Pelotte, Director Division of Business Technology</td></tr>
<tr><td>Client Address</td><td colspan="5">11 State House Station, 19 Union Street, Augusta, ME 04333</td></tr>
<tr><td>Client Phone</td><td colspan="5">(207) 624-4168</td></tr>
<tr><td>Client Email</td><td colspan="5">anthony.pelotte@maine.gov</td></tr>
<tr><td># of Employees</td><td>20</td><td>Public Sector (Y/N)?</td><td>N</td><td>Project Name and Description</td><td>State of Maine IT Applications, Infrastructure, and Business Processes Modernization Project Phase I - Achieve baseline integration with the Federally Facilitated Marketplace (FFM) for the ACA.</td></tr>
<tr><td>Date/Duration of Staff Involvement</td><td>Start (MM/YYYY)</td><td>06/2013</td><td></td><td>End (MM/YYYY)</td><td>01/2014</td></tr>
<tr><td>Project Scope</td><td colspan="5">The State of Maine Department of Health and Human Services' (DHHS) objective for the IT Applications, Infrastructure, and Business Processes Modernization Project Phase one is to implement the design recommendations that KPMG developed in the initial phase of the project to achieve baseline integration with the FFM for the ACA.

To assist the State in its execution of Phase one, the project provided the following services:
• Program management assistance (PMA).
• Requirements definition and functional and technical design development assistance (in the form of a combined business requirements definitions [BRD] and system requirements specifications [SRS]).
• Quality assurance (QA) and quality testing.
• O&M planning assistance.
• Organizational change management (OCM) assistance.

As the Functional Lead and Testing Manager, Yogi used an enterprise architecture approach to business process modeling, requirements gathering, use case, and test case elaboration using the open source SPARX EA tool. He was responsible for the changes needed to the Rules Engine within the existing Integrated Eligibility system, ACES, to accommodate the MAGI MA household composition and facilitate eligibility rules changes align with the business requirements of the ACA. He led the Client Self Service Web Portal (My Maine Connection) related changes to support the single streamlined application and no wrong door policy of CMS. He also defined the test approach and methodology for the account transfer testing with CMS. In</td></tr>
</table>

	addition, he conducted QA of the test approach and use case and test scenario development assistance.				
Staff Role on the Project	Functional Lead and Testing Manager				
REFERENCE 3					
Client Name	Wisconsin Department of Human Services				
Client Point of Contact	Jason Wutt				
Client Address	WRMA Inc 12300 Twinbrook Parkway, Suite 310, Rockville, MD 20852				
Client Phone	(262) 443-9328				
Client Email	jwutt@wrma.com				
# of Employees	50	Public Sector (Y/N)?	Y	Project Name and Description	WiSACWIS – The CGI solution operates in a Service Oriented Architecture (SOA), with core components following the standard web service protocols.
Date/Duration of Staff Involvement	Start (MM/YYYY)	12/2006		End (MM/YYYY)	06/2007
Project Scope	The SACWIS application is an open, vendor neutral web-based solution built on open standards and open source. The solution operates in a SOA, with core components following the standard web service protocols. The SACWIS solution has a cumulative total of over 75,000 production hours, has processed more than 80 million production transactions, and has distributed over $1 billion dollars in payments to child welfare providers. As the Functional Group Lead, Yogi was responsible for developing the object model for the assessment related change order and analyzing changes to the existing SACWIS functionality including Federal NCANDS report generation. He developed and implemented a transition plan for technical knowledge transfer to the State operations team. Yogi managed the expectations of the WiSACWIS project team with a clear understanding of the Project Sponsor's project objectives and led focus groups of SMAs to achieve organizational changes for integrated systems and business processes. Furthermore, Yogi verified that the configured solution addressed all the child welfare functional requirements as part of help desk triage.				
Staff Role on the Project	Functional Group Lead				
INDIVIDUAL QUALIFICATIONS					
Certifications (if applicable)					
PMI/PMP	Member ID#: 1507647				
	Earned Date: 05/18/2012		Expiration Date: 05/17/2018		

Agile Scrum Master	Member ID#: 000209144	
	Earned Date: 08/29/2012	Expiration Date: 08/28/2018

Table 4. Training Lead: James Collier

Team Member Name:	**James Collier**				
Description of Skill Sets and Experience	James has been leading training teams for IBM on complex system implementations in similar size and scope as IE-BM for over 10 years. Since joining IBM in 1998, James has worked in several capacities including instructional design, course-ware development, project management, consulting, and recruiting and hiring. He has provided leadership and creative solutions for the development of training and reference material for both traditional classroom training and distance learning. James led all training and knowledge transfer planning, material development delivery for multiple engagements including clients such as the County of San Diego Health and Human Services Agency, Equinix, Inc, and the Florida Department of Children and Families. This includes preparing for the deployment of the solution to the full organization.				
Proposed Project Role for RFP #: SP-17-0012	Training Lead			Subcontractor (Y/N)?	N
Years' Experience in Role:	10				
REFERENCES					
REFERENCE 1					
Client Name	County of San Diego Health and Human Services Agency				
Client Point of Contact	Francisco Puentes, Staff Development Coordinator				
Client Address	1255 Imperial Avenue, Suite 740, San Diego, CA 92101				
Client Phone	(619) 338-2788				
Client Email	Francisco.puentes@sdcounty.ca.gov				
# of Employees	6	Public Sector (Y/N)?	Y	Project Name and Description	Connect Well San Diego – Person- centric care solution.
Date/Duration of Staff Involvement	Start (MM/YYYY)	04/2015		End (MM/YYYY)	12/2016
Project Scope	The County of San Diego has key objectives of supporting residents to become healthy, safe, and thriving. To achieve these objectives, the County recognizes that it must increase information sharing capabilities to increase coordination across programs, reduce duplication and rework by staff and customers, and manage services and resources effectively. Spanning more than 4,000 square miles, and home to over 3,000,000 residents, San Diego				

<table>
<tr><td></td><td colspan="5">County is one of the largest metropolitan and rural regions in the country. In support of this initiative, ConnectWellSD provides the functionality necessary to manage referrals and collaboration across County agencies and in-depth reporting capabilities to better inform critical decision making.

As the Training Lead, James managed the end-to-end implementation of training for the ConnectWellSD project. The Training team was responsible for developing and delivering web based, virtual learning, and instructor-led training courses across all three system functional release phases to the full organizational system user base. User security groups were implemented access level to system functionality, and training was organized around those levels. The release and deployment of system functionality included the following phases:

• Phase one: Customer search, basic referrals, and basic reports.
• Phase two: Advanced referrals, collaborative service delivery, expanded customer search, alerts, and shared reports.
• Phase three: Expanded customer search, expanded alerts, notifications, and advanced population based shared analytics.

Working collaboratively with County training counterparts, the IBM team facilitated the County had the tools, knowledge, and capability to maintain and continuously deliver the prepared training beyond the life of the contract. James led training and knowledge transfer planning, material, and delivery on this engagement. He also prepared for the deployment of the solution to the full organization.</td></tr>
<tr><td>Staff Role on the Project</td><td colspan="5">Training Lead</td></tr>
<tr><td colspan="6">REFERENCE 2</td></tr>
<tr><td>Client Name</td><td colspan="5">Equinix, Inc.</td></tr>
<tr><td>Client Point of Contact</td><td colspan="5">Julie Biberstein, Director, Business Operations, Americas</td></tr>
<tr><td>Client Address</td><td colspan="5">One Lagoon Drive, 4th Floor, Redwood City, CA 94065</td></tr>
<tr><td>Client Phone</td><td colspan="5">(650) 598-6165</td></tr>
<tr><td>Client Email</td><td colspan="5">jbiberstein@equinix.com</td></tr>
<tr><td># of Employees</td><td>6</td><td>Public Sector (Y/N)?</td><td>N</td><td>Project Name and Description</td><td>REIT and SWIFT - Upgrade the Equinix finance system to Oracle R12 and enable a REIT reporting structure for IRS tax purposes.</td></tr>
<tr><td>Date/Duration of Staff Involvement</td><td>Start (MM/YYYY)</td><td colspan="2">11/2013</td><td>End (MM/YYYY)</td><td>06/2014</td></tr>
</table>

Project Scope	Equinix provides network-neutral data centers (Internet Business Exchange [IBX]) and interconnection services. The company offers collocation, traffic exchange, and outsourced IT infrastructure solutions to enterprises, content companies, SIs, and over 600 network service providers worldwide. Equinix operates 98 data centers across 38 major metropolitan areas in 12 countries in North America, Europe, Asia-Pacific, and South America. To transform Equinix's tax structure to a Real Estate Investment Trust (REIT), IBM was hired to upgrade the Equinix finance system to Oracle R12 and enable a REIT reporting structure for IRS tax purposes. As the Training Lead, James managed a team of developers in a cross-border engagement that enabled the end-to-end implementation of training in support of the Oracle R12 upgrade. Following the Assess, Design, Develop, Implement, and Evaluate (ADDIE) methodology, he performed an audience analysis, developed a training strategy and training prototype, and documented standards and templates to enable the consistent implementation of training for the resources on his team. With five of the seven resources on his team off-shore from IBM India, James effectively coordinated activities between on- and off-shore teams to deliver 26 instructor-led training courses, three web-based courses, and 78 system simulation exercise demonstrations. Implemented through Train-the-Trainer, James' Training team supported the planning and logistics for delivery and conducted an effective hand-off, so the client was able to maintain developed material and continue to deliver on-going training sessions. Throughout the life of the engagement, James fostered and maintained a collaborative relationship with the client and effectively managed expectations per the project schedule. James led training and knowledge transfer planning, material, and delivery on this engagement. He also prepared for the deployment of the solution to the full organization.
Staff Role on the Project	Training Lead
REFERENCE 3	
Client Name	Florida Department of Children and Families
Client Point of Contact	Linda Radigan, M.Ed., Case Practice Specialist, Office of Child Welfare
Client Address	1317 Winewood Blvd., Bldg. 1, Room 302-M, Tallahassee, FL 32399
Client Phone	(850) 717-4679 Desk, (850) 321-1492 Cell
Client Email	Linda.Radigan@myflfamilies.com

# of Employees	15	Public Sector (Y/N)?	Y	Project Name and Description	Activation Phase Enhancements - Transform Florida's child welfare system of care to work more effectively with children and families towards achieving child safety.
Date/Duration of Staff Involvement	Start (MM/YYYY)	07/2013		End (MM/YYYY)	11/2013
Project Scope	The Child Protection Enhancement and SACWIS Compliance Project addressed the needs of over 1,500 Child Protective Investigators who needed the proper tools and decision supports to understand child and family functioning and safety. The vision was to transform Florida's child welfare system of care to work more effectively with children and families towards achieving child safety. Updates to Department of Children and Families' (DCF) Florida Safe Families Network (FSFN) web-based case management application complement the safety methodology, providing DCF workers and supervisors with a powerful tool for assessing safety in the holistic context of overall family functioning. Enhancements to FSFN enable DCF staff to create and maintain case records in a widespread manner, while minimizing duplicate data entry. As part of the Child Protection Enhancement and SACWIS Compliance Project, IBM was tasked with the development of web-based training modules to familiarize DCF field and supervisory staff with the updates and enhancements to FSFN application functionality related to the enhanced safety methodology. FSFN was a troubled project for training when James assumed the Training Lead role after several previous leads were not able to effectively engage with the State. After reviewing the documented scope, timeline, and overall effort, James engaged immediately with the client to validate assumptions and expectations around the scope. This led to an expansion of the training team from six on-site resources to eight resources on-site and seven resources off-site to meet requirements and delivery timelines. The Training team developed and delivered 19 complex eLearning modules to over 5,000 state-wide Child Case Investigators and Child Case Managers in 4.5 months and created a very positive atmosphere of mutual respect with the client for the amount of quality material produced in such a short period of time. Each training milestone was achieved on-time and to high client satisfaction. The success of the Training team strengthened the relationship with the client, which paved the way for additional contract work beyond the M&O period. From the beginning, James established a strong and healthy collaborative relationship with the client and maintained that positive collaboration through the end of the contract. James led training and knowledge transfer planning, material, and delivery on this engagement. He also prepared for the deployment of the solution to the full organization.				

Staff Role on the Project	Training Lead	
INDIVIDUAL QUALIFICATIONS		
Certifications (if applicable)		
PMI/PMP	Member ID#:	
	Earned Date:	Expiration Date:
Other	Member ID#:	
	Earned Date:	Expiration Date:

Table 5. Testing Lead: Gaurang Mavani

Team Member Name:	**Gaurang Mavani**		
Description of Skill Sets and Experience	Gaurang is a Senior Managing Consultant within IBM's Watson Health practice with over 15 years of experience in design, development, testing, and delivery. He has a proven track record of successfully leading testing teams for IBM on complex system implementations in the public Sector including implementations for the County of San Diego Health and Human Services Agency, the New York City Housing Authority, and the New Jersey Department of Pensions and Benefits. His strengths include leading and managing testing, functional, and development teams for external clients in Cúram, Oracle CRM, and SAP ERP. Gaurang is a Cúram V.6 certified Business Analyst and has multiple Oracle certifications. Gaurang's skill sets and experiences exceed the expected qualifications for the Testing Lead position. He has over six years of experience as a Testing Lead for projects similar in size and complexity as IE-BM within the public sector.		
Proposed Project Role for RFP #: SP-17-0012	Testing Lead	Subcontractor (Y/N)?	N
Years' Experience in Role:	6		
REFERENCES			
REFERENCE 1			
Client Name	County of San Diego Health and Human Services Agency		
Client Point of Contact	John Vogel, Technical PM and Client Counterpart		
Client Address	1255 Imperial Avenue, Suite 740, San Diego, CA 92101		
Client Phone	(619) 338-2848		
Client Email	John.vogel@sdcounty.ca.gov		

# of Employees	7	Public Sector (Y/N)?	Y	Project Name and Description	Connect Well San Diego – Person- centric care solution.
Date/Duration of Staff Involvement	Start (MM/YYYY)	04/2015		End (MM/YYYY)	10/2016
Project Scope	The County of San Diego has key objectives of supporting residents to become healthy, safe, and thriving. To achieve these objectives, the County recognizes that it must increase information sharing capabilities to increase coordination across programs, reduce duplication and rework by staff and customers, and manage services and resources effectively. Spanning more than 4,000 square miles, and home to over 3,000,000 residents, San Diego County is one of the largest metropolitan and rural regions in the country. In support of this initiative, ConnectWellSD provides the functionality necessary to manage referrals and collaboration across County agencies and in-depth reporting capabilities to better inform critical decision making. The Cúram product was used in San Diego to implement Case Management, Task Management and MDT. Gaurang led the testing team for the end-to-end implementation of the ConnectWellSD project. Gaurang was responsible for developing the project testing strategy and the test plan for each phase of the project. The testing team worked collaboratively with the client counterpart across all phases of the project. The testing team facilitated that the testing effort aligned with business requirements. Gaurang enabled the County to have complete visibility to the test process and results by verifying the test plan and processes were coordinated with all stakeholders and facilitating documentation and resolution of issues discovered throughout the entire testing process. Gaurang led the user acceptance testing (UAT), guiding the client with strategic and technical insight. He was also the point of contact for issue identification, analysis, and resolution.				
Staff Role on the Project	Test Lead				

REFERENCE 2	
Client Name	New York City Housing Authority
Client Point of Contact	Kondal Jinna, Project Manager
Client Address	250 Broadway, New York, New York
Client Phone	(248) 761-1387
Client Email	kondalj@gmail.com

# of Employees	25	Public Sector (Y/N)?	Y	Project Name and Description	NYCHA NICE – End-to-end Oracle Siebel CRM Solution Case Management for managing application intake process to determine applicant eligibility.
Date/Duration of Staff Involvement	Start (MM/YYYY)	11/2008		End (MM/YYYY)	02/2011
Project Scope	Implementing an end-to-end Oracle Siebel CRM Solution Case Management for managing application intake process to determine applicant eligibility for NYC housing. The solution included Oracle Siebel CRM, a document management system, and an asset management system. IBM's 80-member implementation team supported the City of New York's users. As the Test Lead, Gaurang managed a team of onshore and offshore members during system test. Additionally, Gaurang completed the following actions: • Planned and executed testing activities including SIT, UAT, regression, performance testing, and security testing. • Developed and managed the defect management process. • Managed, coordinated, and reported statuses to the project stakeholders on a weekly basis. • Led all testing activities including planning, documentation, and execution. • Verified the test plan and process was coordinated with all stakeholders. • Facilitated the documentation and resolution of issues discovered during the testing process. • Served as the point of contact for UAT.				
Staff Role on the Project	Test Lead				
REFERENCE 3					
Client Name	NJ Department of Pensions and Benefits				
Client Point of Contact	Vid Dikert, Project Manager				
Client Address	50 West State St, PO Box 295, Trenton, NJ				
Client Phone	(609) 752 4897				
Client Email	Vid.Dikert@treas.nj.gov				

# of Employees	6	Public Sector (Y/N)?	Y	Project Name and Description	Siebel Upgrade - Siebel Case Management Software and Hardware Platforms Upgrades.
Date/Duration of Staff Involvement	Start (MM/YYYY)	10/2012		End (MM/YYYY)	02/2013
Project Scope	The program involved upgrading the case management solution to the latest version of Siebel Public Sector Case Management. IBM's ten-member team supported the effort, which was integrated with New Jersey's financial system. As the Test Lead, Gaurang developed the test strategy and plan for the upgrade by identifying the impact areas for the product upgrade on the new hardware platform. Based on the areas of impact, the test scripts were designed, created, and executed. The test results were documented along with the defects. The strategy, the plan, the test scripts, and the test execution results were shared with all the stakeholders. Gaurang coordinated with the project team and the client team for issue resolution and closure. Despite tight schedules, the testing effort was successfully completed on time and within budget with the highest quality. Gaurang was the project team's point of contact for all the testing activities and lead to a successful go live.				
Staff Role on the Project	Test Lead				

INDIVIDUAL QUALIFICATIONS		
Certifications (if applicable)		
IBM Cúram Certified Business Analyst v6.0	Member ID#: N/A	
	Earned Date: 04/20/2013	Expiration Date: N/A
Oracle Siebel 8 Certified Business Analyst	Member ID#: N/A	
	Earned Date: 10/14/2012	Expiration Date: N/A
Oracle Business Intelligent Enterprise Certified Consultant 10g	Member ID#: N/A	
	Earned Date: 11/18/2012	Expiration Date: N/A
Oracle Siebel 8 Certified Core Consultant	Member ID#: N/A	
	Earned Date: 10/10/2012	Expiration Date: N/A

Table 6. Technical Lead: Ramchandra Takkar

Team Member Name:	**Ramchandra Takkar**		
Description of Skill Sets and Experience	Ramchandra is a Technical Lead in IBM's Watson Health practice. He has ten years of experience on complex projects and nine years of experience as a Technical Lead in a management role. Ramchandra has ten years of experience architecting/designing enterprise solutions and specializes in architecting solutions, analysis, and problem solving, project management, and people management. Ramchandra has seven years of end-to-end delivery and operational management experience with the Cúram product. He also has three years of experience consulting clients implementing and customizing the Cúram product as part of an enterprise solution within the public sector. Ramchandra has strong leadership skills, is a quick learner, and has nine years of people management at IBM. Furthermore, Ramchandra is a certified Cúram Business Process Analyst making him very experienced on the Cúram product.		
Proposed Project Role for RFP #: SP-17-0012	Technical Lead	Subcontractor (Y/N)?	N
Years' Experience in Role:	10		
REFERENCES			
REFERENCE 1			
Client Name	Arkansas Department of Health and Human Services		
Client Point of Contact	Ali Yavuzer, Enterprise Systems Director		
Client Address	425 West Capitol Avenue, Little Rock, Arkansas 72201		
Client Phone	(501) 638-3150		
Client Email	Ali.yavuzer@arkansas.gov		

# of Employees	3	Public Sector (Y/N)?	Y	Project Name and Description	Eligibility and Enrollment Framework (EEF) - Provides the functionality necessary to manage applications, personal information, maintain rules and workflow, provide determination on their application and collaboration across State and Federal system and in-depth reporting capabilities to better inform critical decision making.
Date/Duration of Staff Involvement	Start (MM/YYYY)	06/2016		End (MM/YYYY)	Present
Project Scope	The State of Arkansas has key objectives of supporting residents to become healthy, safe, and thriving. To achieve these objectives, the State recognizes that it must assess their citizen's circumstances better, implement their policies properly in the system, and coordinate with various systems. They wish to reduce duplication and rework by staff and customers and manage services and resources effectively. In support of this initiative, Eligibility and Enrollment Framework (EEF) provides the functionality necessary to manage applications, personal information, maintain rules and workflow, provide determination on their application and collaboration across State and Federal system and in-depth reporting capabilities to better inform critical decision making. As the Technical Lead, Ramchandra leads the IBM technical team for the EEF project. Ramchandra is responsible for all technical aspects of the solution, including establishing documentation and coding standards for the project team and ensuring the team adheres to standards. He is available to the DDI project team for consultation of future enhancements and oversees the development of all technical documentation. In addition, Ramchandra familiarizes himself with the technical design of all the components and has a solution-wide view verifying each component and module works together to address technical requirements. The IBM team was responsible for reviewing functional and technical design, providing expert advice on how to customize the Cúram product, how to use out-of-the-box (OOTB) features to meet State of Arkansas requirements. Working collaboratively with the SI, the IBM team facilitated that the State had the tools, knowledge, and capability to maintain and continuously deliver the features and functionality required to meet business needs.				
Staff Role on the Project	Technical Lead				

REFERENCE 2					
Client Name	South Carolina Department of Health and Human Services				
Client Point of Contact	Timothy Cozine, Project Coordinator				
Client Address	1801 Main St, Columbia, SC 29201				
Client Phone	(803) 898-4577				
Client Email	cozine@scdhhs.gov				
# of Employees	4	Public Sector (Y/N)?	Y	Project Name and Description	Member Management (MM) - Provides the functionality necessary to manage client applications, their personal information, maintain rules and workflow, provide determination on their application and collaboration across State and Federal system and in-depth reporting capabilities to better inform critical decision making.
Date/Duration of Staff Involvement	Start (MM/YYYY)	11/2014		End (MM/YYYY)	05/2016
Project Scope	The State of South Carolina has key objectives of better health, better care, and better lives for their residents. To achieve these objectives, the State recognizes that it must assess their citizen's circumstances better, implement their policies properly in the system, and coordinate with various systems. They also wish to reduce duplication and rework by staff and customers and manage services and resources effectively. In support of this initiative, Member Management (MM) provides the functionality necessary to manage client applications, personal information, maintain rules and workflow, provide determination on their application and collaboration across State and Federal system and in-depth reporting capabilities to better inform critical decision making. As the Technical Lead, Ramchandra led the IBM technical team for the MM project. Ram was responsible for all technical aspects of the solution, including establishing documentation and coding standards for the project team and verifying the team adhered to standards. He was available to the DDI project teams for consultation of future enhancements and oversaw the development of all technical documentation. In addition, Ram familiarized himself with the technical design of all the components and had a solution-wide view facilitating each component or module worked together to address technical requirements.				

	Ramchandra was responsible for reviewing functional and technical design and providing advice on how to customize the Cúram product and how to use OOTB features to meet State of South Carolina requirements. He also worked collaboratively with the SI, and the IBM team verified the State had the tools, knowledge, and capability to maintain and continuously delivery the features and functionality required to meet their business needs.				
Staff Role on the Project	Technical Lead				
REFERENCE 3					
Client Name	Arkansas Department of Health and Human Services				
Client Point of Contact	Susan Burton, EEF Business Operations Manager				
Client Address	425 West Capitol Avenue, Little Rock, Arkansas 72201				
Client Phone	(501) 537-9728				
Client Email	Susan.burton@dhs.arkansas.gov				
# of Employees	18	Public Sector (Y/N)?	Y	Project Name and Description	Eligibility and Enrollment Framework (EEF) - Provides the functionality necessary to manage clients' applications, their personal information, maintain rules and workflow, provide determination on their application and collaboration across State and Federal system and in-depth reporting capabilities to better inform critical decision making.
Date/Duration of Staff Involvement	Start (MM/YYYY)	07/2014		End (MM/YYYY)	10/2014
Project Scope	The State of Arkansas has key objectives of supporting residents to become healthy, safe, and thriving. To achieve these objectives, the State recognizes that it must assess their citizen's circumstances better, implement their policies properly in the system, and coordinate with various systems. They wish to reduce duplication and rework by staff and customers and manage services and resources effectively. In support of this initiative, Eligibility and Enrollment Framework (EEF) provides the functionality necessary to manage applications, personal information, maintain rules and workflow, provide determination on their application and collaboration across State and Federal system and in-depth reporting capabilities to better inform critical decision making.				

	As the Technical Lead, Ramchandra leads the IBM technical team for the EEF project. Ramchandra is responsible for all technical aspects of the solution, including establishing documentation and coding standards for the project team and ensuring the team adheres to standards. He is available to the DDI project team for consultation of future enhancements and oversees the development of all technical documentation. In addition, Ramchandra familiarizes himself with the technical design of all the components and has a solution-wide view verifying each component and module works together to address technical requirements. The development team was responsible for creating technical design, developing the code for defined requirements, and unit testing the features using the Cúram product. Working collaboratively with the Developer and the IBM team, Ramchandra verified the State had the tools and knowledge to develop features needed, as per the business requirements.	
Staff Role on the Project	Technical Lead	
INDIVIDUAL QUALIFICATIONS		
Certifications (if applicable)		
PMI/PMP	Member ID#: N/A	
	Earned Date:	Expiration Date:
Cúram Business Process Analyst	Member ID#: N/A	
	Earned Date: 04/2014	Expiration Date: N/A

Table 7. Architect Lead: Devananda Muthakana

Team Member Name:	**Devananda Muthakana**
Description of Skill Sets and Experience	Devananda is an Enterprise Solution Architect. His experience spans architecting and delivering enterprise solutions on traditional (on premise), cloud, and mobile platforms. He also has extensive experience in architecting complex integrations on projects involving Cúram and other enterprise products. The following list showcases his skill sets and other experiences: • TOGAF (The Open Group) certified Master Architect. • 20 plus years of overall IT experience. • 16 years of Cúram experience. • 15 years of experience in health and human services domain. • 14 years of experience architecting and designing solutions. • 12 years of experience as an Architect Lead.

Proposed Project Role for RFP #: SP-17-0012		Architect Lead		Subcontractor (Y/N)?	N
Years' Experience in Role:		12			
REFERENCES					
REFERENCE 1					
Client Name	South Carolina Department of Health and Human Services				
Client Point of Contact	Rhonda Morrison, Project Director, Department of HHS				
Client Address	1801 Main Street Suite 1100, Columbia, SC 29201				
Client Phone	803-543-7803				
Client Email	Morrison@scdhhs.gov				
# of Employees	8500	Public Sector (Y/N)?	Y	Project Name and Description	Member Management Replacement Program (MMRP) – Provides an integrated social services application intake and eligibility determination system.
Date/Duration of Staff Involvement	Start (MM/YYYY)	02/2017		End (MM/YYYY)	Present
Project Scope	In the state of South Carolina, IBM supports the delivery of the Member Management Replacement Program (MMRP) project using the Cúram software as the framework solution. The objective of MMRP is to provide an integrated social services application intake and eligibility determination system that automates many of the business processes that are now manual. IBM provides DDI, O&M, PMO, and OCM and training support services. MMRP is a MAGI Medicaid implementation using IBM Cúram. It is an integration of Cúram with ESB, document management system, and other State and Federal systems. In this project, Dev completed the following actions: • Lead the project architecture team providing technology vision and guidance to the implementation team. • Managed design and direction for several development tracks in parallel. • Advised the infrastructure and interface teams.				
Staff Role on the Project	Enterprise Architect				
REFERENCE 2					
Client Name	County of San Diego, CA				
Client Point of Contact	Deborah Marquette, Project Manager, Department of HHS				
Client Address	1255 Imperial Avenue, San Diego, CA 92101				

<table>
<tr><td>Client Phone</td><td colspan="5">619-338-2737</td></tr>
<tr><td>Client Email</td><td colspan="5">Deborah.Marquette@sdcounty.ca.gov</td></tr>
<tr><td># of Employees</td><td>7000</td><td>Public Sector (Y/N)?</td><td>Y</td><td>Project Name and Description</td><td>Connect Well San Diego – Person- centric care solution.</td></tr>
<tr><td>Date/Duration of Staff Involvement</td><td>Start (MM/YYYY)</td><td colspan="2">03/2015</td><td>End (MM/YYYY)</td><td>In progress</td></tr>
<tr><td>Project Scope</td><td colspan="5">The County of San Diego has key objectives of supporting residents to become healthy, safe, and thriving. To achieve these objectives, the County recognizes that it must increase information sharing capabilities to increase coordination across programs, reduce duplication and rework by staff and customers, and manage services and resources effectively. Spanning more than 4,000 square miles, and home to over 3,000,000 residents, San Diego County is one of the largest metropolitan and rural regions in the country. In support of this initiative, ConnectWellSD provides the functionality necessary to manage referrals and collaboration across County agencies and in-depth reporting capabilities to better inform critical decision making. The system is serving about 700,000 citizens of the County of San Diego. It is a person-centric model providing 360-degree view of citizens to case workers and self-service functionality to citizens.

In this project, Dev completed the following actions:
• Played the Lead Architect role guiding the technology implementation and people management.
• Used Cúram, Cognos, MDM and SOA technology to build the solution.
• Involved in architecting Cúram interfaces for integration with source systems and external interfaces.</td></tr>
<tr><td>Staff Role on the Project</td><td colspan="5">Enterprise Architect</td></tr>
<tr><td colspan="6">REFERENCE 3</td></tr>
<tr><td>Client Name</td><td colspan="5">Otsuka America Pharmaceuticals</td></tr>
<tr><td>Client Point of Contact</td><td colspan="5">Chuong Nguyen, Architect, ODH Project</td></tr>
<tr><td>Client Address</td><td colspan="5">508 Carnegie Center, Princeton, NJ 08540</td></tr>
<tr><td>Client Phone</td><td colspan="5">(408) 835-9577</td></tr>
<tr><td>Client Email</td><td colspan="5">cnguyen@xceptify.com</td></tr>
<tr><td># of Employees</td><td>25330</td><td>Public Sector (Y/N)?</td><td>N</td><td>Project Name and Description</td><td>Otsuka Digital Health – Worker Compensation Management.</td></tr>
<tr><td>Date/Duration of Staff Involvement</td><td>Start (MM/YYYY)</td><td colspan="2">06/2013</td><td>End (MM/YYYY)</td><td>12/2014</td></tr>
</table>

Project Scope	Cúram implementation for Worker Compensation Management, which used Cúram for Care Management as well as IBM Integration Bus, Cognos, and Data Stage. The system was designed to serve about 200 thousand workers and to present a 360-degree view of patient and perform care management functionality. The Cúram modules included Core, Provider Management and Outcome Management. Dev was an Enterprise Architect and Workflow Specialist for the Cúram Workers Compensation Module (CWC) implementation. In this capacity, he was the Lead Architect providing technology guidance and Cúram SMA and Integration Lead.				
Staff Role on the Project	Enterprise Architect				
REFERENCE 4					
Client Name	Product management and strategy help for several clients				
Client Point of Contact	Pratul Gupta, Product Manager, Sales				
Client Address	13800 Coppermine Road, Herndon, VA 20171				
Client Phone	(781) 791-7630				
Client Email	Pratul.gupta@us.ibm.com				
# of Employees	700	Public Sector (Y/N)?	N	Project Name and Description	Product management
Date/Duration of Staff Involvement	Start (MM/YYYY)	04/2008		End (MM/YYYY)	05/2013
Project Scope	• Worked with several clients including the State of Arkansas gathering requirements for product enhancements. • Helped clients with performance issues and Cúram upgrades.				
Staff Role on the Project	Cúram Product Manager				
REFERENCE 5					
Client Name	WorkSafe BC				
Client Point of Contact	Chuong Nguyen, Architect, CMS				
Client Address	Chuong Nguyen, Architect, CMS				
Client Phone	(408) 835-9577				
Client Email	cnguyen@xceptify.com				
# of Employees	5000	Public Sector (Y/N)?	Y	Project Name and Description	Claims management solution
Date/Duration of Staff Involvement	Start (MM/YYYY)	01/2006		End (MM/YYYY)	03/2008

Project Scope	• Cúram implementation for Worker Compensation Management. • System designed to serve about 200 thousand workers.	
Staff Role on the Project	Cúram Architect	
INDIVIDUAL QUALIFICATIONS		
Certifications (if applicable)		
PMI/PMP	Member ID#:	
	Earned Date:	Expiration Date:
TOGAF	Member ID#: 88549	
	Earned Date: 06/15/2016	Expiration Date: 06/15/2019

Table 8. M&O Operations Manager: Santharam Hanumandhan

Team Member Name:	**Santharam Hanumandhan**		
Description of Skill Sets and Experience	Santharam is a Delivery Project Executive. He has more than 19 years of experience in the IT industry. His experience includes M&O, program management, project management, people management, transition management, and support of application software. He has successfully managed large M&O teams conducting support, takeover, and transition activities. Santharam managed State and Local contracts for the last seven years for the State of California and Missouri. Santharam is certified in project management, has strong leadership skills, is a quick learner, and has 12 years of people management at IBM. Santharam also has an expert level certification in Managing Projects and Programs from the IBM Project Management Center of Excellence. Santharam has 16 years of business application M&O experience, including 7 years of end-to-end delivery and operational management experience for large accounts and six years of experience managing an M&O team for an enterprise solution within a public-sector client.		
Proposed Project Role for RFP #: SP-17-0012	M&O Manager	Subcontractor (Y/N)?	N
Years' Experience in Role:	16		
REFERENCES			
REFERENCE 1			
Client Name	State of Missouri		
Client Point of Contact	Paula Peters, Project Director, Information Technology Services Division		
Client Address	Jefferson City, MO		
Client Phone	(573) 526-5214		

Client Email	Paula.Peters@oa.mo.gov				
# of Employees	45	Public Sector (Y/N)?	Y	Project Name and Description	MEDES – A complex MAGI implementation for the State of Missouri.
Date/Duration of Staff Involvement	Start (MM/YYYY)	05/2015		End (MM/YYYY)	Present
Project Scope	05/2015 In Missouri, IBM assumed the role of lead SI in May of 2015. Missouri purchased the full suite of Cúram modules in 2013 and embarked on a journey to implement HCR (MAGI), CGIS, SNAP, TANF, and other modules over a multi-year schedule. The State decided in May 2015 to replace their SI, and IBM was awarded that work. The MEDES project includes the implementation of MAGI functionality including Change in Circumstance functionality for the MO-MEDES program and M&O support of the MEDES system in production. IBM is providing application and infrastructure M&O support to the MEDES system, which is built upon the IBM Cúram product. IBM took over this contract from an incumbent integrator. The IBM team performs implementation and development activities along with M&O services. Santharam is the lead for M&O services as a Delivery Project Executive. As the Delivery Project Executive, Santharam served as a liaison with the State of Missouri for M&O activities and was available and responsive to requests for consultation and assistance. He established and maintained positive client relationships and provided timely and informed responses to operational and administrative inquiries that arose. He successfully managed staff assigned to all day-to-day M&O activities. Furthermore, Santharam successfully coordinated and managed enhancement requests and changes to solutions on the MEDES engagement. He played an active role in day-to-day management of the accounts to be knowledgeable and aware of all issues, concerns, and requirements. Santharam's collaborative approach allowed him to facilitate productive meetings with State staff on a regular basis to provide oral and written status reports and other information as required. He also helped manage relationships with subcontractors and partner vendors on this engagement. Santharam was responsible for delivery and oversight of M&O work with the State. He also managed the customer relationship and served as the overall delivery point of contact for M&O work. He assisted in project financial management and strategic planning as well. Furthermore, he performed people management for all IBM India resource and coordinated people management activities for IBM US resources. Santharam coordinated vendor management for all vendor resources within the project team. He led solution building activities for all proposals under M&O work and participated in project governance with Sector executives and				

	State PMO team. He also planned staff fulfillment for project work and led process improvement and financial forecasting for IBM management.				
Staff Role on the Project	Delivery Project Executive				
REFERENCE 2					
Client Name	State of CA Under prime Xerox				
Client Point of Contact	Mart Tannner, CIO MMIS contract				
Client Address	840 Still water road, West Sacramento CA 95605				
Client Phone	(916) 373-2795				
Client Email	Mart.Tanner@Xerox.com				
# of Employees	120	Public Sector (Y/N)?	120	Project Name and Description	CAMMIS – Migrate application and transition application support from the incumbent organization and move into steady state operation.
Date/Duration of Staff Involvement	Start (MM/YYYY)	09/2011		End (MM/YYYY)	05/2015
Project Scope	CAMMIS is led by Affiliated Computer Systems (ACS) as a prime vendor for the Department of Health Care Services in the State of California. The IBM team worked as a business partner for Application Management Services (AMS) in the legacy application area. The project scope was to migrate application and transition application support from the incumbent organization and move into Steady State operation. After taking over in Steady State, as Maintenance and Enhancement Manager, Santharam took over managing the delivery of IBM's scope of work for the SDN work stream in CAMMIS contract between Xerox and IBM. Santharam served as a liaison with the State of California and Xerox for M&O activities and was available and responsive to requests for consultation and assistance. He established and maintained positive client relationships and provided timely and informed responses to operational and administrative inquiries that arose. He successfully managed staff assigned to all day-to-day M&O activities. Furthermore, Santharam successfully coordinated and managed enhancement requests and changes to solutions on the CAMMIS engagement. He played an active role in day-to-day management of the accounts to be knowledgeable and aware of all issues, concerns, and requirements. Santharam's collaborative approach allowed him to facilitate productive meetings with State staff on a regular basis to provide oral and written status reports and other information as required. He also helped manage relationships with subcontractors and vendors on this engagement.				

	As part of the IBM management team, Santharam was involved in the overall governance of the project, which involved enhancement, operation, and the replacement project. Santharam worked directly with the customer team in managing this T&M contract work stream and represented the IBM team during day-to-day interaction with immediate client Xerox and to the end client DHCS (Department of Health Care Services). The following list includes his primary responsibilities in this role: • Managed an end of end deliver of SDN work stream with delivery oversight, project financial, and growth of work stream. • Interfaced with Xerox, the prime vendor in this contract, and the user the Department of Healthcare Services in day-to-day delivery. • Participated in executive governance for legacy operation and represent the IBM team. • Planed and managed IBM work by following agreed upon processes and executing work as per the IBM delivery process. • Directed Project Manager and Program Managers in delivery work products following internal governance and reports to client teams (Xerox and DHCS) and to IBM executive management. • Led the process improvement initiative at the account level and was responsible for identifying and executing improvement initiatives. • Performed people management responsibilities for IBM India resources working on the SDN work stream. • Worked on industry level and account level new business opportunities to scope work in AMS contracts. • Led the CAMMIS project LEAN initiative and represented the project team activities in LEAN North America community. • Provided support for staffing fulfillment at the account level in CAMMIS by closely working with the IBM resource fulfillment team of both IBM India and IBM US.
Staff Role on the Project	Business Area Manager
REFERENCE 3	
Client Name	State of CA Under prime Xerox
Client Point of Contact	David Losin, System Group Director, CAMMIS
Client Address	840 Still water road, West Sacramento CA 95605
Client Phone	(678) 457-8794
Client Email	David.Losin@Xerox.com

# of Employees	45	Public Sector (Y/N)?	Y	Project Name and Description	CAMMIS – Migrate application and transition application support from the incumbent organization and move into steady state operation.
Date/Duration of Staff Involvement	Start (MM/YYYY)	05/2010		End (MM/YYYY)	09/2011
Project Scope	CAMMIS is led by ACS as a prime vendor for the Department of Health Care Services in the State of California. The IBM team worked as a business partner for AMS in the legacy application area. The project scope was to migrate application and transition application support from the incumbent organization and move into Steady State operation. Santharam served as a liaison with DHCS, ACS, and CGI for M&O activities and was available and responsive to requests for consultation and assistance. He established and maintained positive client relationships and provided timely and informed responses to operational and administrative inquiries that arose. He successfully managed staff assigned to all day-to-day M&O activities. Furthermore, Santharam successfully coordinated and managed enhancement requests and changes to solutions on the CAMMIS engagement. He played an active role in day-to-day management of the accounts to be knowledgeable and aware of all issues, concerns, and requirements. Santharam's collaborative approach allowed him to facilitate productive meetings with State staff on a regular basis to provide oral and written status reports and other information as required. He also helped manage relationships with subcontractors and partner vendors on this engagement. Santharam was involved as a Business Area Manager for all mid-range applications to stand-up in the new IBM data center and to transition application knowledge to the new IBM team. This involved scoping the work related to takeover and working with both internal stakeholders like the IBM SO team, IBM T&T team, and with other business partners like DHCS, ACS, and CGI. He reported to the IBM DPE and prime vendor on the progress of the project. He also coordinated and managed issue resolution with IBM SO and the ACS team. Furthermore, Santharam conducted resource fulfillment activities for the entire CAMMIS AMS team and was the single point of contact for the IBM application team from a resource hiring perspective. Additionally, he represented the IBM midrange application team during communication and status reporting meetings to DHCS. He also provided updates on weekly progress to IBM senior management.				

Staff Role on the Project	Business Area Manager	
INDIVIDUAL QUALIFICATIONS		
Certifications (if applicable)		
PMI/PMP	Member ID#: 1251773	
	Earned Date: 04/24/2009	Expiration Date: 04/23/2018
Other	Member ID#:	
	Earned Date:	Expiration Date:

Table 9. M&O Technical Lead: Siva Kumar Veluru

Team Member Name:	**Siva Kumar Veluru**		
Description of Skill Sets and Experience	Siva is a Senior Managing Consultant in the IBM Watson Health – Cúram Group with over 12 years of experience in IT services architecting and designing enterprise solutions. Siva is a Cúram Certified Developer (CCD), a Cúram Certified Professional (CCP), and a Project Management Professional (PMP). Siva has successfully implemented and led multiple Cúram projects in an M&O capacity and has over 10 years of experience in the HHS Industry. Siva was awarded the Cúram Outstanding Performer for the year 2007 for his contribution to the Electronic Resource and Eligibility Product – State of Utah's Social Welfare project. He was also awarded the IBM LAB Services award for the year 2012 for his contribution to the North Carolina Families Accessing Services through Technology (NC FAST) project. Siva is a Sun Certified Java Programmer (SCJP) and a Sun Certified Web Component Developer (SCWCD). He is a confident and focused consultant, who has demonstrated strong verbal and written communication skills with proven ability to work well as part of a team and individually to produce quality results.		
Proposed Project Role for RFP #: SP-17-0012	M&O Technical Lead	Subcontractor (Y/N)?	N
Years' Experience in Role:	12		
REFERENCES			
REFERENCE 1			
Client Name	Information Technology Division – North Carolina Department of Health and Human Services		
Client Point of Contact	Jeff Wimberley		
Client Address	79 TW Alexander Drive, Durham, NC 27709		
Client Phone	(919) 813-5100		
Client Email	jeff.wimberley@dhhs.nc.gov		

# of Employees	200+	Public Sector (Y/N)?	Y	Project Name and Description	North Carolina Families Accessing Services through Technology (NC FAST) – A statewide integrated eligibility and case management system provides access to Carolinians seeking information about or seeking services offered by the NC DHHS. Programs include TANF, SNAP, Medicaid, LIHEAP, and Child Services.
Date/Duration of Staff Involvement	Start (MM/YYYY)	08/2015		End (MM/YYYY)	Present
Project Scope	North Carolina Families Accessing Services through Technology (NC FAST) is a program designed to improve the way the NC Department of Health and Human Services and county departments of social services do business. NC FAST introduces new technological tools and business processes that will enable workers to spend less time on administrative tasks and more time assisting families. The following are the economic benefit programs implemented as part of this assignment: Child Care, Low Income Energy Assistance Program (LIEAP), and Crisis Intervention Program (CIP). As a Technical Architect, Siva is responsible for implementing Child Care, Low Income Energy Assistance, and Crisis Intervention Programs through Cúram solutions in the State of North Carolina. Siva plays an important role in architecting and designing the solution. He provides detailed application knowledge in support of complex application issues and incidents on this engagement and reviews potential changes from a technical perspective and provided technical design and assessments. Siva was available to the project team for consultation on future enhancements on this engagement. NC started the Child Care implementation based out of the IBM Cúram Child Care module and derived all the customizations and enhancements based on the available features in the product, but IBM Cúram de-scoped the Child Care solution and withdrew the support. Siva played a vital role finding reusable components from the de-scoped solution and enhancing further to fit well with NC's business. He also guided the team to reuse features from other Cúram modules including Cúram Global Income Support Suite (CGISS), Cúram Provider Management (CPM), and Funded Program Management and service plans. With a greater effort, the NC Child Care project turned out to be a complete solution and much superior then the de-scoped IBM Cúram OOTB Child Care solution that can be reused by any other State.				

	Siva is playing a key role in the production rollout process. Currently, it is in pilot production for four counties and in the next six months, the rest of the counties will be rolled out. Siva's primary focus is on stabilizing the application by improving the responsiveness, performance, and user experience by looking at the trends of the application usage, feedback from stakeholders, and automated and performance test results. He also focuses on integrating the child care program with other production projects SNAP, TANF, and Medicaid.				
Staff Role on the Project	Technical Architect				
REFERENCE 2					
Client Name	Arkansas Department of Human Services				
Client Point of Contact	Susan Burton – DHS Program/Policy Director				
Client Address	425 W Capitol Ave, 9th Floor, Little Rock, AR 72201				
Client Phone	(501) 537-9728				
Client Email	Susan.Burton@dhs.arkansas.gov				
# of Employees	100+	Public Sector (Y/N)?	Y	Project Name and Description	Eligibility and Enrollment Framework (EEF) – Provides the functionality necessary to manage Clients applications, their personal information, maintain rules and workflow, provide determination on their application and collaboration across State and Federal system and in-depth reporting capabilities to better inform critical decision making.
Date/Duration of Staff Involvement	Start (MM/YYYY)	07/2014		End (MM/YYYY)	07/2015
Project Scope	The scope of the EEF project includes development of systems to support determination of Medicaid and State Children's Health Insurance Program (SCHIP) eligibility and enrollment, which is required to support compliance with the Patient Protection and ACA. As a Technical Architect, Siva was responsible for guiding the team on implementing MAGI Medicaid with the Cúram HCR solution in the State of Arkansas. Siva played an important role in architecting and designing the solution. He provided detailed application knowledge in support of complex				

	application issues and incidents on this engagement and reviewed potential changes from a technical perspective and provided technical design and assessments. Siva was available to the project team for consultation on future enhancements on this engagement. Siva helped the team understand the Cúram OOTB features and re-use them with no or minor customizations. He played a key role enhancing the OOTB Person Match to fit well with the project. He also played an important role assisting Northrop Grumman in FNS conversion. He worked with the Infrastructure team on setting up purging and archiving jobs to control the database growth. He helped the deployment team streamline the process by customizing Cúram tools that help migrate changes to production.				
Staff Role on the Project	Technical Architect				
REFERENCE 3					
Client Name	North Carolina Department of Health and Human Services				
Client Point of Contact	Jeff Wimberley – Lead Architect, Information Technology Division, Office of NC FAST				
Client Address	79 TW Alexander Drive, Durham, NC 27709				
Client Phone	(919) 813-5100				
Client Email	jeff.wimberley@dhhs.nc.gov				
# of Employees	200+	Public Sector (Y/N)?	Y	Project Name and Description	North Carolina Families Accessing Services through Technology (NC FAST) – A statewide integrated eligibility and comprehensive case management system provides access to Carolinians seeking information about or seeking services offered by the NC DHHS. Programs include TANF, SNAP, Medicaid, LIHEAP, and Child Services.
Date/Duration of Staff Involvement	Start (MM/YYYY)	04/2012		End (MM/YYYY)	06/2014
Project Scope	North Carolina Families Accessing Services through Technology (NC FAST) is a program designed to improve the way the NC Department of Health and Human Services and county departments of social services do business. NC FAST introduces new technological tools and business processes that will				

	enable workers to spend less time on administrative tasks and more time assisting families. Following are the economic benefit programs implemented as part of this assignment: Food and Nutrition Services, Medicaid, Health Care Exchange, Work First, Special Assistance, and Refugee Assistance. As a Technical Architect on this engagement, Siva was responsible for implementing SNAP, TANF, and Medicaid by using Cúram solutions in the State of North Carolina. Siva played an important role in architecting and designing the solution. He provided detailed application knowledge in support of complex application issues and incidents on this engagement and reviewed potential changes from a technical perspective and provided technical design and assessments. Siva was available to the project team for consultation on future enhancements on this engagement. Siva played an important role in the rollout process of the SNAP application to 100 counties. As this was the first program that went live with Cúram in NC, he put a greater effort in stabilizing the application and improving performance and user experience. He helped conversion teams migrate existing cases for SNAP and Medicaid with greater accuracy and less intervention from workers. He educated the application development teams on OOTB SNAP and Medicaid features, which helped them avoid unnecessary customizations. He worked very closely with business, development, and infrastructure teams to deliver a productive application.	
Staff Role on the Project	Technical Architect	
INDIVIDUAL QUALIFICATIONS		
Certifications (if applicable)		
PMI/PMP	Member ID#: 1482344	
	Earned Date: 01/16/2012	Expiration Date: 01/16/2018
Other	Member ID#:	
	Earned Date:	Expiration Date:

Table 10. M&O Security Expert: James Scholz

Team Member Name:	**James Scholz**
Description of Skill Sets and Experience	James is a highly qualified cyber security expert with more than 40 years of experience in the IT industry. He has over 15 years of experience implementing and managing security in enterprise solutions. James is a seasoned and highly experienced cyber security professional in IT architectures credited with experience in the design, development, and implementation of many industry programs and security disciplines including Critical Infrastructure Protection (CIP), International Organization for Standardization (ISO), Federal Information Security Management Act (FISMA), National Institute of Standards and technology (NIST), Minimum

	Acceptable Risk Standards for Exchanges (MARS-E), 10CFR Nuclear Regulatory Commission Standards, Nuclear Energy Institute (NEI), North American Electric Reliability Corporation (NERC), North American Energy Stands Board (NAESB), Intelligence Community Directive (ICD) 705, Internal Revenue Service (IRS) 1075, and National Industrial Security Program Operating Manual (NISPOM). For the Arkansas Department of Human Services (DHS), James recently developed the Enterprise Architecture Model for incorporating service management and delivery using a security model for the DHS, Office of Systems and Technologies. He has led three separate audits including IRS, SNAP/ANSWER IT system and the Eligibility and Enrollment Framework (EEF) for ACA compliance. James' skill sets and experience exceed the expected qualifications for the Security Expert position including the following components: • Certified Chief Information Security Officer (C|CISO - CC-JS-786), and Certified Homeland Security Level IV (CHS-IV -106680) in addition to a Certified Information Systems Security Professional (CISSP – 33371). • Over 40 years implementing and managing security in an enterprise environment.		
Proposed Project Role for RFP #: SP-17-0012	Security Expert – DDI and M&O	Subcontractor (Y/N)?	Y
Years' Experience in Role:	20		

REFERENCES	
REFERENCE 1	
Client Name	Southwest Power Pool (SPP)
Client Point of Contact	Mark Bowling, Director of Security
Client Address	201 Worthen Dr, Little Rock, AR 72223
Client Phone	(501) 326-5167
Client Email	m.d.bowling@att.net

# of Employees	500+	Public Sector (Y/N)?	Y	Project Name and Description	SPP - Oversees the bulk electric grid and wholesale power market in the Central US on behalf of a diverse group of utilities and transmission companies in 14 states. The project involved developing security measures to protect the infrastructure.
Date/Duration of Staff Involvement	Start (MM/YYYY)	12/2015		End (MM/YYYY)	02/2016
Project Scope	James provided guidance and leadership in developing Bulk Electric System (BES) cyber assets documentation that outlined a methodical process to follow for Critical Infrastructure Protection (CIP) compliance. He developed a plan for the CIP transition from version three to version five. He guided team members in identifying and evaluating architecture for BES cyber assets by developing project plans and implementing a new cyber security team. James defined the requirements for Identity Access Management (IAM) and managed the vendor selection process. James assisted an inexperienced manager in understanding the steps and processes in rebuilding a secure infrastructure and aided the management team in understanding and supporting the requirements of the North American Electric Reliability Corporation (NERC) security controls.				
Staff Role on the Project	Senior Security Analyst and IT Cyber Security Team				
REFERENCE 2					
Client Name	LNO, Inc.				
Client Point of Contact	Michael Benson, Vice President				
Client Address	4811 Technology Dr, Martinez, GA 30907				
Client Phone	(706) 922-8890				
Client Email	Mike.benson@lno-inc.com				

# of Employees	500	Public Sector (Y/N)?	Y	Project Name and Description	LNO, Inc. - Focuses on tactical and strategic command, control, communications, and computer information systems projects. Development of a curriculum for the Cyber School of Excellence and develop plans to achieve a secure facility.
Date/Duration of Staff Involvement	Start (MM/YYYY)	09/2014		End (MM/YYYY)	07/2015
Project Scope	James served as the Project Manager and Cyber SMA for eight developers designing and implementing the Cyber Center of Excellence and Cyber Protection Teams (CPT). He provided guidance for the Special Compartmental Information Facility (SCIF) development and accreditation to support the CPTs. James led his team of developers in developing deliverables for a 400-hour CPT in five weeks. He served as the lead for the Cyber Critical Task Site Selection Board (CTSSB) to coordinate the required elements for the development of a multi-service training course. James provided leadership, mentoring, and direction as the course SMA for the development team to implement course design for the CPTs. His ability to mentor junior personnel in information security and guide their understanding of the requirements was instrumental in expediting the course production. James provided guidance on the Cyber Network Defense course requirements, course selection, and its presentation as a specialty course that moved to Ft. Gordon as a Military Occupational Specialty (MOS). The production of this curriculum fulfilled a requirement within the US Army. James was also an active member of the FBI InfraGard Program fulfilling the role of Sector Chief for the Nuclear Sector.				
Staff Role on the Project	Project Manager and Cyber SMA				
REFERENCE 3					
Client Name	Emirate Nuclear Energy Corporation				
Client Point of Contact	Terik Al Shamsi, Security Manager				
Client Address	Abu Dhabi, United Arab Emirate				
Client Phone	011+971-50-442-8824				
Client Email	talshamsi@hotmail.com				

# of Employees	1900	Public Sector (Y/N)?	Y	Project Name and Description	Security design for a nuclear power plant.
Date/Duration of Staff Involvement	Start (MM/YYYY)	10/2012		End (MM/YYYY)	08/2014
Project Scope	James provided guidance for the security compliance management team developing procedures, personnel, and processes for the classified and business information categorization, marking, and storage procedures and personnel. James assisted the Emirates in the integration of NIST Special Publication 800 Series, 10 CFR 73.54, and NEI 08-09 compliance based programs for compliance by designing and managing the build-out of the Classified Information Facility. James worked directly with the project management team presenting security projects to verify proper corporate direction and future growth of information, personnel, and physical security programs. James mentored junior and senior personnel in the information security arena to assist and guide them to understand the ISO, NIST (FISMA), IAEA, and Abu Dhabi Government requirements for security of information and facilities. He developed a validation and compliance program with Government standards developed from NIST 800-53 requirements. He also served on a team of 13 personnel to determine the target set development and planning for Critical Digital Assets (CDA) within the protected zones of the nuclear power plant. James worked with the security and emergency preparedness teams and provided guidance on development of the escalation procedures for reporting, responding to, and controlling a nuclear incident. James introduced a “self-assessment” program for professional, section, and personal growth to develop roadmaps for the nuclear security requirements training and sustainment. In his off hours, James taught an Integrated Civil Security, Critical Infrastructure Protection Master’s-level course at Khalifa University as a volunteer developer and instructor.				
Staff Role on the Project	Security Management and Facility Security Officer; Cyber Information Security Specialist				

INDIVIDUAL QUALIFICATIONS		
Certifications (if applicable)		
PMI/PMP	Member ID#:	
	Earned Date:	Expiration Date:
Certified Information Systems Security Professional	Member ID#: 33371	
	Earned Date: 2002	Expiration Date: N/A
Certified Chief Information Security Officer	Member ID#: CCISO - CC-JS-786	
	Earned Date: 2014	Expiration Date: N/A

Certified Homeland Security – Level IV	Member ID#: CHS-IV -106680	
	Earned Date: 2014	Expiration Date: N/A
Arkansas InfraGard Alliance – Nuclear Sector Chief	Member ID#: 10050296	
	Earned Date: 2011	Expiration Date: N/A

2.0 Resumes

The Vendor should attach professional resumes of all proposed Key Personnel to this section of the Proposal.

Each resume should demonstrate experience germane to the position proposed. The resume should include work on projects cited under the Vendor's corporate experience, and the specific functions performed on such projects.

Instructions: Provide a resume for each proposed Key Personnel.

Engagement and Executive Director for DDI and M&O: Walter Szyperski

Professional experience

Profile	Walter is a Partner within IBM's Global Business Services (GBS) group and currently leads the GBS Cúram practice in the US Public Sector. As the Cúram practice leader, Walter is focuses ensuring each Cúram implementation is client-centered and meets IBM's standard of Delivery Excellence. Walter has over 28 years of professional experience in design and implementation of COTS and complex technology solutions, quality assurance management, and project management. He has dedicated his career to helping public and private sector organizations transform their processes and technology to become a more effective, efficient and citizen centric business operation. For 20 years, he has managed large-scale implementations in the US sectors of Federal, State, and Local and healthcare ranging from $40 million to $80 million. He has overseen integrated eligibility programs that have included both DDI and M&O for multiple HSS programs including successful and ongoing Cúram programs in New York, Missouri, South Carolina, and California. As the executive on the Cúram programs in New York, Missouri, South Carolina, and California, Walter served as the primary point of contact between leadership and State Executive Sponsors for activities related to contract administration, overall project management and scheduling, correspondence between the Client and IBM, dispute resolution, and status reporting.
Professional History	**12/2010 - To date** **IBM, United States of America** **Service Area Partner** Walter is developing a qualitative portfolio of IT consulting programs in federal and state and local markets. He provides delivery leadership on Cúram programs that include: San Diego ConnectWell, Missouri Eligibility Determination and Enrollment System, New York Health Homes, and California Department of Industrial Relations. He has led PeopleSoft ERP engagements and has turned around troubled programs, particularly within the Healthcare Industry. Walter works with resource development managers and account teams to effectively manage staffing

requirements and recruiting efforts. Walter has successfully grown teams of consultants in the areas of Oracle and SAP ERP, business intelligence, Siebel CRM and Cúram for Social Services. He also provides leadership and participates directly in multiple sales efforts through client relationship development, RFI and RFP responses, orals presentations, contract negotiations, prototype/demo and business solution development.

11/2005 - 12/2010
Computer Sciences Corporation, United States of America
Oracle ERP Managing Partner

Walter developed a team of highly skilled Oracle and PeopleSoft ERP professionals through the combination of experienced hiring, internal transfers and entry level development. He closely monitored our government opportunity pipeline to accurately forecast resource demand and maximize staff utilization. Walter established and maintained vendor relationships to asset development and joint opportunity pursuits. He assembled delivery teams, provided solution architecture services and project oversight for client

09/2000 - 11/2005
Accenture, United States of America
Practice Lead

Walter managed internal investments of over $5 million to develop industry specific market offerings using leading Commercial Off-The-Shelf (COTS) software products such as SAP, Siebel and OBIEE. This included the development of an integrated tax administration solution that utilizes SAP (PSCD, CRM and NetWeaver), Microsoft products (e.g. BizTalk Sever and .NET) and other 3rd party products (e.g. Adobe). He also assembled delivery teams and provided project oversight for engagements such as: DC Office of Tax & Revenue, MI Dept. of Treasury, KS Dept. of Human Resources, CO Dept. of Labor and Employment, Dept. of Education, Internal Revenue Service, US Postal Service, General Dynamics (Dept. of Defense contract). Walter also supported multiple sales efforts. This included COTS product selection that included Siebel Public Sector, Analytics and UCM; developing a robust case management demo based on several business scenarios created by our subject matter experts.

11/1999 - 9/2000
Accenture, United States of America
Delivery Manager, DC Office of Tax and Revenue (OTR)

Walter developed an Implementation Plan and Product Test Plan for the Integrated Tax System project. He led a team of subcontractors in the development of a Data Purification Plan for the conversion of legacy tax data. Walter developed and executed a detailed work plan for the design, build and deployment phases of the solution delivery. In addition, he managed a 50+ member team of Accenture and government employees in the off-site development of the integrated tax administration system.

8/1995 - 11/1999
Accenture, United States of America
Program Manager, Tennessee Dept. of Revenue (TDOR)

Walter developed detailed project estimates and work plans for the integration and conversion of 33 personal and business taxes into one administrative system. He also managed a over 50 member team of Accenture and government employees in the on-site and off-site development of an integrated tax administration system. In addition, Walter oversaw project financial administration and reported our performance to executive leadership monthly.

05/1994 - 07/1995
Electronic Data Systems, United States of America
Senior Systems Engineer

Walter provided systems development and technical support for the SSPO warehouse. He evaluated vendor hardware and software products and developed a prototype for the implementation of radio frequency technology on the warehouse floor. Furthermore, Walter provided production support of the inventory control system for the 20x7 picking, packing and shipping operation in the SSPO warehouse.

Key Skills

Industries:

- Government, Public.
- Health and Human Services.
- Education.
- Telecommunications.
- Financial.

Process and Functional skills:

- Project management, team leadership.
- Training: Strategy, design, development, logistics, delivery, and evaluation.

Technical skills:

- Windows and Mac.
- Microsoft Office (Word, Excel, PowerPoint, Access, Project, Visio).

Education

Qualifications — BS in Information Systems Management

	Buffalo State College, 1989	
Languages	English	Fluent
Other relevant information		
Certifications	Project Management Professional, PMP®	
Clearances	TS SCI with Full Scope Polygraph	

Project Manager: Ennapadam A Padmanabhan

Professional experience

Profile

Pad is an Associate Partner and Program Executive in IBM's GBS - Public Sector Enterprise Applications practice. Pad is a PMP certified professional specializing in ERP delivery management and project management (Cúram, SAP, and Oracle) with over 25 years of professional experience in both the public and private sectors. He has specific experience in directing healthcare and Affordable Care Act (ACA) Cúram implementations. These implementations include the ACA implementation at the MNSure project in St. Paul, Minnesota, where he led a complex project that spanned Medicaid, State sponsored programs, and QHPs (Qualified Health Plans) and more recently as Program Executive for the State of Missouri MEDES program.

Pad has 22 years of client support and project management experience and 14 years of experience leading the implementation of enterprise solutions. Moreover, he has seven years of experience implementing solutions of similar functional scope to the IE-BM. Pad has vast experience providing onsite management for projects and being the chief liaison for clients throughout the duration of the project lifecycle. In his management roles, Pad has worked closely with both the clients and the internal teams to create and maintain project timelines on track, respond to resolve client inquiries, and keep client abreast of project milestones.

Pad is a seasoned general manager who combines vision, strategic orientation, methodology and detail focus in the execution of projects and operations to deliver outstanding business value to clients.

Professional History

04/2015 - To date
Project Executive, 22 months
State if Missouri – MEDES
Project Description: Pad is the Project Executive for an extremely complex

MAGI implementation for the State of Missouri. In MO, IBM assumed the role of lead System Integrator in May of 2015. Missouri purchased the full suite of Cúram modules in 2013 and embarked on a journey to implement HCR (MAGI), CGIS, SNAP, TANF and other modules over a multiyear schedule. The state made a decision in May 2015 to replace their System Integrator and IBM was awarded that work.

Under Pad's leadership, IBM has successfully managed the M&O function since taking over as the SI. Since the Fall of 2015, IBM has a release of new functionality every 4 to 6 weeks. Additionally, MEDES went live in

August 2016 with the extreme complex Change in Circumstance functionality. The base Cúram system was upgraded to version 6.2 in December 2016. The current plan calls for implementation of several new programs by 2Q 2017.

05/2014 - 04/2015
Project Executive, 12 months
Minnesota Department of Health
MNSure Implementation

Project Description: Pad functioned as the Project Manager/Executive for a highly-visible

Affordable Care Act (ACA) State Health Care Exchange (MNHIX) implementation using IBM

Cúram. He successfully directed a 60-member team to implement important Exchange

Functionality and Eligibility functionality involving the case worker and the citizen portal. This implementation also included integration with several Fed Sources such as MMIS and the Federal Data Hub. Pad managed relationships with diverse vendors and state teams to reach consensus on scope and manage/deliver to the agreed upon project plan.

03/2014 - 05/2014
Integration Manager, Three months
Department of Veterans Affairs
HRIS - PeopleSoft Implementation

Project Description: Pad functioned as the Integration Manager responsible for coordinating the requirements from the VA, and as a program liaison between the VA Business Office, the IBM team, and the VA Austin Information Technology Center (AITC). The VA program involved design, configuration, development, and implementation of the PeopleSoft HR and Payroll system for the VA department. He facilitated that the VA program was kept on schedule given that various components of the testing occurred and needed to be coordinated with VA/IBM and the AITC. Pad's role involved significant coordination and negotiation with the various parties to facilitate that the overall program milestones were met. IBM successfully passed all tests from AITC for the T5 (initial) phase of the program on time.

12/2009 - 03/2014
Program Manager, 52 months
IBM - Blue Harmony - China /Germany Deployment – SAP Implementation
Blue Harmony - Release 1.0/ Wave 1

Project Description: The Blue Harmony program involved replacing systems across IBM's hardware, software, and services business across all countries and standardizing them on an IBM/SAP platform. Pad functioned as the Program Manager for end-to-end Information

Management activities in the data quality and migration work stream for the Blue Harmony

Release 1.0 China and Germany Deployments. He successfully led the planning and designing and implementation of all data quality and migration activities. Additionally, Pad was the key focal point in the planning and coordination activities for the Brazil, UK, and Hong Kong implementations.

10/2008 - 07/2009
Strategic Planning Manager, Ten months
Center for Medicare and Medicaid Services
HIGLAS - Strategic Planning

Project Description: Developed the Strategic Vision for the HIGLAS Program for the next five years. The vision includes the entire gamut of HIGLAS including Data Architecture, Reporting Architecture, Infrastructure Analysis, Compliance and Security and Program Governance. Pad developed a roadmap to position the HIGLAS program for future success with contractors and claims volumes projected to almost triple over the next 5 years. Worked closely with all key CMS directors and executives in developing the Vision.

06/2001 - 11/2008
Project Manager, 90 months
USDA
Integrated Acquisition System (IAS)

Project Description: Pad directed a team of over 25 consultants. Responsible for architectural vision of the program. Advised client management on program options, developed five-year strategic plan. Directed Requirements and Releases (R&R), O&M, and customer care teams. This involved directing Release

Management activities for five key USDA releases and planning, execution and monitoring for all release activity.

Pad also directed a major effort integrating an Oracle-based eProcurement system to PRISM and Compuserach and to the legacy Financial system using IBM WebSphere suite of products. He managed the development of this integration. The entire projected was delivered within time and budget.

04/2001 - 06/2001
Business Analyst, Three months

Bristol-Myers
Global Demand Planning

Project Description: Pad developed a design for a global demand web application for a major pharmaceutical company. The design was done completely in

Universal Modeling Language (UML). The development environment was IBM WebSphere and Visual Age for Java. The backend database was Oracle 8i. This implementation's key critical success factor is the reduction of inventory by 6% through careful demand planning.

03/2000 - 04/2001
Technology Manager, 14 months
Lend Lease
REI

Project Description: Pad functioned as Technology Manager, overseeing the

design and development of conversions, interfaces, and customizations for an R11 Oracle

Financials implementation for a major Real Estate Investment Trust. The customizations involved extensive Oracle 11I workflow design and development. The modules implemented were general ledger (GL), accounts payable (AP) and fixed asset (FA). The implementation

of this system resulted in proper allocation of accounting costs to joint venture capital

Partners as well as a 5% reduction in accounts payable costs.

10/1997 - 03/2000
Test Manager, 30 months
COD
DRMS

Project Description: Pad directed the testing effort in the build and test phase of Oracle Financials (R10.7) for a major city government, which involved managing a team of 10 test analysts through the testing phase. Work products included developing test plans, executing test plans for both the system test and acceptance test phases, maintaining a bug list and co-coordinating/prioritizing resolution to that list.

The implementation resulted in completely revamping the city's financial system with a state-of-the-art ERP package and resulted in great improvement in productivity and a dramatic reduction in vendor payment cycle.

11/1991 - 10/1997
Lead Designer, 73 months

Syntel, Inc
DTE Energy

Project Description: Designed and coordinated development of a comprehensive customer billing package that encompasses residential, industrial, and commercial customers for a major Midwestern utility. The system involved Oracle Tools, and all design and development and documentation was done on Designer/Developer 2000, resulting in accurate billing for residential, industrial, and commercial customers and increased timely receivables. Pad designed and developed a system for tracking the line crew performance in responding to outages for a major utility.

Key Skills

- Project management.
- Cúram.
- Affordable Care Act.
- Proposal writing and client management.
- Worldwide SAP implementation.
- Oracle Systems implementation.
- Database design.
- Implementing ERP packages
- Integration with existing systems.
- Oracle technologies, Oracle applications.
- Business process re-design.

Education

Qualifications

Masters in Science in Computer Science
Indian Institute of Technology, India, 1984

Languages		
	English	Fluent
	Tamil	Fluent
	Hindi	Basic
	French	Basic

Integration Manager / Functional Lead – Yogi Ganesan

Professional experience

Profile

Yogi is Senior Managing Consultant in IBM’s GBS practice. He is a high energy, client centric, technology professional with deep experience in the Health and Human Services industry. Yogi has helped public service organizations achieve their mission by improving business processes, empowering human capital and maximizing IT adoption for the last 18 years. He is a certified Project Management Professional (PMP) and Certified Scrum Master (CSM).

Yogi is well versed in leading various phases of the SDLC using Waterfall, Agile and Hybrid Agile methodologies. Yogi has hands on experience leading projects teams in the Health and Human Services domain using multiple technology stacks including J2EE, .NET and Cloud Platforms.

Yogi has worked in Integrated Eligibility Systems in multiple states including Tennessee, Maine, Pennsylvania, Ohio and Missouri.

Yogi has led initiatives that included FFM Account Transfer, CMS1115 Waiver programs, ESAP for SNAP and Employment and Training programs for TANF. He has led workshops and JAD sessions to map business process with requirements. He is good communicator and a hands-on leader.

Professional History

10/2016- To date
Integration Lead and Functional Lead, 7 months
State of Missouri
MEDES

Project Description: In 2013 IBM competed, and lost an RFP for the implementation of Cúram at the State of Missouri. A competitor, EngagePoint. was the winning bidder. In 2014, EngagePoint was failing to meet its obligations and the State contacted IBM to perform an assessment of the Cúram architecture being deployed by this integrator. IBM completed the assessment and provided a report to the State. In May of 2015 the State Commissioner's office contacted IBM and informed us that a decision had been made to terminate EngagePoint's contract. We were awarded an initial 30-day transition contract, followed by a 120-day contract to do an assessment for Project-1, MEDES Implementation. This led to a subsequent award of a fixed priced $23M contract and a T&M Maintenance and Operations (M&O) contract, to which IBM is currently performing on both.

IBM has turned the failed implementation around and is succeeding on all fronts with the State of Missouri at this time. IBM recently conducted an Assessment to enable additional Cúram functionality for the state. Several new contract modifications are in flight with releases for new functionality underway. Additionally, we have designed an SSO solution to be implemented in 2016 and are in the midst of a project to upgrade to the Out of the Box (OOTB) Cúram version-6.2 at this time. The State of Missouri is a shining example of IBM's ability to take over and turn around a troubled integration project. We are providing leadership and technical supremacy to the state of Missouri while enabling client success and achieving high customer satisfaction.

As the Integration / Functional Lead, Yogi leads the Verify Lawful Presence Initiative from Project Initiation to Deployment. He coordinates with the State on Dev Ops type defect prioritization and deployment strategy to resolve outstanding defects based on business impacts. Furthermore, Yogi implements Hybrid Agile methods and practices using JIRA, provides leadership and mentoring to junior staff, and manages stakeholder involvement.

04/2016 - 07/2016
Functional Lead, Three months
State of Ohio
Ohio Child Licensing and Quality System

Project Description: The OCLQS project supports the State's Early Childhood and ELCG reform agenda of "Higher Quality Early Childhood Programs for Young Children through Integrated and Coordinated Systems by reducing manual and redundant processes and consolidate multiple disjointed applications. Child Care Licensing is currently administered by 2 State Departments – JFS and ODE. As an added caveat, Family Based Day Care programs (1- 6 Children) are licensed by the 88 County JFS agencies that they reside in. The solution is being developed on the Salesforce.com platform using a Hybrid Agile methodology.

As the Functional Lead, Yogi was responsible for

- Mapping the business processes to the requirements to facilitate that the configured solution addresses all the functional requirements
- Integration of the various functional design components, for a solution-wide view to facilitate component/module work together to address the functional requirements and Use Cases
- Developing and managing a test-driven development methodology.

09/2015 - 03/2016
Quality Assurance Management Advisor, Seven months
State of Oregon
Oregon Department of Justice – Child Support

Project Description: The Oregon Child support system project is a multi-year child support system development and implementation project where functionality was transferred from the States of California, New Jersey and Michigan to Oregon.

As the Quality Assurance Management Advisor, Yogi is responsible for the quality oversight and timely delivery of the Deliverables and Plans from the PMO, Technical and Functional teams within this large-scale business transformation project. He is also responsible for developing content for the Joint Technical Design Sessions that pick up from where the functional Joint Application Design Sessions left off. The session content is tailored based on the fit gap analysis results regarding the transferability of the different transfer system design and documentation components from California, Michigan and New Jersey.

04/2015 - 09/2015
Initiative Manager, Six months
Commonwealth of Pennsylvania
Integrated Eligibility (iCIS) – ACA Modifications

Project Description: DHS is pursuing the establishment of the Family Planning Services program provided for under ACA. In order to achieve this within a compressed timeline, a phased approach is being followed.

Phase 1 – Targeted system modifications

Two key components:

- Allow for the creation of Non-Continuous Eligibility segments (NCEs) using the existing PSF10 category.

- A one-time system process to extend the Non-Continuous Eligibility segments (NCEs) of previous SelectPlan for Women recipients that were not subsequently enrolled in MA/PCO

Phase 2 – System Automation and Worker Efficiencies

This phase will include additional system modifications to implement the new Family Planning program within the system through the establishment of a new program status code, eligibility rules, and system generated correspondence.

As the initiative manager, Yogi was responsible for delivering the project from project charter through system implementation. He was also responsible for managing a cross functional team leveraging a delivery center and shared services models and client communications, risk management and operational management.

01/2015 - 04/2015
Data Collection Manager, Three months
Commonwealth of Pennsylvania
HealthChoices Expansion

Project Description: With the change in administration following the gubernatorial elections, Governor Wolf and the Commonwealth reached a decision to transition from the Healthy PA program to a more conventional form of Medicaid Expansion. This will be accomplished through the following key objectives:

- Benefit Package Changes. The current Healthy, Healthy Plus, and PCO benefit packages will be revised into a single ‘Adult’ benefit package.
- Eligibility and Enrollment Updates. Changes will be made to discontinue PCO enrollment, remove medical frailty evaluation (health screening, clinical validation, claims determination, and passive rules), and align with a single 'Adult' benefit package.
- Transition of Existing Recipients. Existing recipients will be transitioned to Traditional MA, Health Choices and aligned with the revised ‘Adult’ benefit package.

As the Data Collection Manager, Yogi was responsible for system modification to streamline the intake/enrollment process to support a traditional Medicaid expansion with the elimination of health screening and associated validation process. He also managed system changes to remove medical frailty from within the eligibility determination and benefit calculation segments.

03/2014 - 12/2014
Data Collection and Interfaces Manager, Nine months
Commonwealth of Pennsylvania
Healthy Pennsylvania (HPA)

Project Description: Healthy Pennsylvania was Governor Corbett’s plan to facilitate that Pennsylvanians h increased access to quality, affordable health care. The Healthy Pennsylvania plan focuses on three key health care priorities: improving access, ensuring quality, and providing affordability. It touches all areas of health care to encourage better care coordination for patients, providers, and insurers.

As the Data Collection and Interfaces Manager, Yogi was responsible for System modifications needed to introduce a new health screening tool as part of the initial application and annual renewal process that helps identify the appropriate benefit plan that would serve the applicant needs based on their health conditions. Yogi also facilitated the collection of data to support the reporting associated with the CMS 1115 Demonstration Waiver approval period and the hypotheses of the Healthy PA initiative with:

- Increase health care access for Pennsylvanians through the Healthy PA Private Coverage Option
- Implementing the Encouraging Employment Program to improve health outcomes and move people out of poverty
- Implementing a unique incentive plan to encourage personal accountability incentivize healthy behaviors and develop cost-conscious consumer behavior in the consumption of health care services
- Utilizing a health screening tool for all adult participants, both initially and periodically, will help identify the benefit plan that appropriate serves their needs
- Design and Development of the new interfaces for validating the self-attested Health Screening Information and the Medical Frailty Indicator based on Claims information to the iCIS enterprise required to support Healthy Pennsylvania
- Project Management and Leadership functions to oversee the 360 full time staff within the project

06/2013 - 01/2014
Solution Architect, Six months
State of Maine
IT Applications, Infrastructure, and Business Processes Modernization Project Phase 1

Project Description: The State of Maine Department of Health and Human Services (DHHS's) objective for the IT Applications, Infrastructure, and Business Processes Modernization Project Phase 1 is to implement the design recommendations KPMG developed in the initial phase of the project to achieve baseline integration with the Federally Facilitated Marketplace (FFM) for the Affordable Care Act. To assist the State in its execution of Phase 1, the following services were provided:

- Program Management Assistance (PMA)
- Requirements Definition and Functional and Technical Design Development Assistance (in the form of a combined Business Requirements Definitions (BRD) and System Requirements Specifications (SRS))
- Quality Assurance (QA) and Quality Testing
- Operations and Maintenance Planning Assistance

- Organizational Change Management (OCM) Assistance

As the Solution Architect, Yogi used an Enterprise Architecture approach to Business Process Modeling, Requirements Gathering, Use Case and Test Case elaboration using the open source SPARX EA tool. He was responsible for the changes needed to the Rules Engine within the existing Integrated Eligibility system, ACES to accommodate the MAGI tax and other ACA changes.

- Using an Enterprise Architecture approach to Business Process Modeling, Requirements Gathering, Use Case and Test Case elaboration using the open source SPARX EA tool.
- Responsible for the changes needed to the Rules Engine within the existing Integrated Eligibility system, ACES to accommodate the MAGI MA household composition and eligibility rules changes aligns with the business requirements of the ACA
- Federally Facilitated Marketplace FFM Account Transfer bidirectional exchange of application data including data mapping and staging approach based on the existing infrastructure and timing constraints
- Client Self Service Web Portal (My Maine Connection) related changes to support the single streamlined application and no wrong door policy of CMS
- Defined the test approach and methodology for the Account Transfer testing with CMS
- QA of the test approach and Use case and Test scenario development assistance

Technical Environment: Oracle 10G, J2EE, EJB's, Dot project, Subversion, MS Project, Move IT FTP, Apache

12/2012 - 01/2014
Program Advisor, 13 months
State of Ohio
Ohio Public Employees Retirement System – Program Assurance

Project Description: KPMG was engaged to act as an OPERS advocate in a program assurance role while providing objective, independent oversight and monitoring of the Our Way Forward program. KPMG is expected to help facilitate the success of the program by working collaboratively with the executive program sponsor, a systems integrator, program and project management, and staff to stay apprised of the progress and direction. Program Assurance includes the following activities:

- Advise and monitor the OWF Solution and Systems Integration RFP process
- Independent verification and validation (IV &V) of Key deliverables
- Monitor Standards compliance (adherence to BPR design, methodologies, established project processes and standards, technology standards, etc.)
- Monitor program accounting and budget management
- Monitor the implementation of the process recommendations and their benefits and validate against the OWF business case

- Provide on-going Project Status and Risk Assessment Reports
- While performing the duties above, identify and evaluate issues/risks/conflicts which are not being adequately addressed

As Program Advisor, Yogi evaluated the coding and unit testing processes and standards of the Systems Integration vendor against Industry standards and averages. He helped develop Project Governance and Metrics reporting protocols with an Agile like iterative development approach and assisted with the Performance testing approach with the existing topology considerations and Composite Services

12/2012 - 04/2013
PMO and Risk Manager, Five months
XEROX
TN Vision Integration Project

Project Description: KPMG provided PMO support including development and execution of project related tasks, Risks and Issue Management, Testing Assessment and Support, Internal Quality Assurance and Review of Project Deliverables and Work Products to Xerox for the Vision Integration Project (VIP) in Tennessee. The VIP project is an Integrated Eligibility System that determines eligibility determination and benefits calculation for multiple programs including TANF, SNAP, Child Care Assistance and assists with Voters Registration and Overpayment Claims and Recovery. The VIP System was envisioned to interface with over 100 external sources and is designed to support 2500 DHS workers and 2 million clients.

As PMO Manager/Risk Manager, Yogi was responsible for planning the project for Xerox to lay out a road map detailing the feasibility of the VIP project including cost and time estimates and associated risks and confidence levels for successful statewide implementation. Yogi also made strategic observations and recommendations to improve the defect resolution process and throughput within the End to End Testing phase. Furthermore, Yogi played a critical role in restructuring the Project wide Risk Management Process to include an actionable response strategy. In addition, he evaluated Performance and Scalability options for the Rules Engine.

02/2011 - 11/2012
Functional Project Manager, 9 months
State of Ohio
Ohio SACWIS, ODJFS

Project Description: The Ohio SACWIS (Statewide Automated Child Welfare Information System) is a comprehensive automated case management tool that supports social workers' foster care and adoptions assistance case management practice. The system tracks an average of 250,000 intakes per year and payments totaling $450 million per annum are paid out to Service Providers and Adoptive Parents. An iterative test-driven development approach has been adopted and the monthly deployments add value to the caseworkers and management staff alike.

As a Functional Project Manager, Yogi was Responsible for day to day operations, deliverables and invoices totaling $6 million per annum.

- Responsible for day to day operations, deliverables and invoices totaling $6 million per annum.
- Coordinate testing and development efforts with cross functional teams using an iterative, incremental Agile approach using the HP Quality Center tool.
- Manage the monthly on time, under budget product release cycles that addresses all the functional requirements.
- Lead the Joint Application Design (JAD) Sessions with State SMA's and performed technical and business systems analysis of project requirements that exceeded the overall project objectives
- Help develop use case scenarios, prepare status reports and deliver presentations to project sponsors.
- Provided organizational transformation and improvement; data warehouse and master data management to support Business Intelligence initiatives to measure program performance and deliver superior client services and formulate new public policies.
- Managed development of reporting cubes and created a robust and dynamic end user reporting capability using the Query Studio tool.
- Coordinated data governance strategies with State PMO

07/2007 - 02/2011
Release Manager, 2 years and 8 months
State of Ohio
ODJFS

Project Description: Step Up to Quality (SUTQ) is Ohio's voluntary quality rating system for ODJFS licensed child care programs. SUTQ recognizes early care and education programs that exceed quality benchmarks over and above Ohio's licensing standards. Supports and awards are available to assist programs in achieving and maintaining a Star Rating. An iterative development approach that has led to a hybrid application, with a Microsoft Access user interface for screens and reports sitting on top of a Microsoft SQL Server back-end database. This combination has allowed the Step-Up Licensing Specialists (SULS) to perform and record onsite verification visits at facilities even when no wireless internet connections are available. The SULS can work off-line with all the functionality of the SUTQ database available to them. When there is internet access, a point-and-click process was made available to synchronize their data with the central server. This is bi-directional synchronization using SQL Server Merge Replication, with data uploaded to and downloaded from the central server back to the SULS laptops.

As the Release Manager, Yogi contributed to the SUTQ program across all phases of the Software Development Life Cycle. Tasks performed included gathering and documenting system and business process requirements as a starting point for the design and development of database solutions. In addition, Yogi managed user support and issue escalation during system installation, ensuring that user experience was incorporated in design and fixes. Furthermore, he developed performance measures and metrics to demonstrate added value of organizational changes and new applications. His development duties included configuring and migrating software to production.

12/2006 - 06/2007
Functional Group Lead, Six months
Wisconsin DFS
eWISACWIS

Project Description: The CGI SACWIS application is an open, vendor neutral web-based solution built on open standards and open source. The CGI solution operates in a Service Oriented Architecture (SOA), with core components following the standard web service protocols. The SACWIS solution has a cumulative total of 75,000+ production hours and has processed more than 80 million production transactions and has distributed over $1 billion dollars in payments to child welfare providers.

As the Functional Group Lead, Yogi was responsible for developing the object model for the Assessment related change order and analyzing changes to the existing functionality including Federal NCANDS reports. Yogi also developed and implemented a Transition plan and produced future state user and training documentation. Furthermore, he led focus groups to achieve organizational changes for integrated systems and business processes.

06/2006 - 11/2006

Intake Design Lead, Five months

Florida DHS

FSFN

Project Description: The FSFN Intake module supports 225 counselors and is used to record an average of 1200 calls a day. It supports the 24-7 operation of the DCF Hotline, that handles all calls alleging institutional and in-home abuse, neglect and exploitation of children and disabled adults in the state of Florida. The Intake module also documents service referrals and other types of voluntary service requests.

As the Intake Design Lead, Yogi leveraged presentation and group facilitation skills and brought together a diverse set of individuals that included case workers, supervisors, administrators, and IT professionals during the Joint Application Design (JAD) sessions with the Department and the various Community based Care Agencies. Yogi also delivered recommendations relating to future state business processes and staffing roles and responsibilities with the new workflow process. Moreover, Yogi was responsible for developing a comprehensive test plan and providing experience with the legacy data conversion efforts.

10/2005 - 05/2006
Functional Group Lead, Seven months

Wisconsin DFS
eWISACWIS

Project Description:

The CGI SACWIS application is an open, vendor neutral web-based solution built on open standards and open source. The CGI solution operates in a Service Oriented Architecture (SOA), with core components following the standard web service protocols. The SACWIS solution has a cumulative total of 75,000+ production hours and has processed more than 80 million production transactions and has distributed over $1 billion dollars in payments to child welfare providers.

As the Functional Group Lead, Yogi identified the transactions and the data elements that fell under the HIPAA federal compliance aegis and tracked the viewing of this data by users within the system. Yogi also conducted interviews of key stakeholders to develop vision and mission in relation to organizational change and process improvement and facilitate acceptance. Furthermore, Yogi managed the Application Help Desk in a part-time capacity and handled all calls that came from the system users involving application related issues ranging from ‘How Do I’ type questions to software failures and future enhancement requests.

07/2004 - 09/2005
Rollout Manager, 14 months
New Jersey DHS
NJ SPIRIT

Project Description: NJ SPIRIT (New Jersey Statewide Protective Investigation Reporting and Information Tool), was a $70 million project funded in part from Federal Grants. NJ SPIRIT merges case management and data collection tool s to help the Department of Children and Families easily produce reports on the aggregate condition of the child welfare system within the State of New Jersey. The system also promotes better connectivity between the state attorney general's office and DYFS.

As the Rollout Manager, Yogi was responsible for preparing user support materials and providing on-site support at the Statewide Central Call Center for post-production deployment. Yogi also developed the System Implementation Guide. Moreover, Yogi identified and trained Super Users to setup an escalation process based on existing policies and procedures.

06/2001 - 06/2003
Implementation Manager, Two years
Wisconsin DFS
WISACWIS

Project Description: The AMS SACWIS application is an open, vendor neutral web-based solution built on open standards and open source. The AMS solution operates in a Service Oriented Architecture (SOA), with core components following the standard web service protocols. The SACWIS solution has a cumulative total of 75,000+ production hours and has processed more than 80 million production transactions and has distributed over $1 billion dollars in payments to child welfare providers.

As the Implementation Manager, Yogi prepared the designated counties for implementation of the WiSACWIS application. This included all areas of implementation readiness including Organizational Readiness, Technical Readiness, Data Readiness and User Readiness. In addition, Yogi coordinated efforts with key stakeholder and County administrators. He also worked with the County Directors in customizing templates and system notifications based on their local policies and needs.

04/1999 - 05/2001
Implementation Team Lead, 2 years 1 month
OHIO DJFS
eICMS

Project Description: Integrated Client Management System (ICMS), ICMS was the first web-enabled case management system, which facilitated information sharing across Ohio's various human services legacy information systems, and enabled caseworkers to better coordinate and deliver services to the State's public assistance clients. This project was part of Ohio's effort with the historic Welfare to Work Legislation of the 1990's.

As the Implementation Team Lead, Yogi directed and participated in BPR efforts with client teams to capture and enhance client work processes, creating improved communication and organizational understanding of work methods. Additionally, Yogi developed and implemented business process reengineering and change management strategies/plans for the ICMS system user support network resulting in improved service delivery and acceptance in 88 counties. Furthermore, Yogi created the implementation strategy and plan for statewide county user support network to achieve federally mandate goals with the work requirements required for TANF adults.

Key Skills

Function and specialization:

Public Sector, Large Scale System Implementation, SDLC, Project Management, Proposal Development, Business Process Reengineering (BPR), Business Development, Integrated Eligibility (IES), Affordable Care Act (ACA), Health Insurance Exchange (HIX), Independent Verification and Validation Services (IV&V), Data Warehousing(DW) & Business Intelligence (BI), Child Welfare (SACWIS), Federal Reporting (CMS, FNS, ACF) Public Sector, Large Scale System Implementation, SDLC, Project Management, Proposal Development, Business Process Reengineering (BPR), Business Development, Integrated Eligibility (IES), Affordable Care Act (ACA), Health Insurance Exchange (HIX), Independent Verification and Validation Services (IV&V), Data Warehousing(DW) and Business Intelligence (BI), Child Welfare (SACWIS), and Federal Reporting (CMS, FNS, ACF)

Education

Qualifications: BS in Civil Engineering

	Anna University, College of Engineering, Chennai India, 1996 Project Management Professional, Project Management Institute, 2012 Certified Scrum Master, Scrum Alliance, 2012	
Languages	English	Fluent

Training Lead: James Collier

Professional experience

Profile

James is a Senior Managing Consultant in the IBM GBS Talent and Engagement practice. Since joining IBM in 1998, James has worked in several capacities including instructional design, course-ware development, project management, consulting, and recruiting and hiring. He has provided leadership and creative solutions for the development of training and reference material for both traditional classroom training and distance learning. In his current role, he is responsible for managing and consulting on large and medium custom content learning development projects for both internal and external clients on Oracle, SAP, Cúram, and Watson solutions. James is extremely flexible and confident in his abilities to develop training for client systems.

James is an organized self-starter and is always eager to find the most effective approach to learning. He is a positive leader and mentor to his teams and values project success and the growth of individual team members as factors in his own success. His ability to develop and maintain meaningful and collaborative client relationships makes him a valuable asset on program leadership teams.

While with IBM, James has made several innovative patent applications and received a completed patent award for an IBM methodology used to perform analysis of delivery methods to job roles. This is a well-known methodology within the IBM training community and is utilized on many IBM engagements.

Professional History

12/1998 - To date
IBM, United States of America
Training Consultant, Subject Matter Expert

James manages large training development and delivery efforts for both public and private sector clients. He has delivered many solutions to solve specific needs in a continuous effort to minimize cost and maximize effectiveness for both project and system end user.

02/1997 - 12/1998
Leading Check Manufacturing Company
Institutional Data Support and Training Developer

James provided support services to financial institutions in the use of a custom automated ordering system. He established a flagship support services desk for an SAP implementation and assisted in the development of both instructor-led and distance learning to train personnel in SAP.

Assignment History	**02/2017 - To date** **Training Lead, One month** **Visa Inc.** **Finance Technology Programs Alignment** Project Description: Visa Inc. has multiple large-scale implementation projects (Visa Inc/Visa Europe Integration, Project Costing, Procurement, and Expenses) running concurrently in FY17 that may impact several, common stakeholder groups across the organization. To optimize on cost, quality, time, and coordination efforts, James joined the Change Management team to develop and deliver a strategic training plan that will unify the approach to training across all 2017 Finance projects. The training plan is scheduled for delivery to Visa at the end of March. **04/2015 - 12/2016** **Training Lead, 19 months** **County of San Diego** **ConnectWellSD (formerly CoSDIE)** Project Description: The County of San Diego has key objectives of supporting residents to become healthy, safe, and thriving. To achieve these objectives, the County recognizes that it must increase information sharing capabilities to: increase coordination across programs, reduce duplication and rework by staff and customers, and manage services and resources effectively. Spanning more than 4,000 square miles, and home to over 3,000,000 residents, San Diego County is one of the largest metropolitan and rural regions in the country. In support of this initiative, ConnectWellSD provides the functionality necessary to manage referrals and collaboration across County agencies and in-depth reporting capabilities to better inform critical decision making. James managed the end-to-end implementation of training for the ConnectWellSD project. The Training Team was responsible for developing and delivering web based, virtual learning, and instructor led training courses across all three system functional release phases. Working collaboratively with County training counterparts, the IBM team facilitated the County had the tools, knowledge, and capability to maintain and continuously delivery the prepared training beyond the life of the contract. Beginning with the development of a firm client relationship that continued throughout the program, James led a team of six IBM training developers through the ADDIE (Assess, Design, Develop, Implement, and Evaluate) methodology to create 22 eLearning courses, eight webinars, 39 system simulation, 35 job aids, and 12 quick reference guides. The Training Team was the area of least concern to program and client leadership as training development, delivery, and client expectations were effectively managed to drive a successful conclusion in support of positive system user adoption and acceptance. **01/2015 - 04/2015** **Training Lead, Four months**

Veteran's Health Administration
Clinical Reasoning System Assessment (CRSA) [Watson]

Project Description: IBM is providing support services to implement an existing, in-production Reasoning System as a Clinical Reasoning Service (CRS) for assessment purposes, encompassing: contractor program management, software/hardware support, testing, configuration, integration, programmatic improvement, documentation, and safe harbor pilot deployment of the system solution as a service. These services will allow VA to assess the question: In what ways can a leading CRS help improve patient care, efficiency and outcomes within the VA clinical environment?

For this engagement James established initial client confidence to training with support from the IBM project leadership. Conducted an initial requirement review with the client to baseline the training development effort. Built the initial document outline and identified information sources for content to fold into the training guide. Managed team members contributing to the development of the guide, including both training team specific resources as well as Subject Matter Experts from other project work streams. Developed the system training guide for use of the custom VHA user interface to the Watson EMR Assistant (EMRA) and the Watson Discovery Adviser (WDA). Supported training team members through the completion of the CRSA training guide.

11/2014 - 04/2015
Training Lead, Six months
IBM Corporate Citizenship and Corporate Affairs
IBM SafetyNet

Project Description: The SafetyNet project was sponsored by the internal IBM organization Corporate Citizenship and Corporate Affairs (CCCA). The scope of the Cúram SafetyNet project was to replace the legacy SafetyNet system with a Cúram based solution including all current SafetyNet features which provide client, contract/program, and reporting functionality to non-profit organizations in New York. The technical team developed the IBM SafetyNet solution as a Program as a Service (PaaS) asset that will benefit future Cúram engagements.

James led a team of four remote training developers through this end-to-end initiative. All material development was completed in collaboration with the project BA team and the client and included planned review and feedback sessions to facilitate compliance with program direction and accuracy of the intended program messages.

The team delivered a blended solution which consisted of one web-based course and five instructor led classroom courses with 20 system simulations and nine quick reference guides to support the adoption and integration of the new IBM SafetyNet solution into the New York non-profit community. The effort began with an audience analysis and strategy development, and ending with end user training delivery through a Train-the-Trainer program and hand-off of material to client personnel.

Under Mr. Collier' leadership, the project concluded successfully with the CCCA client able to maintain the completed training material and continue training delivery as new non-profits are brought on to the IBM SafetyNet system.

08/2014 - 11/2014
Training Lead, Four months
Nebraska Medicaid Eligibility and Enrollment Solution
Wipro EES

Project Description: IBM is working to offer the Nebraska Medicaid and Long-Term Care (MLTC) program an eligibility and enrollment solution designed specifically to meet the needs of the Nebraska MLTC program.

As Training Lead for the Nebraska Medicaid Eligibility and Enrollment Solution, James has laid the planning groundwork for the training effort following the ADDIE (Analyze, Design, Development, Implement, and Evaluate) ISD (Instructional Systems Design) model. At this time, the project is just getting started as leadership and work stream engagement with the state is in the process of being established.

06/2014 - 08/2014
Training Strategist, Three months
VeriFone
Shared Service Center Consolidation

Project Description: VeriFone has 5,600 employees worldwide, and partners with local distributors to deliver innovative payment solutions in 150 countries. To centralize financial processes following recent global expansion initiatives, the Finance Shared Service Strategy (FSSC) Program sought to address these issues and improve the efficiency, effectiveness, measurement and scalability of transaction processing related functions through the design and implementation of a Financial Shared Services Center(s).

James was a learning strategist on the consolidation effort. VeriFone moved from local financial services to a region shared services model. James provided training strategy guidance to set vision recommendations to realize the future vision for VeriFone.

11/2013 - 06/2014
Training Lead, Eight months
Equinix
REIT/SWIFT

Project Description: Equinix, Inc. is an American public corporation that provides carrier-neutral data centers and internet exchanges. Equinix provides network-neutral data centers (IBX or "Internet Business Exchange") and interconnection services. The company offers collocation, traffic exchange and outsourced IT infrastructure solutions to enterprises, content companies, systems integrators and over 600 network service providers worldwide. Equinix operates 98 data centers across 38 major metropolitan areas in 12 countries in North America, Europe, Asia-Pacific and South America. To transformed Equinix's tax structure to a Real Estate Investment Trust (REIT), IBM was hired to update the Equinix finance system to enable a REIT reporting structure for IRS tax purposes.

James managed a team of seven developers in a cross-border engagement that enabled the end-to-end implementation of training in support of the R12 upgrade. Following the ADDIE (Assess, Design, Develop, Implement, and Evaluate) methodology, he performed an audience analysis, developed a training strategy, training prototype, and documented standards and templates to enable the consistent implementation of training for the resources on his team.

From the beginning of the project and throughout the life of the engagement, James fostered and maintained a collaborative relationship with the client and effectively managed expectations according to the project schedule.

With five of the seven resources on his team off-shore from IBM India, James effectively coordinated activities between on-shore and off-shore teams.

The team developed 26 instructor led training courses, three web-based courses, and 78 system simulations.

Implemented through Train-the-Trainer, Mr. Collier' Training Team supported the planning and logistics for delivery and conducted an effective hand-off so the client was able to maintain developed material and continue to deliver on-going training sessions.

07/2013 - 11/2013
Training Lead, Five months
Florida Department of Children and Families
FSFN Activation Phase Enhancements

Project Description: The Child Protection Enhancement and SACWIS Compliance Project addressed the needs of over 1,500 Child Protective Investigators who needed the proper tools and decision supports to understand child and family functioning and safety. The vision was to transform Florida's child welfare system of care to work more effectively with children and families towards achieving child safety. Updates to DCF's Florida Safe Families Network (FSFN) web-based case management application complement the safety methodology, providing Department of Children and Families (DCF) workers and supervisors with a powerful tool for assessing safety in the holistic context of overall family functioning. Enhancements to FSFN enable DCF staff to create and maintain case records in a comprehensive manner, while minimizing duplicate data entry. As part of the Child Protection Enhancement and SACWIS Compliance Project, IBM was tasked with the development of Web-based training modules to familiarize DCF field and supervisory staff with the updates and enhancements to FSFN application functionality related to the enhanced safety methodology.

James was asked to assume the role of Training Lead to improve the health of a difficult project after four other leads were dismissed by the client for various reasons. After reviewing the scope, timeline, and overall effort, James expanded the training team from six on-site resources to eight resources on-site and seven resources off-site to meet requirements, expectations, and delivery timelines. From the beginning, James established a strong and healthy collaborative relationship with the client and maintained that positive collaboration through the end of the contract.

The team developed 19 complex eLearning modules to over 5,000 state-wide Child Case Investigators and Child Case Managers in 4.5 months and created a very positive atmosphere of mutual respect with the client for the amount of quality material produced in such a short period of time. Each training milestone was achieved on-time and to the highest client satisfaction. The success of the Training Team strengthened the relationship with the client which paved the way for additional contract work beyond the M&O period.

10/2011 - 06/2013
Training Lead, 21 months
LifeCell
Oracle R12 Implementation

Project Description: LifeCell is a subsidiary of Kinetic Concepts Inc. (KCI). LifeCell develops and markets tissue repairs products for use in reconstructive, urogynecologic and orthopedic surgical procedures. LifeCell’s six sigma initiatives identified the improvement of inventory accuracy, electronic batch record for FDA compliance, Order to invoice, procurement, and streamlined Finance as an organizational priority.

LifeCell selected IBM for the implementation of Oracle R12.1.3. This implementation included two operating units (US and Canada), one manufacturing location, one distribution warehouse and 1500 consignment locations. The Oracle R12 implementation reduced the customization of the packaged application and reduce the manual paper work by implementing Oracle MES for electronic batch record system. The LifeCell project was a highly FDA regulated implementation and complex manufacturing processes.

James managed the end-to-end implementation of training for the LifeCell project on this cross-border engagement. Following the ADDIE methodology, James created the training strategy and development schedule, standards and templates, and established a positive working relationship with SMAs from the six functional areas (costing, finance, logistics, manufacturing, order management, and purchasing). The Training Team consisted of four total resources; James on-shore at the client site and three off-shore developers from IBM India which James effectively managed.

Mr. Collier’s effort led to the successful development of two web-based courses, 30 instructor-led courses, and just over 170 system simulations. The training effort concluded with a Train-the-Trainer program and the successful hand-off of developed training material for the client to maintain and continue to deliver.

01/2011 - 09/2011
Training Lead, Nine months
VHA Chief Business Office

Project Description: The Veterans Health Administration (VHA) has more than 235,000 employees and the country's largest integrated healthcare delivery network serving approximately 5.5 million veterans. The VHA's Chief Business Office (CBO) provides national leadership for advancing business practices that support patient care and delivery of health benefits, and is organized into three primary business lines, which include Purchased Care, Revenue Operations, and Member Services.

James was the training lead for this engagement. He coordinated and facilitated several training design workshops for Fee, Customer Service, and Eligibility and worked closely with his project team and client representatives to develop thirteen hours of web based training courses for new hire personnel.

05/2010 - 11/2010
Training Lead, Seven months
VHA Revenue Academy

Project Description: The Veterans Health Administration (VHA) is undergoing a consolidation of all its revenue functions whereby they are regionalizing those functions into Consolidated Patient Account Centers (CPACs) across the US. IBM was subcontracted through Altarum Institute to develop nine Basic Job Skills training courses. These courses were primarily instructor led classroom training, and included system simulation exercises to supplement the classroom instruction.

James started this project as the lead developer for the VHA Revenue Academy training development team and concluded the project as the training lead. While on the project, he provided training development guidance and support, provided lead technical support for document and simulation development and converted two existing Revenue Academy courses into the same consistent delivery format as other project courses. James assumed leadership responsibilities toward the latter half of the engagement as standing leadership transitioned to other IBM client efforts. He was highly regarded by peers, leadership, and client representatives and delivered quality products within the constraints of the program.

01/2009 - 05/2010
Training Lead, 17 months
US Census Bureau
DRIS Coverage Follow-Up

Project Description: The U.S. Census Bureau is the primary source of basic statistics about the population and economy of the nation and is known for the Decennial census of population and housing. As the Census DRIS 2010 integrator, IBM developed custom applications to support contact center personnel in validating paper and electronic data with census respondents.

James was the Training Lead for this engagement. As the Training Lead, he was responsible for the planning, development, and delivery of training material to support the roll-out of the DRIS Coverage Follow-Up program. He led a team of seven training developers through successful completion and delivery of training to DRIS end users.

James was also responsible for the mechanics behind and supported the development of individual learning components that made up the training curriculum. He setup and implemented the Learning Management System and Virtual Classroom environment for end user training delivery. As the LMS administrator, James created the curriculum structure and learning framework in the LMS, loaded and maintained courses, instructors, and end users in the system, and provided reporting results to project leadership throughout the life of the curriculum roll out. He also provided SMA advice and maintained project team relationships for cross team integration with training. His knowledge of the project and familiarity with project systems made him a valuable resource in support of training.

01/2006 - 01/2009
Training Lead, 37 months
U.S. Air Force
Financial Management Transformation (SAF/FMT)

Project Description: The Assistant Secretary of the Air Force for Financial Management and Comptroller (SAF/FM) engaged IBM to be its strategic advisor in defining and implementing its Strategic Planning and Transformation Program (SAF/FMT). With IBM's guidance, the Air Force's CFO organization developed a strategic vision for moving this 10,000-person organization from a transactional focus toward greater emphasis on strategic advice to Air Force commanders, while improving customer service and becoming more efficient.

James led a team of consultants to develop training and education in support of multiple lanes of FM Transformation. Balancing workload against available resources led to the development of a custom development application to rapidly produce web-based training which made it possible for developers to create 103 courses in nine months. All web based courses were loaded to an Air Force LMS for delivery to the end user population. James was responsible for the development, maintenance, and delivery of web based courses through the LMS to the end user. New and updated courses were made available in the online course catalog for individual registration as well as manager assignment of specific training courses.

09/2005 - 12/2005
Training SMA, Four months
IBM Corporation
Entitled Software (ESW)

Project Description: James provided services that brought an existing SAP context sensitive help system up to date with current development standards. Project scope and timeline made it necessary to enlist additional consultant resources to complete the assignment in accordance with client demands. The client was delighted with the results as the final product was delivered on time and under budget.

02/2004 - 09/2005
Training SMA, 20 months
Sprint
Sprint/IBM Customer Care Partnership

Project Description: The Sprint / IBM Customer Care Partnership was designed to transform Customer Solutions to provide a return to industry leading customer satisfaction levels, $1.5B in cumulative cost savings over 5 years, the ability to respond to changing customer, product and business needs , improved management information and controls, and develop more effective, productive, and satisfied employees.

James was charged to provide a technology roadmap for the learning infrastructure and a comprehensive tools analysis with recommendations on which tools would satisfy client training development and delivery needs. His recommendations were well received and adopted as standard practices to improve performance and customer satisfaction. He was part of a team to develop the primary transformation training curriculum and delivered it to all worldwide Sprint contact centers. The new curriculum focused on the introduction of newly integrated operational technology which was part of the company's strategic change. James provided SCORM conformant WBT courses to the Sprint LMS administrators for posting. Once the courses were loaded to the SABA LMS, James delivered Train-the-Trainer to key training personnel and ultimately delivered end user training across the US, five locations in Canada, and three locations in the Philippines. In addition to delivering training, James provided technical support to field training personnel as necessary in the use and administration of the SABA LMS.

09/2002 - 01/2004
Training SMA and User Security Alignment, 17 months
United States Government
Logistics Modernization Program

Project Description: The Wholesale Logistics Modernization Program (WLMP) was a 10-year, $680M US Army (DOD) project to completely modernize the Army wholesale logistics business processes through the adoption and adaptation of commercial business practices and the implementation of SAP R/3 as the technological underpinnings and involves approximately 35,000 end users. Though IBM was not the primary contract owner for this engagement, IBM does retain a recognized presence and had been identified as a strong source of key skills needed to further the goals of the project.

James developed the system by which the training development effort was tracked and developed a relational database solution to integrate data collected by various organizations to provide role-to-course mapping for training. He was the key facilitator, integrator, developer, and architect of several systems used to manage data including enterprise resource mapping, personnel data validation, role mapping, change control, training scheduling, and user account management for both SAP and the custom (home grown) learning management system. James excelled in the role of Information/Data Coordinator and was essential to the success of the fully integrated training program.

03/2002 - 09/2002
Training SMA, Seven months
IBM Corporation
Fulfillment Hardware

Project Description: James re-designed the Fulfillment Hardware intranet web site to conform to intranet standards compliance.

03/2002 - 08/2002
Training SMA, Six months
IBM Corporation
Entitled Software

Project Description: James designed a solution for an HTML context sensitive help system launched directly from SAP. He guided the interface design through numerous updates and changes to meet the requirements of this global client. James developed a process to convert training documentation created with RWD InfoPak into HTML web format for on-line delivery. This process was intended to benchmark future conversion necessities from InfoPak to HTML.

12/2001 - 03/2002
Training SMA, Four months
IBM Corporation
Asset Financing

Project Description: James designed, developed and deployed an on-line SAP documentation warehouse. The primary purpose of this warehouse was to deploy developed training documentation to a global audience. The training material is accessed by instructors who may print their classroom material directly from this site. Secondary to the global distribution of the classroom training material, this site evolved into an on-line help system from which SAP users can access specific SAP transaction documentation to assist in the everyday activity of running SAP as it was installed at IBM Asset Financing.

08/2001 - 12/2001
Training SMA, Five months
GE Capital
GE Capital Dealroom

Project Description: Mr. collier designed, developed and deployed a client specific on-line training course for the internal client application "Dealroom". This navigation and overview course was developed and delivered successfully against an aggressive project plan to the ultimate satisfaction of the client.

02/2001 - 04/2001
Training SMA, Three months
IBM Corporation
Real Estate Site Operations (RESO)

Project Description: James designed, developed and deployed a client specific web hosted on-line help system to house and maintain all developed training documentation in PDF format for SAP user access through the client intranet.

10/2000 - 06/2002
Training SMA, 21 months
IBM Corporation

Enterprise Application Training Solutions (EATS) Practice Database

Project Description: James designed, developed and deployed a Lotus Notes database to better connect practice consultants with the tools and information necessary to succeed on any client engagement.

02/2000 - 05/2001
Training SMA, 16 months
IBM Corporation
Global Financing, Global Asset Recovery System (GARS)

Project Description: James created and deployed a client specific web hosted navigation course delivering basic classroom instruction in SAP that offered student feedback and evaluations. He designed and developed an on-line help system to compliment classroom training which became the knowledge repository for up-to-date information on procedures, role requirements, and system configuration changes. James also contributed in the development of SAP Production Planning (PP) classroom training material. He designed and developed a Microsoft Access classroom scheduling database which has been used on several other client engagements.

03/1999 - 12/1999
Training SMA, 10 months
Lucent Technologies

Project Description: James trained manufacturing shop management and production floor operators in the use of MAX (Manufacturing Execution System) - a custom application designed specifically for Lucent that allowed the machine operator to easily enter data by scanning into SAP without the user navigating through SAP to complete transactions. James played key role in the development of classroom training material for the MAX software application.

Key Skills	Industries: – Government, Public. – Education. – Telecommunications. – Financial. – Life Sciences. Process and Functional Skills: – Project Management, Team Leadership. – Training: Strategy, Design, Development, Logistics, Delivery, and Evaluation. – Learning and Development: Adult, Blended, Distance, eLearning, User Training, Instructor-Led Training, Virtual Classroom. Technical Skills: – Windows and Mac. – Microsoft Office (Word, Excel, PowerPoint, Access, Project, Visio). – Adobe eLearning Suite (Dreamweaver, Home Site, Captivate, Presenter). – Articulate Storyline. – Trivantis Lectora – Oracle UPK, IBM Simulation Producer. – Graphics Editor (Adobe Photo Shop). – Web Development. – Learning Management Systems (Adobe Connect LMS, Saba LMS, Meridian LMS). – Web Meetings / Distance Learning (Centra Symposium, IBM Smart Cloud, Adobe Connect).

Education

Qualifications	BA in English Literature St. Mary's University, San Antonio, Texas, United States of America, 1995	
Languages	English	Fluent

Other relevant information

Other job-related activities	James received a patent for his innovation in the development of a training strategy database application that applies the principles of IBM's Roll Out Strategy Analysis.

Testing Lead: Gaurang Mavani

Professional experience

Profile	Gaurang is a Senior Managing Consultant at IBM's Watson Health Consulting Services with the Cúram practice. Within Public Sector, Gaurang has worked on HealthCare, Public Housing, Unemployment

Insurance and City Environmental Protection Agency Industry in multiple roles. Gaurang has extensive experience leading and managing testing, functional and development teams for external clients in Cúram, Oracle CRM and SAP ERP.

Gaurang has a proven track record of successfully leading testing teams for IBM on complex system implementations for over six years. His experiences include leading all testing activities including planning, documentation, execution and ensuring test plans and processes are coordinated with stakeholders. He facilitates documentation and resolution of issues discovered during the testing process and has successfully served as the point of contact (POC) for user acceptance testing (UAT) for several clients including the County of San Diego Health and Human Services Agency, the New York City Housing Authority, and the New Jersey Department of Pensions and Benefits.

Gaurang has the following certifications:

- IBM Cúram Certified Professional Business Analyst. v6.0.
- Oracle Siebel 8 Certified Business Analyst.
- Oracle Siebel 8 Certified Core Consultant.
- Oracle Business Intelligent Enterprise Certified Consultant 10g.

Assignment History

11/2016 - To date
Lead Business Analyst, Five months
Missouri Department of Health and Human Services
MO Eligibility Determination and Enrollment System (MEDES)

Project Description: MEDES is an extremely complex MAGI implementation for the State of Missouri. In MO, IBM assumed the role of lead System Integrator in May of 2015. Missouri purchased the full suite of Cúram modules in 2013 and embarked on a journey to implement HCR (MAGI), CGIS, SNAP, TANF and other modules over a multiyear schedule. MO decided in May 2015 to replace their System Integrator and IBM was awarded that work.

As the Lead Business Analyst, Gaurang created the functional design documents for the Federal Hub (Fed Hub) calls which include H 31 and H 9, which he reviewed and provided design recommendations for Prior Quarter, Show Me Healthy Babies (SMHB) and Annual Renewals. Additionally, Gaurang provided guidance to the test team for test case design for the Fed Hub design documents.

04/2015 - 10/2016
Test Manager, 19 months
County of San Diego, California
County of San Diego Information Exchange Project

Project Description: The County of San Diego has key objectives of supporting residents to become healthy, safe, and thriving. To achieve these objectives, the County recognizes that it must increase information sharing capabilities to: increase coordination across programs, reduce duplication and rework by staff and customers, and manage services and resources effectively. Spanning more than 4,000 square miles, and home to over 3,000,000 residents, San Diego County is one of the largest metropolitan and rural regions in the country. In support of this initiative, ConnectWellSD provides the functionality necessary to manage referrals and collaboration across County agencies and in-depth reporting capabilities to better inform critical decision making. The Cúram product was used in San Diego to implement Case Management, Task Management and MDT.

Gaurang led the testing team for the end to end implementation of the ConnectWellSD project. Gaurang was responsible for developing the project testing strategy and the test plan for each phase of the project. The testing team worked collaboratively with the client counterpart across all phases of the project. The testing team facilitated that the testing effort aligned with business requirements. Gaurang enabled the county to have complete visibility to the test process and results by ensuring the test plan and processes were coordinated with all stakeholders and ensuring documentation and resolution of issues discovered throughout the entire testing process. Gaurang led the UAT, guiding the client with strategic and technical insight. He was also the point of contact for the POC, for issue identification, analysis and resolution.

Furthermore, Gaurang led a team of 6 Full Time Employees (FTE's), evaluated and identified the testing tools for automated testing and developed the Quality Assurance Process for the project. He developed the Master Testing Strategy for the overall project and coordinated and shared the test strategy, plan, design and execution with stakeholders. Gaurang created the following plans for the three phases of the project:

- Test Plan.
- Security Test and Evaluation Plan.
- System Recovery Test Plan.
- Performance Test Plan.

In addition, Gaurang assisted the County in conducting the User Acceptance Plan for each phase, completed the testing of each phase under budget and on time, and successfully delivered quality deliverables products consistently with highest client satisfaction.

08/2014 - 03/2015
Functional Lead, Eight months
State of Nebraska
NE Eligibility and Enrollment Solution

Project Description: The State of Nebraska's Eligibility and Enrollment solution (NE EES) involves implementing Cúram along with multiple system components. The project is to modernize the existing eligibility and enrollment system for Medicaid in Nebraska.

As the Functional Lead, Gaurang led a team of 4 FTE's to document the process flows for CMS Gate Review for AR (Architectural Review). He identified issues and risks and worked with multiple client vendors to support the CMS gate review process.

Gaurang identified processes which needed to be re-engineered for the NE EE solution, organized and drew process flows based on the highest priority for re-engineering, and led the Business Process Re-Engineering sessions with the client to socialize the To Be process flows. Moreover, he identified Gaps and the impact to the current business processes as a part of BPR.

05/2013 - 04/2014
Functional Lead, 12 months
Maryland State
MD Health Information Exchange Implementation (MDHIX)

Project Description: The project involves IBM Cúram Social Enterprise Application implementation for the Maryland Health Information Exchange (MD HIX). The IBM team was responsible for design, development and implementation of the Cúram HCR application.

As the Functional Lead, Gaurang led the client reporting team by providing guidance around Cúram capabilities. Gaurang also led the IBM Cúram Functional Team by conducting requirement gathering sessions around SHOP and Data Conversion functionality. He assessed the business landscape and helped the client align business requirements with product functionality. Gaurang collaborated across other areas including development and test to support the delivery of multiple Cúram releases. He also planned for delivery of the Cúram Releases.

02/2013 - 04/2013
Business Analyst, Three months
Clark County Social Services
CC Social Services ACES Project (CC SS ACES Project)

Project Description: Clark County has undertaken the Automated Case Management and Eligibility System (ACES) to replace the existing legacy system. The IBM team was responsible for designing, developing and implementing the ACES application.

As a Business Analyst, Gaurang reviewed Business Requirements for Creating and Managing Participant, reviewed the Business Requirements for Task Management and understood the processes for CC SS Burial Program through the Business Use Cases (BUC) and documented the process flow in MS Visio for client review. He executed Test Scripts for Work Packet 1 and 2 and owned, maintained and tracked the Actions Items.

12/2012 - 02/2013
Test Lead. 3 months
CA State Government
CA Department of Industrial Relations (CA DIR) Liens Payment System

Project Description: The State of California mandated the payment for liens. To support the legislative mandate IBM designed, developed and deployed the IBM Payment Systems and integrated it with the Case Management System based on the Cúram Case management module.

IBM integrated the solution with the CA DIRs file upload process and web based lien creation system.

As the Test Lead, Gaurang identified issues and risks and provided the mitigation plan. He developed testing strategy for Component Integration test (CIT), System Test (ST) and User Acceptance Test (UAT) and coordinated with the stakeholders. Gaurang planned and estimated the timeline for test execution based on available resources for Release 0 and Release 1 and recommended practices around testing to the client. Furthermore, Gaurang developed an effective defect management process and facilitated that the team adhered to the recommended process, managed and guided the Client UAT testers to facilitate that they documented the defects appropriately and in a timely manner, served as a single point of contact for CIT, ST and UAT for the overall test initiative, and created/managed the deployment for the Release 0 and Release 1.

09/2012 - 12/2012
Test Lead, Four months
NJ State Government. Department of Pensions and Benefits:

Project Description: The NJ Division of Pensions and Benefits (DPB) was seeking to upgrade their Case Management and Tracking System which was implemented by Oracle Siebel Case Management Software. IBM deployed the Oracle Siebel upgrade to 8.2 project.

As the Test Lead, Gaurang planned resources, time and estimates for the development and testing effort. He prepared Master Test Plan, Test Summary and Test Reports as a part and shared the processes and document with the stakeholders in the timely manner. He identified Issues, risks and provided the mitigation plan, created the Deployment plan as a part of IBM deliverable, and reviewed the User Interface, Screens, Views, Applets, MVG's, obsolete fields to fix the errors in the screen navigation.

Additionally, Gaurang identified and fixed Siebel UI issues impacted by the upgrade, Web Templates, Screens, Views, and Applets. He planned and executed UAT along with the client stakeholders, created Training documentation for the User, worked with the Administration team to facilitate that all the deployment activities were completed on time for a successful go live, and guided, mentored and resolved intra team issues to facilitate a successful delivery.

01/2012 - 09/2012
Lead Business Analyst, Nine months
American Airlines
AA Premium Services Remediation Project

Project Description: American Airlines observed severe decrease in their loyalty program and were looking to remediate the issues. As a part of the AA Premium Services Remediation Project, IBM provided governance and oversight. The oversight was involved in the areas of technical design, development / configuration of Oracle Siebel CRM, testing and deployment.

Gaurang analyzed as is business processes and provided specific and actionable remediation recommendations. He tackled system defects and technical issues, improved user perception, and addressed business and IT Leadership concerns regarding system quality and fit. Gaurang played a pivotal role finalizing the detailed remediation plan to perform JIRA backlog cleanup, JIRA prioritization against Business Metrics, and mapping prioritized JIRAs to releases. He provided recommendations on tightening Program Governance for CRM applications, defined baseline measures and frameworks for measurement, and led a team of GD resources for defect remediation for three releases on time and within budget.

07/2011 - 01/2012
Test Lead, 7 months
Medtronic Inc.
Siebel CRM Application

Project Description: Medtronic uses Oracle's Siebel Application in multiple instances.

1. The CRM Group, Siebel is used to manage and maintain the customers, contacts, devices and device registration information for the implanted and explanted devices of the patient. The Siebel application is multiple org, global implementation which includes their Spinal, Cardiovascular, Corporate, Neuro divisions. It is integrated with multiple applications which includes SAP, and American Express Online services.
2. The CTMS (Clinical Trial Management System) group Siebel eClinical is implemented to document the findings of a clinical trial for a subject. Medtronic being a manufacturer of medical devices, needs to capture the results of the clinical trial on the subject per site and per visit. IBM led the maintenance and enhancement effort with a team of 150.

As the Test Lead, Gaurang led a 15-member testing team in India and the Philippines focused on testing the Siebel CRM and Siebel CTMS applications. Gaurang recommended Testing Methodologies and Developed Processed to facilitate that the team conformed to the processes. He created the Test Plan, Test Summary and Test Reports for Siebel CRM, Siebel CTMS and Integration Testing effort and shared these plans with the stakeholders.

Moreover, Gaurang identified issues, raised risks and provided mitigation plans. He also provided time and resource estimates for the testing effort, tracked, managed and facilitated defects were tracked and retested in a timely manner. He served as a single point of contact for the project stakeholders for SIT and UAT and guided, mentored and resolved issues and concerns.

02/2011 - 05/2011
Lead Data Analyst, Four months
NYC Department of Environmental Protection
NYC DEP - Billing systems

Project Description: The NY Department of Environment Protection planned to implement the Hansen Enterprise Resource Planning (ERP) application to replace the legacy billing system. IBM led the design of the effort for the billing system.

As the Lead Data Analyst, Gaurang led the Data Mapping sessions to gather data migration requirements and documented the requirements in formal Data Mapping documents. He defined, documented and managed the Change Request process around data migration requirements. Additionally, Gaurang defined the testing strategy for data migration.

11/2008 - 01/2011
Test Lead, 27 months
New York City Housing Authority (NYCHA)
NYCHA - NYCHA Improving Customer Experience

Project Description: New York City Housing Authority (NYCHA) was looking to replace their existing legacy system with state of the art technology. IBM implemented an End to End Oracle Siebel CRM Solution Case Management for managing application intake process to determination if the applicant was eligible for NYC housing. The solution included Oracle Siebel CRM, a document management system, and an asset management system.

As the test lead, Gaurang effectively led the testing team with 15 FTEs. He developed the test plan and the strategy for the project, reviewed the test scripts and led the end to end execution of the test scripts. Furthermore, he owned, identified and executed tests to validate the data migration from legacy to Siebel.

Gaurang led a team of offshore testing resources for SIT and UAT Script execution, developed the plan for the User Acceptance Test and shared results, documentation, and risks with the stakeholder. He also developed the defect management and resolution process and facilitated that the team and the stakeholders adhered to the defined processes. He effectively documented and communicated the issues and the resolutions for the identified issues to stakeholders. He was the POC for all testing activities which included SIT, UAT and Performance Test activities

08/2007 - 11/2008
Design Lead, 16 months
Kansas Department of Labor
KDOL Unemployment Insurance Management (UIM) Project

Project Description: Kansas Department of Labor planned to implement a new solution to manage the Unemployment Insurance process. IBM's UI Benefits & Tax Implementation provided a COTS KDOL UI solution based on applications. At the core of the proposed solution is Siebel.

As the Design Lead, Gaurang was involved in the FIT-GAP business requirement gathering sessions for UIM as a Siebel Technical Expert. He modeled the Operational Level Processes to Siebel out of the box functionality. Gaurang possessed a deep understanding of the requirements and offered multiple solutions for the implementation. He documented the business requirements in the FRD's and create the TDD for the development team.

12/2004 - 07/2007
Technical Lead, 32 months
National Grid (Formerly KeySpan Energy)
Vertical: Siebel Power Communications

Project Description: The assignment involved the implementation and enhancement of the Siebel Power Communications vertical. As a part of the implementation, various energy related programs were designed, developed and deployed.

As the Technical Lead, Gaurang was heavily Involved in business requirement (JAD) gathering sessions as a Siebel Technical Expert. He strategically mapped the process to the Siebel Process data model, with minimal impact to eService Application. He performed GAP Analysis and re-engineered the process to fit as close to the original Siebel application as possible.

He documented the business requirement in the form of the Functional Design Document and translated this to the Technical Design Document adhering to Siebel practices. He estimated the time and allocated the required resources for the development effort. Gaurang designed, developed and configured Contracts, Agreements, Energy Programs, Opportunities, and Activities using Siebel Tools. Additionally, he facilitated Unit Test, System Test and Integrated System Test with the users and other relevant groups. He led the testing team for testing development effort during each phase of the delivery. He also resolved post production user issues with regards to navigation, functionality and process.

07/2004 - 11/2004
Data Conversion Lead, Five months
BMC Software
Data Migration

Project Description: BMC Software had recently acquired Remedy. The project involved moving Remedy's data and processes to the BMC's system. This included the design, development and the data conversion effort and deployment of the solution.

Gaurang understood the end to end business processes and orchestrated a Gap Analysis based on business requirements. He documented and designed the logical and physical data flows. He also documented, developed, implemented, and tested the data migration of Accounts, Addresses and Contacts (Customer Master Data), Assets, Agreements, Entitlements and Service Contracts. He used the Infomatica ETL tool to create mapping transformations like aggregator, filter, joiner, lookup transform, workflow objects and sessions to move data from Remedy to Siebel.

Moreover, Gaurang resolved issues faced by developers, related to Siebel EIM and Informatica. He managed resources efficiently to achieve stated milestones and trained employees in Informatica and EIM to support the effort after deployment.

12/2003 - 07/2004
Senior Siebel Developer, Eight months
American Management Systems /CGI
Siebel Configuration

Project Description: Centers for Medicare and Medicaid Services were looking to implement the Medical Appeals System using the Siebel Financial Insurance application. The project scope included design, development and deployment of the functionality.

As a Senior Siebel Developer, Gaurang reviewed the requirement to conduct a gap analysis for Medical Appeal System (MAS) for CMS. He was heavily involved in mapping the process to the Siebel Data Model and created functional and technical documents, while developing objects like Providers, Practitioners, Activities, and Opportunities. Gaurang played a pivotal role in test and system test on this engagement.

10/2003 - 11/2003
Data Conversion Lead, Two months
Accenture
Siebel ERM

Project Description: The project involved converting the data from legacy systems to the Agent Performance Platform system which tracks the performance of the call center agent.

Gaurang created Business Components (BC's), Business Objects (BO's), applets, views and screens for the APP (Agent Performance Platform) per the requirements. He also automated the data conversion from Witness System to Siebel database on the MS SQL platform.

12/2002 - 08/2003
Data Conversion Lead, Nine months
BMC Software

Siebel 7.5 implementation

Project Description: BMC Software undertook the project of modernizing their legacy systems with state of the art technologies for the Customer support application. The project involved design, development and deployment of the system.

As the Data Conversion Lead, Gaurang assisted in the integration of Various Legacy systems to a common platform. He gathered and analyzed requirements from Business Users and performed GAP/FIT analysis and suggested process enhancements. He developed the Test Plan, test cases and test steps for Employees, Activities, Account, Address and Contact for the Enterprise Integration Manager (EIM).

Moreover, he mapped the requirements to the Siebel Data Model and created technical specifications for the off-shore development team. Gaurang developed and reviewed PL/SQL code and IFB scripts for object

Accounts, Contacts, Employees, Activities, Service Request, Change Request, and Agreements as per the requirements and the Data Mapping document for loading, merge and deletes.

Key Skills

- All testing activities including planning, documentation, and execution.
- Test plan and process coordination with all stakeholders.
- Documentation and resolution of issues discovered during the testing process.
- Point of contact for UAT.
- Client collaboration, engagement, and satisfaction.
- Testing project strategy and planning.
- Testing team resource management.
- Test design, development, and execution.
- Test result tracking and sharing.Web Meetings / Distance Learning (Centra Symposium, IBM Smart Cloud, Adobe Connect).

Training:

- Eight-week Management and Resource Management program.
- Project Management Fundamental Training.
- Two month in house training in Siebel CRM and Siebel Tools.
- Three-month in-house training in SAP R/3 ver 4.0B in SD module and ABAP/4.
- Two-month training in JAVA, Web Sphere, J2E and other related Web technologies.

Education

Qualifications	Bachelors in Engineering in Electronics University of Mumbai (Formerly Bombay), India, 1990
Languages	English Fluent

Certifications

- Oracle CRM Siebel 8 Certified Core Consultant.
- Oracle CRM Siebel 8 Certified Business Analyst.
- Oracle Business Intelligence Enterprise Edition 10 Certified Consultant.
- IBM Cúram Certified Professional as Business Analyst

Technical Lead: Ramchandra Takkar

Professional experience

Profile

Mr. Takkar is a Technical Lead. He has more than 17 years of experience in the IT industry. Ram’s skillset includes Architecting Solutions, Analysis and Problem Solving, Project Management, and People Management. He has 12 years of experience as a Technical Lead, 10 years as a Technical Lead on complex projects and 9 years in management. Ram also has 7 years of experience architecting/design enterprise solutions.

Mr. Takkar has 7 year of End-to-End delivery and operational management experience with the Cúram product and 3 years of experience consulting clients implementing and customizing Cúram product as part of an enterprise solution within the public sector. Additionally, Mr. Takkar has strong leadership skills, is a quick learner, and has 9 years of People Management at IBM. Furthermore, Mr. Takkar is a certified Cúram Business Process Analyst making him expert on the Cúram product.

Assignment History

06/2016 - To date
Technical Lead, 9 months
State of Arkansas
Arkansas Eligibility and Enrolment Framework (EEF)

Project Description: EEF is a Medicaid eligibility and enrolment system built on the IBM Cúram product. Currently new features are added to the project and some architectural design changes. IBM team performs expert consulting, reviews, design solution, and develop.

As the Technical Lead, Mr. Takkar leads the IBM technical team for the EEF project. Ram is responsible for all technical aspects of the solution, including establishing documentation and coding standards for the project team and ensuring the team adheres to standards. He is available to the DDI project team for consultation of future enhancements and oversees the development of all technical documentation. In addition, Ram familiarizes himself with the Technical design of all the components and has a solution-wide view ensuring each component/module works together to address technical requirements.

Ram is responsible for participating in functional and technical design discussions. He also provides solutions for project business needs and assists the system integrator with the upgrade of Cúram V7.0.0.0. He resolves issues with the product, either by deployment or configuration and is the point of contact (POC) for M&O work.

11/2014 - 05/2016
Technical Lead, 1 years and 7 months
State of South Carolina
South Carolina DHHS Member Management

Project Description: Member Management is a Medicaid eligibility and enrolment system built on the IBM Cúram product. New customization and configuration were done to product to meet the States business needs.

As the Technical Lead, Mr. Takkar led the IBM technical team for the MM project. Ram was responsible for all technical aspects of the solution, including establishing documentation and coding standards for the project team and ensuring the team adhered to standards. He was available to the DDI project teams for consultation of future enhancements and oversaw the development of all technical documentation. In addition, Ram familiarized himself with the Technical design of all the components and had a solution-wide view ensuring each component/module worked together to address technical requirements.

Additionally, Ram provided business solutions for customer needs when those were not available in product, like second application straight through processing, extending eligibility for partial household, notices to customers, guided scripts for recording change and renewal, providing gap in eligibility when appropriate. He worked on technical design for various requirements like consolidating various product delivery cases to Single product delivery, Providing eligibility to partial household, and Notices. He also worked with Business users to understand policies and processes to help DHHS define business requirements and create BPMD documents. Ram worked with business analyst and business user to clarify and elaborate requirements, and created functional design to meet the business requirements. Furthermore, Ram worked with technical leads and developers to explain the functional design and participated in designing the technical solution to solve the business need.

07/2014 - 10/2014
Technical Lead, 3 months
State of Arkansas
Arkansas Eligibility and Enrolment Framework (EEF)

Project Description: EEF is a Medicaid eligibility and enrolment system built on the IBM Cúram product. This project build change in circumstance and renewal functionality on top of Cúram product

As the Technical Lead, Mr. Takkar led the technical team for the EEF project. Ram was responsible for all technical aspects of the solution, including establishing documentation and coding standards for the project team and ensuring the team adhered to standards. He was available to the DDI project teams for consultation of future enhancements and oversaw the development of all technical documentation. In addition, Ram familiarized himself with the Technical design of all the components and had a solution-wide view ensuring each component/module worked together to address technical requirements. Ram was also responsible for leading the analysis, planning, design, and release of Change in Circumstance, Renewal and service pack releases.

07/2012 - 06/2014

Technical Lead, 2 years

IBM India Pvt. Ltd, Bangalore, India

Health Care Reform (HCR) module

Project Description: The Affordability Care Act (Obama Care) was signed into Law in US in 2012, requiring State governments to set up health benefit exchanges, wherein citizens could go online to compare plans, shop, and enroll for health coverage. This project involves building workflows, rules, user interface, and application processing in Cúram product to support ACA law.

As the Technical Lead, Mr. Takkar led the technical team and was responsible for all technical aspects of the solution, including establishing documentation and coding standards for the project team and ensuring the team adhered to standards. He was available to the DDI project teams for consultation of future enhancements and oversaw the development of all technical documentation. In addition, Ram familiarized himself with the Technical design of all the components and had a solution-wide view ensuring each component/module worked together to address technical requirements.

Moreover, Mr. Takkar was responsible for delivering, leading, guiding and monitoring the Cúram technical team, business team and testing team working on Cúram product development. He engaged with subject matter experts (SME) to understand the business needs of various customers, and worked with SME's to define common and important business needs. He also worked with business analyst and SMEs to help analyze requirements in detail to define the scope. Ram created and reviewed technical designs, data models and rules design for the HCR module. Furthermore, Ram was responsible for product functionality by providing feedback to the product managers, services team, and sales team based on customer needs and demands on the ground.

08/2005 - 06/2012
Technical Lead, 6 years 10 months
Cúram Software Pvt. Ltd, Bangalore, India
Cúram Global Income Support Suite (CGISS) module

Project Description: The US government provides social programs to it citizens. This project built various workflows, eligibility rules, configured various data, user interfaces, and application processing for Medicaid, SNAP and TANF programs on top of the Cúram framework.

As the Technical Lead, Mr. Takkar led the technical team and was responsible for all technical aspects of the solution, including establishing documentation and coding standards for the project team and ensuring the team adhered to standards. He was available to the DDI project teams for consultation of future enhancements and oversaw the development of all technical documentation. In addition, Ram familiarized himself with the Technical design of all the components and had a solution-wide view ensuring each component/module worked together to address technical requirements.

In addition, Ram planned, estimated, designed, developed and delivered the Cúram Income Support solutions for various releases (5.0, 5.1, 5.2 & 6.0) on time with good quality. He worked with the development team to provide technical designs and solutions and developed code as per technical design for CGISS. Furthermore, Ram led the technical team by handling day to day technical design sessions, proposed technical solutions, and implemented the technical solution through the Cúram product.

Ram also analyzed, designed, and developed the Cúram Return to Work module and the Cúram Decision Assist module. He consulted with product owners to identify key requirements, defined project scope, developed the project plan and schedule, and provided leadership to internal teams on projects and daily production issues. Additionally, Ram identified risks early in the projects and came up with ideas/ways to mitigate them and provided weekly status updates to the Executive management team.

05/2004 - 08/2005
Technical Consultant, 1 year 3 months
SAP India Pvt Ltd., Bangalore, India

Project Description: SAP introduce a new product called NetWeaver portal that would be act as a front end to other SAP system. On this project, we have to work on various issue customer face while deploying or while using portal.

As a Technical Consultant, Ram was responsible for consulting and troubleshooting on the customer site, developing and implementing support tools and conducting Knowledge Transfer trainings. He also analyzed, designed, and developed a Solution Manager Diagnostics using Web Dynpro

02/2001 - 04/2004
Senior Software Developer, 3 years 2 months
STAR India Pvt Ltd., Bangalore, India & Hong Kong

Project Description: STAR Network build a CRM system to manage their customer of their DTH service, as part of this system, they had a holistic view of customer like their demographic data, subscriptions, billing method and cycle etc.

As a Senior Software Developer, worked at customer local to support their Billing and CRM system. Ram also worked on developed of new CRM system, in this project he analyzed, designed and developed features that were incorporated in a CRM System. Ram used software like JSP, EJB, Java Beans & Oracle in this project.

Key Skills

- A Certified Cúram Business Process Analyst
- Product and Enterprise Application development
- Managed and worked effectively with geographically distributed teams on multiple projects
- Project Planning, execution and monitoring and controlling done using various methodologies like Agile, Scrum, Waterfall
- Domain knowledge of Social Enterprise Management
- Hands on development experience using Java / J2EE, SQL, Eclipse

Education

Qualifications

Master in Business Administration
I.B.M.R.D, University of Pune, India, 1999

	Bachelor of Science (Physics) I.Y College, University of Mumbai, India, 1996	
Languages	English	Fluent

Architect Lead: Devananda Muthakana

Professional experience

Profile

Devananda is an Open Group Certified Master Architect and Services Leader with extensive experience in Design and Delivery of Projects. He is an Executive Architect in IBM Global Business Services. He has 15 years of experience in Health Care and Social Program domains. He has 20 plus years of overall professional IT experience, with 16 of those years in US Market. Devananda has built and lead teams of on-shore and off-shore resources and is an expert in rapid off-shore enablement. His experience spans delivering Enterprise Solutions on Traditional (on premise), Cloud and Mobile platforms. He is passionate about Data Science and is a founding architect for BI & Analytics in Cúram. He also has experience in Bid Management, Pre-Sales, Product Strategy, Product Management and Marketing. He holds a degree in Engineering Technology along with certifications in Cúram, Oracle and DB2.

Employer History

07/2012 - To date
IBM, United States of America
Executive Architect

- Open Group Certified Master Architect in IBM Global Business Services
- Senior Advisor and Architect for multiple Cúram Implementation Projects, many of which involve Cloud and Mobile based solutions
- Integrations with key industry leading products including IBM Watson, InfoSphere MDM, Cognos and SPSS for Advanced Data Insights and Analysis
- Mentor and instructor for several GBS Cúram resources
- Working on pre-sales and sales activities to sell and implement IBM Cúram solutions for Social Programs and Care Management
- Enterprise Solution Architect in Cúram CoC before GBS
- Principle Product Manager in Cúram Product Management prior to CoC role
- Managed Cúram BI & Analytics product
- Instrumental in hosting several IBM Cúram Demos for wider IBM Community

07/2002 - 06/2012
Cúram Software Inc., United States of America
Principle Product Manager

- Managing Cúram BI & Analytics and new product initiatives when Cúram was acquired by IBM

- Was instrumental in design and development of first Cúram Mobile Prototype which became a standard for later versions
- Prior to moving into Product Management, worked with several Cúram Implementation Projects as Principle Technical Consultant
- Played several roles on Cúram Projects including Project Advisor, Senior Solution Architect, Principle DBA
- Started as a Senior Database Administrator helping Cúram Projects to coexist on customer database platform along with other customer products

02/1998 - 06/2002
Xoriant Corporation, United States of America
Senior Database Administrator

- Was a Senior Member of the DBA team
- Worked with several clients helping to set up and manage Oracle, DB2 and SQL Server databases
- Client list includes Cúram Software (was ITDesign then), Apple Computers, Sun Micro Systems, National Pen, QuinStreet, Harmony Software and Metricom

07/1988 - 01/1998
AP Transco, India
Senior IT Manager

- Managed several IT Projects for in-house modernization of billing and HR management systems
- Worked with several databases including Oracle and Sybase

Assignment History

01/2017 - To date
6 months
State of South Carolina
MMRP

Project Description:

- State of South Carolina embarked on a journey to implement a modern, comprehensive benefit management system helping the citizens in need. As a first step, they started the implementation of Affordable Care Act (ACA) using IBM Cúram.
- When the implementation got into some issues the State approached IBM to complete the implementation and rollout
- IBM is in the process of completing functionality that was left open from previous vendor and planning and executing remaining project work
- I am an Enterprise Solution Architect on the project leading the Solution design and delivery

03/2015 - To date
26 months
County of San Diego
ConnectWellSD

Project Description:

- County of San Diego had a grand vision to connect care for Citizens through an electronic information exchange system
- They selected IBM to implement this vision called ConnectWellSD to bring information from nine different customer and two provider agencies on to a common platform and application for better service and outcomes to Citizens
- IBM solution includes Cúram, InfoSphere MDM, Cognos, SPSS, Informatica, Weblogic, Oracle SOA, Oracle Service Bus and Oracle Database
- I am an Enterprise Solution Architect on the project leading the Solution design and delivery

01/2015 - 02/2015
2 months
State of Missouri
Missouri Eligibility Determination and Enrollment System (MEDES)

Project Description:

- State of Missouri originally awarded the Cúram Implementation for Affordable Health Care project to another vendor
- When the project was going bad with the inefficiency of that vendor, the State called IBM to do an assessment of situation and to provide recommendation
- Was summoned to the project to help in this assessment
- Assessed the production issues faced within the MEDES system. We identified the issues, impact, and created recommendations to correct the issues
- Conducted an assessment of the technical infrastructure and recommended improvements to address areas of weakness
- Conducted an assessment of the application architecture and recommended improvements to address potential areas of weakness
- Reviewed the Project Governance Model artifacts and processes and recommended adjustments to improve effectiveness
- Conducted an assessment of the state of requirements and development for MEDES Project I
- Worked on compiling the final assessment report

08/2014 - 10/2014
3 months
Ontario Ministry of Community and Social Services
Social Services Solutions Modernization Project (SSSMP)

Project Description:

- SSSMP is a Cúram implementation project for modernization of benefit management process of the Ministry
- The project involved several interfaces including Cúram Batch, Cognos, FileNet and other existing Ministry products
- Called upon by the project management for helping with Performance Tuning during integration and pre-production testing phases
- Played a key role in bringing together several project teams to discuss and resolve identified issues
- Helped with tuning of SQL and Cúram Batch processes

01/2014 - 04/2015
16 months
IBM Corporate Citizenship & Corporate Affairs
SafetyNet

Project Description:

- IBM CC&CA is the philanthropic arm of IBM providing funding and IT modernization help for several Non-Profit Organizations around the world
- SafetyNet Cúram is the implementation of Cúram for Non-Profits to better manage clients and funding
- Major new functionality includes Contract, Program and Tracking Item Management
- Modifications to existing Cúram functionality includes simplification of Client Registration and changes to Case Management for Program Enrollment
- Reports and Dashboards is another major feature of the project
- Once completed, IBM CC&CA will be ready to roll out SafetyNet Cúram to several new Non-Profit Organizations
- Playing the roles of Senior Solution Architect and Technical Team Lead helping with customization of Cúram Social Program Management Platform
- Is a trusted advisor to CC&CA Management in planning for Cloud based roll out and maintenance of SafetyNet Cúram for Non-Profits

12/2013 - 12/2013
1 month
Minnesota Department of Commerce
Health Insurance Exchange Project

Project Description:

- Implementation of Cúram for Health Insurance Exchange per Affordable Care Act (ACA)
- The project involved implementation of several complex Cúram features including Online Enrollment, Eligibility and Entitlement,

Workflow and several other interfaces to move data between Cúram and other systems
- Called upon by the project management for helping with Performance Tuning during pre-production testing phase
- Played a key role in resolving issues especially where multiple teams are involved

06/2013 - 12/2014
19 months
Otsuka America Pharmaceuticals
Otsuka Digital Health (ODH)

Project Description:

- Otsuka Digital Health (ODH) is the implementation of IBM Care Management Solution for Behavioral Health
- Otsuka Pharmaceuticals and IBM are partnering in this joint effort to bring the benefits of Coordinated Health Care to several agencies serving the Behavioral Health populations around the world
- The solution includes IBM Cúram at the center with EHR, IBM Cognos and IBM Health Care Provider Data Model working through IBM Integration Bus (IIB)
- Played the roles of Cúram and Integration architect on the project helping to design and develop the solution
- Was a key member of the Project Management team working with complex resource mix comprising of IBM Employees and Contractors in On-Shore and Off-Shore environment

01/2009 - 10/2014
70 months
IBM
Cúram Product Management

Project Description:

- Product Manager for Cúram BI & Analytics and new product initiatives
- Work involved setting product direction and roadmap using Market Analysis and Surveys
- Instrumental in bringing open source BIRT integration into Cúram which set the phase for acceleration of BI & Analytics in Cúram
- Played a key role in communication between Sales and Product Development to speed up the process of bringing new products to market
- Provided Architectural guidance and direction for new products

04/2008 - 12/2008
9 months
Cúram Software Inc

Cúram Child Care

Project Description:

- Technical Architect and Team Lead for the Cúram Child Care (CCC) development project
- Cúram Child Care is a new solution module developed by Cúram and released in Dec 2008
- Provided technical expertise throughout the project life cycle along with management of resources who were part of the project from various geographical regions

03/2007 - 03/2008
13 months
British Columbia Workers' Compensation Board (WorkSafeBC)
Claims Management Solution (CMS)

Project Description:

- Technical Architect and Workflow Specialist for the implementation of Cúram Workers Compensation Module (CWC)
- Architecture and design for complex system workflows
- Integration Architecture to make Cúram work with several interfaces including legacy systems

11/2006 - 02/2007
4 months
Louisiana Department of Social Services
A Comprehensive Enterprise Social Services System (ACESS)

Project Description:

- Cúram Upgrade from v3.0 to v4.5 for the ACESS project
- Architectural design and guidance for migrating code and data
- Technical and Database leadership to guide the project team in upgrading several customizations to work with new version of Cúram

01/2006 - 10/2006
10 months
British Columbia Workers' Compensation Board (WorkSafeBC)
Claims Management Solution (CMS)

Project Description:

- Project involved creating a new Cúram solution module CWC, based on Cúram platform and generic requirements from WorkSafeBC
- Design and development of complex rules and workflow functionality
- Setup and maintenance of Source Code Repository and Databases for development

10/2003 - 12/2005
27 months
Wisconsin Department of Workforce Development
Enhanced Automated Benefits Legal Enterprise Services (EnABLES)

Project Description:

- Lead the Project DBA team in design and development of Cúram Database functionality
- Lead the data migration team to bring legacy data into Cúram using Informatica

03/2003 - 09/2003
7 months
Cúram Software Inc
Cúram Reporting Module

Project Description:

- Team Lead for Cúram Reporting for design and development of the module
- Played active role in designing the Reporting Database for Cúram product

07/2002 - 02/2003
8 months
New Mexico Department of WorkForce Solutions
State System Applicant Links to Services for Assistance (SSALSA)

Project Description:

- Implementation of Cúram for Unemployment Insurance process modernization
- Senior Database Administrator for the SSALSA Development and Test Databases
- Guided the client in achieving the best possible performance from Cúram implementation

02/1998 - 06/2002
53 months
Various Clients of Xoriant Corporation
Various Web Projects

Project Description:

- Provided database services for clients like Cúram Software (was ITDesign then) Apple Computers, Sun Microsystems, National Pen, QuinStreet, Harmony Software and Metricom
- Worked as Senior Database Administrator providing database design and implementation help

	07/1988 - 01/1998 **115 months** **AP Transco** **Various IT Modernization Projects** Project Description: • Managed several IT Projects for in-house modernization of billing and HR management systems • Worked with several databases including Oracle and Sybase
Key Skills	Design and Delivery on Projects, Enterprise Solution Architecture, Application Architecture, Architectural Frameworks, Architectural Methodology, Cloud and Mobile based solution delivery, IBM Cúram Software, Off-Shore Team Enablement and Management, Data Science, BI & Analytics, Pre-Sales, Product Strategy, Management and Marketing, Database Design, Oracle, DB2
Key Courses and Training	• Master Architect Certification from The Open Group (TOGAF) • Certification in IBM Cúram SPM Platform • Architectural Thinking
Education	
Qualifications	Bachelors in Electrical & Electronics Engineering JNT University, India

Languages	English	Fluent
	Telugu	Fluent
	Hindi	Good

Operations Manager: Santharam Hanumandhan

Professional experience

Profile	Santharam is a Delivery Project Executive. He has more than 19 years of experience in the IT industry. Santharam has been involved in Business Application M&O projects for the past 16 years. His skillset includes Maintenance & Operations, Program Management, Project Management, People Management, Transition Management and support of application software. Santharam has 7 years of End-to-End delivery and operational management experience for large accounts and 6 years of experience managing an M&O team for an enterprise solution within a public-sector client. Santharam has served as a liaison with numerous clients for M&O activities and is available and responsive to requests for consultation and assistance. He establishes and maintains positive client relationships and provides timely and informed responses to operational and administrative

	inquiries that arise. He has successfully managed staff assigned to all day-to-day M&O activities. Furthermore, Santharam successfully coordinated and managed enhancement requests/changes to solutions for multiple clients. He's played an active role in day-to-day management of the accounts to be knowledgeable and aware of all issues, concerns, and requirements. Santharam's collaborative approach allows him to facilitate productive meetings with stakeholders on a regular basis to provide oral and written status reports and other information as required. He also has experience managing relationships with subcontractors and partner vendors. Additionally, Santharam is certified in Project Management. He has strong leadership skills, is a quick learner, and has 12 years of People Management at IBM. Santharam also has an expert level certification in Managing Projects and Programs from the IBM Project Management center of Excellence.
Assignment History	**05/2016 - To date** **Delivery Project Executive, Ten months** **State of Missouri** **Missouri Eligibility Determination and Enrollment System (MEDES) – M&O** Project Description: IBM is providing application and infrastructure maintenance and operation support to the MEDES system which is built upon the IBM Cúram product. IBM took over this contract from an incumbent integrator. The IBM team performs implementation and development activities along with Maintenance & Operations services. Santharam is the lead for these M&O services as a Delivery Project Executive. As the Delivery Project Executive, Santharam served as a liaison with the State of Missouri for M&O activities and was available and responsive to requests for consultation and assistance. He established and maintained positive client relationships and provided timely and informed responses to operational and administrative inquiries that arose. He successfully managed staff assigned to all day-to-day M&O activities. Furthermore, Santharam successfully coordinated and managed enhancement requests/changes to solutions on the MEDES engagement. He played an active role in day-to-day management of the accounts so as to be knowledgeable and aware of all issues, concerns, and requirements. Santharam's collaborative approach allowed him to facilitate productive meetings with State staff on a regular basis to provide oral and written status reports and other information as required. He also helped manage relationships with subcontractors and partner vendors on this particular engagement. Santharam was responsible for delivery and oversight of Maintenance & Operation work with State. He also managed the customer relationship and served as the overall delivery point of contact for M&O work. He assisted in project financial management and strategic planning as well.

Furthermore, he performed people management for all IBM India resource and coordinated people management activities for IBM US resources.

Santharam coordinated vendor management for all vendor resources within the project team. He led solution building activities for all proposals under M&O work and participated in project governance with Sector executives and State PMO team. He also planned staff fulfillment for project work and led process improvement and financial forecasting for IBM management.

09/2011 - 05/2015
Maintenance and Enhancement Manager, Three years and seven months
State of California
CAMMIS (California Medi-Cal Management Information Systems).

Project Description: CAMMIS is led by ACS (Affiliated Computer Systems) as a prime vendor for the Department of Health Care Services in the State of California. The IBM team works as a business partner for Application Management Services in the Legacy Application area. The project scope is to migrate application and transition application support from the incumbent organization and move into steady state operation.

After taking over in Steady State, as Maintenance and Enhancement Manager, Santharam took over managing the delivery of IBM's scope of work for the SDN work stream in CAMMIS contract between Xerox & IBM. Santharam served as a liaison with the State of California and Xerox for M&O activities and was available and responsive to requests for consultation and assistance. He established and maintained positive client relationships and provided timely and informed responses to operational and administrative inquiries that arose. He successfully managed staff assigned to all day-to-day M&O activities.

Furthermore, Santharam successfully coordinated and managed enhancement requests/changes to solutions on the CAMMIS engagement. He played an active role in day-to-day management of the accounts so as to be knowledgeable and aware of all issues, concerns, and requirements. Santharam's collaborative approach allowed him to facilitate productive meetings with State staff on a regular basis to provide oral and written status reports and other information as required. He also helped manage relationships with subcontractors and partner vendors on this particular engagement.

SDN is a T&M project to support legacy application changes from enhancements based on ongoing business and industry/government mandates. As part of the IBM management team, Santharam was involved in the overall governance of the project which involved Enhancement, Operation and the replacement project. Santharam worked directly with the customer team in managing this T&M contract work stream and represented the IBM team during day to day interaction with immediate client Xerox and to the end client DHCS (Department of Health Care Services). Below are the primary responsibilities in this role:

- Managed an end of end deliver of SDN work stream with delivery oversight, project financial and growth of work stream
- Interfaced with Xerox, the prime vendor in this contract, and the end user the Department of Healthcare Services in day to day delivery.
- Participated in executive governance for legacy operation and represent the IBM team.
- Planed and managed IBM work by following agreed upon processes and executing work as per the IBM delivery process.
- Directed Project Manager and Program Managers in delivery work products following internal governance and reports to Customer teams (Xerox & DHCS) and also to IBM executive management.
- Led the process improvement initiative at the account level and was responsible for identifying and executing improvement initiatives.
- Performed People management responsibilities for IBM India resources working on the SDN work stream.
- Worked on industry level / account level new business opportunities to scope work in Application Management services contracts.
- Led the CAMMIS project LEAN initiative and represented the project team activities in LEAN North America community.
- Provided support for Staffing fulfillment at the account level in CAMMIS by closely working with the IBM resource fulfillment team of both IBM India and IBM US.

05/2010 - 09/2011
Business Area Manager, One year and four months
State of California
CAMMIS (California Medi-Cal Management Information Systems)

Project Description: CAMMIS is led by ACS (Affiliated Computer Systems) as a prime vendor for the Department of Health Care Services in the State of California. The IBM team works as a business partner for Application Management Services in the Legacy Application area. The project scope is to migrate application and transition application support from the incumbent organization and move into steady state operation.

Santharam served as a liaison with DHCS, ACS, and CGI for M&O activities and was available and responsive to requests for consultation and assistance. He established and maintained positive client relationships and provided timely and informed responses to operational and administrative inquiries that arose. He successfully managed staff assigned to all day-to-day M&O activities.

Furthermore, Santharam successfully coordinated and managed enhancement requests/changes to solutions on the CAMMIS engagement. He played an active role in day-to-day management of the accounts so as to be knowledgeable and aware of all issues, concerns, and requirements. Santharam’s collaborative approach allowed him to facilitate productive meetings with State staff on a regular basis to provide oral and written status reports and other information as required. He also helped manage relationships with subcontractors and partner vendors on this particular engagement.

Santharam was involved as a Business Area Manager for all Midrange applications to stand-up in the new IBM data Center and also to transition application knowledge to the new IBM team. This involved scoping the work related to Takeover and working with both internal stakeholders like the IBM SO team, IBM T&T team and with other business partners like DHCS, ACS and CGI.

Santharam was responsible for planning and managing the takeover of all midrange applications, interacting with internal stakeholders (IBM SO, IBM T&T) and other Business partners (ACS, CGI and DHCS) for all midrange application related work. He reported to the IBM DPE & Prime vendor on the progress of the project. He also coordinated and managed issue resolution with IBM SO and the ACS team.

Furthermore, Santharam conducted resource fulfillment activities for the entire CAMMIS AMS team and was the Single Point of Contact for the IBM application team from a resource hiring perspective. Additionally, he represented the IBM Midrange application team during communication and status reporting meetings to DHCS. He also provided updates on weekly progress to IBM senior management.

10/2009 - 05/2010
Onshore Program Manager, Seven months
Blue Cross Blue Shield of Minnesota
Application Management Services

Project Description: BCBSM is a Healthcare Insurance payer operating out of the Midwest region of the USA. The project goal was to successfully perform knowledge transfer and enter into steady state with adequate knowledge to support their claims and benefit applications.

The project scope was to set up the new team, coordinating and managing the execution of the Transition and Transformation activities as per IBM T&T process. As the Onshore Program Manager, Santharam was involved from the start of the engagement and participated in Due-diligence, solutioning, Contract signing, SOW creation for AMS Transition, Steady State and Overall Migration planning.

He was responsible for customer relationship management, served as a liaison for all Global delivery responsibilities and worked closely with the Transition and Transformation team. He conducted resource alignment activities for the application during transition. I was the single POC for IBM US and the customer teams for the IBM Global Delivery team.

Conducted regular cadence with Customer team to report on the transition and with IBM offshore team on tracking the application knowledge transfer activities. Structured team to effectively cover the scope defined for Maintenance and Operations,

1/2008 - 10/2009
AMS Program Manager, One year and nine months
Blue Cross Blue Shield of Delaware
Application Management Services

Project Description: BCBSD is a Healthcare Insurance payer operating out of the Eastern region of USA. The project is to support the PLASM application from India. Santharam was responsible for executing the Pilot phase and also signing the Steady State support contract. The project scope was to set up the new team, coordinating and managing the execution of the Pilot and Steady State.

As the AMS Program Manager, Santharam was responsible for managing the contract and the project delivery from the IBM India team. This Projects Solution, Contract negotiation and delivery is completely managed from IBM India and Santharam was responsible for delivery of these services to the customer and to IBM US

Santharam represented the AMS side & managed the contract directly with the customer. He successfully completed the engagement management of the Solution, Contract & Negotiation and Project Delivery. He also managed project deliverable as referenced in the SOW and was responsible for both IBM US and IBM India deliverables. Santharam was also responsible for project financial activities like forecasting, tracking and invoicing the Customer and regular internal reporting.

Furthermore, Santharam prepared DoU (Document of Understanding) and conducted resource planning activities per the cost case and managed internal contract activities like Billing IBM US, and implementing all account level activities as per IBM standards and executing the project as per the DoU.

Managed and reported delivery scope as defined in SOW and conducted weekly status meeting with customer team and a monthly meeting with Customer Executive team to report on the status on IBM work executed.

Santharam interfaced with other business units inside IBM to bring valuable solutions to the Client teams and managed and led a team for regular project work for the BCBSD.

12/2006 - 12/2008
Program Manager – Projects, Two years
Regence BCBS

Regence BCBS is a Healthcare Insurance payer operating out of the North West and Mountain regions in the USA. In 2008, Santharam was a Program Manager involved in managing the project team for some of the business and federal mandated projects. Also, managed a transition of APL application and moved the support to a co-sourcing model. The project involved managing them directly with Regence EPMO (Enterprise Project Management Office) team.

As the Program Manager, Santharam conceptualized, initiated, budgeted, planned, managed and implemented projects for the Healthcare industry solution projects and the Regence account. He performed the migration manager role and successfully transitioned the APL & FAMS (Fraud Analytics Management System) application support from Regence to IBM. Santharam followed the IBM standard migration process in transitioning the APL and FAMS applications and delivered these projects mostly with Global Delivery team resources.

Furthermore, Santharam reported earned value analysis on a regular basis to control the project on both cost and schedule. He also managed and led a team for operations and maintenance project work in supporting the ongoing production business application and providing enhancement and 24/7 application support.

08/2004 - 12/2006
Project Manager, Four months
Regence BCBS
Legacy Delivery transition and Application Management Services

Project Description: Regence BCBS is a Healthcare Insurance payer operating out of the North West and Mountain regions of the United States. Regence signed the Legacy Application Delivery contract for 5 years and extended to 8 years.

Santharam was involved in the transition of the applications to India from the planning phase. He was responsible for setting up, coordinating and managing the execution of the actual transition. Santharam was entrusted with managing over 80 people including their performance, client facing communication and approving Quality Gates. The transition was completed within budget and on-time with regular work of the ensuing Application Management Services project commencing following the cut-over to steady-state.

This AMS project provides enhancement, maintenance and delivery of business-critical projects. The various activities performed in this project are in support of the core business of Regence. The core business applications deal with Membership of over 3 million members, Claims processing for all the members, over 40,000 providers and 6000 employees. Some of the important initiatives completed include mandated requirements like Alternate Id, HIPAA Title-I, Medicare Part-D, ITS releases and many more Membership renewal related requirements.

Santharam was responsible for planning and executing the Application transition activities. As a Team lead for claims business application, Santharam executed application Transition actives for multiple business applications to take over from the customer team. He helped with project planning and tracking as well. Furthermore, Santharam conceptualized, initiated, budgeted, planned, and implemented the solution.

He interfaced with other IBM organization like IBM Research Labs, Software labs and Global business services and brought together the best value solutions to the Client teams. Additionally, Santharam managed and led a team for maintenance and project work including 24/7-prod support and minor enhancements.

12/2001 - 07/2004
Finance Application Team Lead, Two years and seven months
Sears
Sears AMS

Project Description: Sears is one of largest retailer in North America. This project aims at providing complete support for the Finance suite of applications. This includes invoice-processing system, accounts payables, lease payment system, and purchase order-writing systems. The support involves maintenance, enhancements and 24/7 supports to the application.

Santharam managed 5-6 members of the migration team and application middleware re-architecture projects. As a team lead, he led the business transition from the SEARS maintenance team at the Customer site. Santharam was responsible for fulfilling the IBM India quality goals in the application deliverables and team activities.

In addition to the above actives, Santharam coordinated and led the development and testing teams. He also led managed the application maintenance, hardware/software budget and costs. He engaged and coordinated with the customer to finalize business requirements and analyzed application problems providing fixes and monitoring application performance. He also led the productivity improvement initiative to cover additional volume and quick turnaround of maintenance requests.

Key Skills

Industries:

- Government, Public.
- Healthcare.
- Retail.
- Sales and Distribution.

Process and Functional Skills:

- Maintenance and Operations Management.
- Project Management.
- Program Management.

Technical Domain: Mainframe and Midrange business applications

Languages: COBOL, JCL, AAS, Assembler, PL/1

Operating Systems: MVS/TSO, Windows 9x, Win 2K

Database: DB2, VSAM

Tools: MS-project, PM Office (RPM), Xpediter, RTC, IPWC

Middleware: MQ – Series

Online: CICS

	Process and Methods: IBM GS Methods, IBM Transition and Transformation Methodology, IBM WWPM (Project Management), Application Management Services Migration Methodology, IBM's QMS (Quality Management System), IBM's OPAL (Organization Process Asset Library), Estimation techniques and Metrics management, Lean Methodology.

Education

Qualifications	Bachelors of Engineering (Computer Science) RVS College of Engineering, Madurai Kamaraj University, India, 1996	
Languages	English	Fluent

M&O Technical Lead: Siva Kumar Velaru

Professional experience

Profile

Mr. Siva Kumar Veluru is a Senior Managing Consultant in the IBM Watson Health – Cúram Group with over 12 years of experience in Information Technology services. Siva is a Cúram Certified Developer (CCD), a Cúram Certified Professional (CCP), and a Project Management Professional (PMP). He has over twelve years of total experience architecting/designing and developing software solutions for enterprises using J2EE technologies. He has over ten years of extensive experience in analysis, design, architecture, coding, and implementation of various Cúram projects. He has 10 years of experience in Health and Human Services Industry.

Furthermore, Siva provides detailed application knowledge in support of complex application issues/incidents. He reviews potential changes (e.g. configuration, warranty fixes, enhancements) to solutions from a technical perspective and provides technical design/assessments. Siva is available to project teams for consultation on future enhancements (e.g. changes to achieve strategic objectives, implement a new program). In addition, Siva has successfully implemented and supported multiple Cúram Project.

He possesses strong experience implementing Cúram solutions at client sites and made significant contributions to the success of implementations at British Columbia's WorkSafe and State of Utah's Social Welfare. He played a project lead role on the Cúram Child Care 5.2 solution project which was part of the Cúram Product Development and worked as a Technical Lead on the Consolidated Assistance Support System, New Jersey (NJ-CASS). He is currently working as an Architect for the North Carolina Families Accessing Services through Technology (NC FAST). He also worked as a Technical Architect for the Arkansas Department of Human Services Eligibility and Enrollment Framework (EEF) project.

Siva is also a Sun Certified Java Programmer (SCJP) and a Sun Certified Web Component Developer (SCWCD). He is a confident and focused consultant, who has demonstrated strong verbal and written communication skills with proven ability to work well as part of a team and individually to produce quality results. He holds a Master in Computer Science from Madras University (India).

Siva was awarded the Cúram Outstanding Performer for the year 2007 for his contribution to the Electronic Resource & Eligibility Product - State of Utah's Social Welfare project. He was awarded the IBM LAB Services award for the year 2012 for his contribution to the North Carolina Families Accessing Services through Technology (NC FAST) project.

Siva has provided direction to clients, project teams, systems integrators and internal Cúram lab services on Cúram implementation leading practices, and product knowledge. He provides leadership and oversight to technical staff and supports the business and subject matter experts on Cúram implementations to facilitate fit of product features to client requirements.

Assignment History

04/2012 – 06/2015, 08/2015 – Present
Technical Architect, Three years, two months | One year, seven months
NC Department of Health and Human Services

North Carolina Families Accessing Services through Technology (NC FAST) Project Description: North Carolina Families Accessing Services through Technology (NC FAST) is a program designed to improve the way the NC Department of Health and Human Services and county departments of social services do business. NC FAST introduces new technological tools and business processes that will enable workers to spend less time on administrative tasks and more time assisting families. The NC FAST Program addresses how North Carolina families access the social services provided by county departments of social services for the following programs:

Economic Benefits: Child Care, Food and Nutrition Services, Medicaid, Health Care Exchange, Work First, Low Income Energy Assistance Program (LIEAP), Crisis Intervention Program (CIP), Special Assistance, Refugee Assistance

Siva was the Architect on these projects starting in April 2012. His responsibilities include:

- Rolling out the North Carolina Food Stamps, Medical Assistance, Cash Assistance, FFM Interoperability (Health Care Exchange), Child Care, Low Income Energy Assistance, and Crisis Intervention projects to all counties; managing the relationships with the client, integrators, and partners to facilitate strong references, build trust and foster a collaborative environment.
- Assisting the client in the implementation of the North Carolina Cash Assistance, Medical Assistance, and Health Care Exchange, Child Care, Low Income Energy Assistance, and Crisis Intervention programs, promote Cúram leading practices, and ensuring the client uses the OOTB solutions correctly and effectively.
- Acting as the liaison between the Product Development and the North Carolina to guarantee the client receives seamless product support.

Enhancing Cúram products by recommending valuable customizations and enhancements.

- Providing detailed application knowledge in support of complex application issues/incidents.
- Collaborating with other architects and project managers to share knowledge and establish processes.
- Focusing on the performance optimization and application scalability in the production systems and anticipating issues that the project might encounter in the future and analyzing these problems upfront to avoid or minimize the impact.
- Reviewing available documentation regarding Health Care Exchange to gain a better understanding of the Federal and State requirements.
- Reviewing all potential changes (e.g. configuration, warranty fixes, enhancements) from a technical perspective and provided technical design/assessments
- Working on NC FAST "Medicaid Information Technology Architecture (MITA)" compliance.

07/2014 - 07/2015
Technical Architect, One year
Arkansas Department of Human Services
Arkansas Department of Human Services Eligibility and Enrolment Framework (EEF)

Project Description: The scope of the EEF Project includes development of systems to support determination of Medicaid/State Children's Health Insurance Program (SCHIP) eligibility and enrollment, which is required to support compliance with the Patient Protection and Affordable Care Act.

Siva was the Technical Architect role from IBM. His responsibilities included:

- Rolled out and supported the Patient Protection and Affordable Care Act to all counties.
- Managed the relationships with the client, integrators, and partners to facilitate strong references, build trust and foster a collaborative environment.
- Promoted Cúram leading practices, and make sure the client uses the OOTB solutions in all possible ways.
- Provided detailed application knowledge in support of complex application issues/incidents.
- Reviewed all potential changes (e.g. configuration, warranty fixes, enhancements) from a technical perspective and provided technical design/assessments on this engagement.
- Served as liaison between the Product Development and Arkansas to facilitate the client receives seamless product support. Enhanced Cúram products by recommending valuable customizations and enhancements.
- Collaborated with other architects and project managers to share knowledge and establish processes.

- Focused on performance optimization and application scalability in the production systems and anticipated issues that might encounter in the future and analyze them upfront to avoid or minimize the impact.

10/2009 - 03/2012
Technical Lead and Business Analyst, Two years, five months
DFD and DMAHS
Consolidated Assistance Support System (CASS) - New Jersey

Project Description: The CASS project provides a fully integrated support system for the entire Division of Family Development (DFD) and Division of Medical Assistance and Health Services (DMAHS). The benefit and service delivery programs include Food Stamps, TANF, Medicaid and Child Care Subsidy. This system replaces multiple data processing applications that are increasingly becoming incapable of meeting client eligibility and case management requirements.

As a Business Analyst:

- Reviewed current policy documents and met with Subject Matter Experts to gain a better understanding of the existing benefit programs.
- Analyzed existing system documentation to gain a better understanding of the existing benefit programs.
- Reviewed high level requirements extracted from the RFP.
- Participated in Requirement validation sessions with State and County representatives to validate Child Care Subsidy and Food Stamp requirements.
- Refined high level requirements and derived all possible low-level requirements.
- Participated in Fit/Gap analysis to document the gap between CASS requirements and Cúram out of the box.
- Participated in High Level design and produced use cases.
- Participated in Low Level design and prepared Class Diagram, Robustness Diagram, Workflow Detailed Design, Batch Design, System Interface Design, Data Mapping, Document Database Entity Relationship Diagram, and Data Dictionary.

As a Technical Lead:

- Led the development of screens, processes, and rules for the following functional areas
  - Client Registration and Eligibility Determination,
  - Screening and Online Application with Citizen Portal/IEG2
  - Clocks and Buyback
  - Temporary Assistance for Needy Families (TANF)
  - General Assistance (GA).
  - Supporting Programs for TANF and GA include Burials, Career Advancement Voucher, Early Employment Initiative, Emergency Assistance, Immediate Need, Kinship Subsidy Program, Refugee Resettlement Program, Repatriation Assistance, Second Chance

Homes, Social Services for the Homeless, Supplemental Work Support Program, Supportive Housing Assistance Program.

- Provided detailed work estimates
- Worked with business analysts and technical leads on the change control process.
- Mentored team members on leading practices

06/2009 - 08/2009

Designer and Developer, Two months

Internal IBM – Saskatchewan Ministry of Social Services - Proposal

Project Description: The Saskatchewan Ministry of Social Services was interested on Cúram Solutions which can be used to replace the existing Case Management System in the Child and Family Services (CFS) and the Benefit Calculation and Payment Administration System in the Income Assistance Division (IAD).

As part of this proposal, the Cúram Product Consulting team received a set of requirements from MSS which needed to be implemented for the demo at MSS.

Siva was a Designer and Developer for this effort. He analyzed and implemented the MSS demo requirements by working with Cúram Product Consulting Team.

His roles and responsibilities included:

- Created 3 new Income Support programs called Social Assistance, Child Care Subsidy and Employment Supplement.
- Configured evidence for Income Support programs through the Cúram Evidence Framework.
- Created Rules for Social Assistance, Child Care Subsidy and Employment Supplement programs.
- Configured Rates for Income Support programs.
- Configured ‘Family Strength and Needs’ and ‘Neglect Risk’ assessments for Child Support.
- Configured Cúram Service Plans for Income Support programs.
- Configured Cúram Social Enterprise Folders for Income Support programs.
- Worked with Product Consulting Team.
- Testing and Bug Fixes.

01/2009 - 05/2009

Technical Project Lead, Five months

Internal IBM

Cúram Child Care 5.2 – SP1

Project Description: Siva was a technical project lead role on the Cúram Child Care 5.2 - SP1 solution project. He was extensively involved in analysis, design, refactoring, development and maintenance of many new and existing modules by working with Business Analysts and Developers.

He coordinated resolution of change requests and implementation of enhancements for the SP1 release.

His roles and responsibilities included:

- Enhanced Child Care eligibility rules as per new requirements.
- Designed Child Care reservations.
- Enhanced Child Care service plans to provide more features.
- Analyzed various enhancements and designed technical solutions.
- Tracked change requests using Rational Clear Quest.
- Collaborated with business analysts on requirements, design issues and enhancement requests.
- Provided detailed work estimates and schedule deliverables.
- Provided accurate and consistent project status reports to managers and escalated issues appropriately.
- Mentored developers on defect fixes.
- Mentored team members on leading practices.

04/2008 - 12/2008
Project Lead, Eight months
Internal IBM
Cúram Child Care 5.2

Project Description: Siva was a project lead role on the Cúram Child Care 5.2 solution project. He was primarily involved in Analysis, Design, Prototyping and Development of many critical modules by working with business analysts and developers.

His roles and responsibilities included:

- Analysis, Design, Prototyping, and Development of the following modules - Screening, Application Intake, Case Management, Evidence, Eligibility and Benefits, Provider Management, Provider Grants, Provider Advances, Child Care Plans, Fund Management, Market Rate Surveys, and Placement Requests.
- Provided External and Internal Design Documents for the above-mentioned modules to developers and testers.
- Provided detailed work estimates and scheduled deliverables.
- Designed and developed using Cúram V5 features such as CPM, Citizen Portal, IEG2, CERT Rules and Data Store etc.
- Collaborated with Business Analysts on requirements and High Level functional designs.
- Provided accurate and consistent project status report to managers and escalated issues appropriately.
- Directed the development of documentation tools which include User Guides, Process Flows, Entity Relationship Diagrams, Design Documentation, and Training Material.
- Mentored team members on leading practices.

11/2007 - 03/2008

Technical Project Lead, Four months

Electronic Resource & Eligibility Product

Project Description: Siva played a technical project lead role on the State of Utah's electronic Resource & Eligibility Product (eREP). He served as the liaison between offshore (India) and onsite (Utah) teams to establish effective communication. He was heavily involved in analysis, design, development and maintenance of new and existing modules by working with business analysts and developers.

His roles and responsibilities included:

- Liaised between offshore (India) and onsite (Utah) teams to establish effective communication.
- Improved customer satisfaction with the help of offshore team by
  - Proactively dealing with customer needs on a consistent basis
  - Consistently tackling risks to avoid escalations,
  - Leveraging every opportunity to exceed customer expectations.
- Served as a technical lead in the development of coding tools, including Java Server Code, Rules, Workflow, UIM Screen Definitions, Message, Code Table and Data Manager Files, Cúram Server Workstation, Database and network configurations, and Unit and System tests.
- Improved business results by delivering project deliverables with
  - 0% schedule variance
  - 0 % effort variance
  - 100% process compliance
  - Improved review and testing processes
  - Accurate and consistent project status update to all stakeholders

10/2006 - 10/2007
Technical Consultant and Lead Developer, One year
Claim's Management System (CMS)
WorkSafeBC

Project Description: Siva was one of the lead developers on WorkSafeBC's Claims Management System (CMS) project.

His roles and responsibilities included:

- Designed and developed many critical modules, which include Transaction Log, Task Management, Goods & Services, Eligibility and Financials.
- Provided Internal Design documents for the above-mentioned modules.
- Designed and developed Cúram Rules, Workflows and IEG scripts.
- Customized the Cúram IEG to satisfy WorkSafeBC requirements.
- Led Eligibility and Financial module development effort.
- Mentored team members on leading practices.
- Provided detailed work estimates and scheduled deliverables.
- Contributed to a positive environment through openness, flexibility, ownership and accountability.
- Provided accurate and consistent project status reports to managers.

03/2007 – 10/2011
Lead Developer, Four years, seven months
Sprint Nextel, USA
Telesales Order Entry System (TOES)

Project Description: TOES (Telesales Order Entry System) is an integrated J2EE web-based Order Entry/Call Management application used by telemarketing representatives in various vendor locations in the USA. Siva was responsible for the development of web based applications for Sprint Nextel.

His roles and responsibilities included:

- Delivered high quality solutions to clients in response to varying business requirements.
- Improved customer satisfaction by proactively looking at customer's needs.
- Established effective communication with the client by working together. Provided regular project status update.
- Utilized in-depth knowledge of functional and Technical experience in SPRINT'S TELESALES Application and other leading-edge technologies in conjunction with industry and business skills to deliver solutions to the customer.
- Facilitated that the development is performed as per the client schedule and requirements.

01/2005 – 03/2006
Developer, One year, two months
Spring USA
Telesales

Project Description: Telesales GUI is a customized front-end application that provides functionality to sell handsets and other equipment to customers based on printed advertisements and other marketing promotions in the USA.

Siva's roles and responsibilities included:

- Improved customer satisfaction by proactively analyzing customer's needs.
- Improved business results by delivering project deliverables on schedule and as per quality standards.
- Facilitated compliance of quality processes as per the Project Quality Plan.
- Contributed to a positive environment through openness, flexibility, ownership and accountability.
- Increased productivity by enhancing application/domain specific knowledge.
- Provided accurate and consistent project status reports to the customer/manager.

Key Skills

- Cúram Certified Developer (CCD).

- Cúram Certified Professional (CCP).
- Project Management Professional (PMP).
- Sun Certified Java Programmer (SCJP).
- Sun Certified Web Component Developer (SCWCD).

Education

Qualifications	Masters in Computer Science – Madras University (India) Madras University, India, 2004	
Languages	English	Fluent

Security Expert for DDI and M&O: James Scholz

Professional experience

Profile

James is a Certified Information Systems Security Professional (CISSP) with more than 40 years of experience in the information technology industry. His experience spans multiple industries and information technology projects including significant experience in enterprise architecture, infrastructure protection, secure coding, network security design, security policy development, IT risk assessment, technical incident management and root cause analysis, penetration testing, security information and event management.

James is a seasoned and highly experienced cyber security management professional with particular experience in the design, development, and implementation of many diverse programs and security disciplines including Critical Infrastructure Protection (CIP), International Organization for Standardization (ISO), Federal Information Security Management Act (FISMA), National Institute of Standards and technology (NIST), Minimum Acceptable Risk Standards for Exchanges (MARS-E), 10CFR Nuclear Regulatory Commission Standards, Nuclear Energy Institute (NEI), North American Electric Reliability Corporation (NERC), North American Energy Stands Board (NAESB), Intelligence Community Directive (ICD) 705, Internal Revenue Service (IRS) 1075, and National Industrial Security Program Operating Manual (NISPOM).

James has demonstrated proven leadership and experience in technical and business consulting with a focus on overall compliance with business, information technology, and security requirements and regulations. He has experience in directing the Business Impact Analysis through the Disaster Recovery services with strong integration and architectural experience. James is an expert in providing guidance on service delivery and security tasks within the enterprise infrastructure and managing the on-schedule delivery of programs. He provides results-focused management of an integrated architectural environment, and is an exceptional communicator and mentor. James has maintained a Top-Secret/Single Scope Background Investigation (SSBI) with Special Compartmental Information (SCI) with a Counter Intelligence (CI) Polygraph (TS/SSBI/SCI/CI Poly) for over 35 years.

Additional core competencies include:

- Cyber Security Architecture Implementation.
- Cyber Security Project Management.
- Configuration Management Improvement.
- Troubleshooting and Diagnosis.
- Strategic Planning and Business Analytics.
- Corporate and Government Information Systems.
- Resolution of Highly Complex Security Issues.
- Systems Architecture.
- Extensive Training and Development
- Disaster Recovery, COOP, BCP Planning.
- Staff Management, Training, and Mentoring.
- Cyber Security Compliance and Planning.
- Sensitive Compartmented Information Facility (SCIF) Design.
- Plan of Actions and Milestone Development.

Assignment History

03/2016 – Present
Lead Cyber Security Architect, 15 months
Northrop Grumman Corporation
Arkansas Information Support Services (ISS)

Project Description: James uses innovative cyber solutions coupled with current technologies to support the Arkansas Department of Human Services (DHS) enterprise. He developed the Enterprise Architecture Model for incorporating service management and delivery into a security model for the DHS, Office of Systems and Technologies (OST). Since joining Northrop Grumman, he has provided support for the IRS 1075 compliance requirements and brought DHS to a level of compliance higher than previous standards. To accomplish this, James helped create 20 new policies, developed standardized procedure formats, aided the overall security effort for IRS compliance, and transferred knowledge to State assets. Compliance with IRS requirements improved approximately 25% in less than 5 months.

James also contributed to raising the level of compliance to the Minimum Acceptable Risk Standards for Exchange (MARS-E) from the 1.0 standard to compliance with the 2.0 standards. Working cooperatively with State staff, DHS was able to achieve a MARS-E IRS audit review of 96%, and the CMS compliance increased from below 50% to over 85%. He also led three separate audits; IRS, SNAP/ANSWER IT system, and the Eligibility and Enrollment Framework (EEF) for Affordable Care Act compliance.

Specifically for EEF, James researched and developed 80% of a multi-use data flow diagram to depict the EEF infrastructure, interconnecting networks data, and flow control within 35 days of joining the project. James helped EEF receive a 99% rating for IRS compliance and furthered the Authority to Connect (ATC) for compliance with MARS-E 1.0 and MARS-E 2.0. James submitted a comprehensive System Security Plan (SSP) and Information Security Risk Assessment (ISRA) to the Centers for Medicare and Medicaid Services (CMS). He added over 150 items to the Plan of Action and Milestone (POA&M) and spearheaded the Privacy Impact Assessment (PIA) for DHS' initial submission to CMS.

James is also working with the Architectural Working Board (AWB) and coordinating closely with project team members to make sure that applicable privacy and security requirements are incorporated in standard operating procedures and other controls implemented for the project. James developed a required DHS Security Plan (draft) to meet compliance and requirements of "leading practices" and the federal guidelines, to include 22 policies.

12/2015 - 02/2016
Senior Security Analyst, IT Cyber Security Team, Three months
Southwest Power Pool

Project Description: James provided guidance and leadership in developing Bulk Electric System (BES) Cyber Assets documentation that outlined a methodical process to follow for Critical Infrastructure Protection (CIP) compliance. He developed a plan for the CIP transition from version 3 to version 5. He guided team members in identifying and evaluating an architecture for BES Cyber Assets by developing project plans and implementing a new Cyber Security Team. James defined the requirements for Identity Access Management (IAM) and managed the vendor selection process. James assisted an inexperienced manager in understanding the steps and processes in rebuilding a secure infrastructure, and aided the management team in understanding and supporting the requirements of the North American Electric Reliability Corporation (NERC) security controls.

09/2014 - 07/2015
Project Manager / Cyber Subject Matter Expert, Nine months
LNO, Inc.

Project Description: James served as the Project Manager / Cyber SMA for eight developers designing and implementing the training curriculum for a newly established Cyber Center of Excellence and Cyber Protection Teams (CPT). He provided guidance for the Special Compartmental Information Facility (SCIF) development and accreditation to support the CPTs. James led his team of developers in developing deliverables for a 400-hour CPT in 5 weeks. He served as the lead for the Cyber Critical Task Site Selection Board (CTSSB) and coordinated the required elements for the development of a multi-service training course. James provided leadership, mentoring, and direction as the course SMA for the development team to implement course design for the CPTs. His ability to mentor junior personnel in information security and guide their understanding of the requirements was instrumental in expediting the course production.

James provided guidance on the Cyber Network Defense course requirements, course selection, and its presentation as a specialty course that moved to Ft. Gordon as a Military Occupational Specialty (MOS). The production of this curriculum fulfilled a requirement within the US Army.

James was also an active member of the FBI InfraGard Program fulfilling the role of Sector Chief for the Nuclear Sector.

06/2013 - 08/2014
Security Manager – Cyber Information Security Specialist, 14 months
Emirate Nuclear Energy Corporation

Project Description: James provided guidance to the Security Compliance Management Team in developing procedures, personnel, and processes for the classified and business information categorization, marking, and storage procedures and personnel. James interviewed potential employees and provided input into the overall hiring decisions for new personnel. James assisted the Emirates in the integration of NIST Special Publication 800 Series, 10 CFR 73.54, and NEI 08-09 compliance-based programs by designing and managing the build-out of the Classified Information Facility. James worked directly with the Project Management Team and presented security projects to facilitate proper corporate direction and future growth of information, personnel, and physical security programs. James mentored junior and senior personnel in the information security arena to assist and guide them to understand the ISO, NIST (FISMA), IAEA, and Abu Dhabi Government requirements for security of information and facilities. He also developed a validation and compliance program with Government standards developed from NIST 800-53 requirements.

He served on a team of 13 personnel to determine the Target Set development and planning for Critical Digital Assets (CDA) within the protected zones of the nuclear power plant. James worked with the Security & Emergency Preparedness teams to develop escalation procedures for reporting, responding to, and controlling a nuclear incident. James introduced a “Self-Assessment” program for professional, section, and personal growth to develop roadmaps for the Nuclear Security requirements training and sustainment requirements. In his off hours, James taught an Integrated Civil Security, Critical Infrastructure Protection Master’s-level course at Khalifa University as a volunteer developer and instructor.

10/2012 - 10/2013
Senior Cyber Engineer and Subject Matter Advisor, 12 months
ENERCON Services

Project Description: James was assigned to the United Arab Emirates (UAE) in Abu Dhabi to supervise, mentor, and train Emirate security personnel within the Emirate Nuclear Energy Corporation (ENEC). He developed and implemented a Classified Information Protection Program that was published as an ENEC policy for protection of Sensitive Nuclear Material and Information. James developed a plan to initiate the ADSIC

(Government FISMA Equivalent) of Compliance through writing the Business Information Protection Program (BIPP) published as an ENEC policy for the protection and safeguards of Business Sensitive Information, Export Control Information, and Security Sensitive Information. James worked with the ENEC Training Division to develop a training policy that defined what security training is needed and the approach to training necessary to fulfill the requirements for nuclear surety. James supervised the implementation of Access Control procedures for the ENEC secure storage areas, ensuring that identity management was strictly enforced through Computer Access Cards, readers, and the planned future development of biometric controls for two factors authentications. James also acted as the Facility Security Officer (FSO) developing the training program to train and certify FSOs, KepCo (Korean Electrical Power Company) contractors, and other tier II and III contractors.

05/2010 - 10/2012
Professional Information Technology Security Manager (M29) and Regional Information Systems Security Office (ISSO), 29 months
Hewlett-Packard / TEK Systems
Federal Bureau of Investigations (FBI)

Project Description: James developed the Continuity of Operations Plan (COOP) for the FBI's Little Rock Field Office (LRFO). He received Headquarters (HQ) recognition as the best developed COOP within the FBI. He recommended the implementation of several new security initiatives and suggested solutions for resolving physical security issues to the Acting Chief Security Officer. James provided upgrade guidance and vendor recommendations for the compliance and installation of TV isolators and visitor warning system within the LRFO's Sensitive Compartmented Information Facility (SCIF). He developed documentation for the FISMA Certification and Accreditation processes to support the HQ level Information System Security Manager (ISSM) and developed LRFO local policy for Information Systems and interacted with users to provide training on various Information Assurance (IA) subjects. James developed a certification and accreditation program that will save the FBI $10.3 million when enacted in all the field offices and resident agencies over the accreditation period. James supervised the accreditation and application of information systems security among 17 Field Offices from Los Angeles, CA to Washington, DC. James was offered, and was fast-tracked to fill the position of the Chief Security Officer.

05/2005 - 12/2015
Cyber System Architect and Engineer, 127 months
Computer Security Consulting (Owner)

Project Description: James' company focused on contracting with government agencies to perform cyber security evaluations and recommendations for compliance with FISMA and other federal standards.

He served as a Facility Security Officer (FSO) for the DSS / Joint Personnel Adjudication System (JPAS) system and the corporate

Top Secret (TS) facility clearance. James developed cyber security leading practices for several federal government agencies to achieve compliance with deferral standards. He provided guidance and imparted knowledge for compliance with NISP through knowledge of the Operating Manual (DoD 5220.22-M). He maintained membership in the National Industrial Security Program (NISP). James also acted as the Nuclear Sector Chief for the InfraGard Program while evaluating and determining Critical Infrastructure Protection issues and disposal factors. He provided insight and advice to federal agencies in the logical division, certification and accreditation, and management of the CA Identity Access Management software. In addition, he provided a recovery plan to the Railroad Retirement Board to automate their Disaster Recovery Program and minimize their RTO/RPO/MTF timelines. He subcontracted through IBM to support hurricane Katrina disaster recovery operations at the USDA, recovering to 90% recovery in 5 weeks.

01/2003 - 05/2005
Senior Security and Systems Engineer, 28 months
General Dynamics / FCBS/ Computer High-Tech Management

Project Description: James provided cyber security consulting services, and FISMA compliance evaluations and consulting. He independently completed a 30-day scheduled evaluation of all systems and databases saving the client and company time and more than $20,000. Contributed to the National Institute of Standards and Technology (NIST) by recommending security controls for data at rest, data in motion, and data in transit.

Key Skills

- Enterprise Architecture.
- Information Systems and Security Policy and Procedures.
- Configuration Management Planning.
- Disaster Recovery Plans and Operations.
- Business/Project Management Skills.
- Team Building and Management.
- Author: Enterprise Architecture and Information Assurance: Developing a secure Foundation: ISBN 9781439841594.
- Lead Instructor, DoD System Administrators/Network Managers Security Course.
- Integrated Civil Security, Critical Infrastructure Protection Master's level course developer and instructor, Khalifa University, UAE.

Education

Qualifications

- PhD in Information Security, University of Arkansas at Little Rock (33SH short)
- Masters in Information Systems, University of Phoenix at Tucson, Arizona

	• BS in Management Information Systems, University of Phoenix at Tucson, Arizona • Certified Information Systems Security Professional (CISSP – 33371), 2002 • Certified-Chief Information Security Officer (C|CISO - CC-JS-786), 2014 • Certified-Homeland Security, Level IV (CHS-IV -106680), 2014 • Arkansas InfraGard Alliance –Nuclear Sector Chief (10050296), 2011 • National Emergency Management Team • MCSE • CCNA • VAT-1 • A+ • ISSO	
Languages	English	Fluent

3.0 Collaboration

Instructions: Provide evidence that the Vendor's proposed team (including subcontractor(s), if proposed) has a proven track record of successfully collaborating in a similar environment to the environment outlined in the RFP. This should include experiences working with a team to improve maintenance and operations efficiency and effectiveness. Describe how the Vendor (including subcontractor(s)) will ensure that the proposed team will achieve the required team dynamics.

IBM is proposing key personnel that have successful track records of collaboration conducting similar implementations for the States of Arkansas, Missouri, South Carolina, and California, demonstrating our ability to work collaboratively to transform needs into solutions that will meet DHS goals.

IBM understands that collaboration is essential to the successful development and maintenance of any information system and process, IBM approaches every project with a "one-team" mindset, and we know that building and maintaining strong relationships with all parties involved is an essential component to success. Our development of effective team dynamics with DHS, suppliers, and subcontractors will allow us to add significant value to your project. Our teams thrive in collaborative work environments, where we directly engage and respond to our clients, suppliers, and subcontractors. We will work as a cohesive team in requirements gathering, design, implementation, and testing to facilitate we meet your needs at every milestone.

IBM has teamed with Northrop Grumman on many engagements, including a long-term engagement in California and the Child Welfare Services and Case Management System (CWS/CMS), as a subcontractor to us since 2009. We are currently working together on other large-scale human services systems using the Cúram COTS framework.

The following table demonstrates our key personnel, the large-scale projects they have worked on, and their involvement:

	Arkansas Department of Human Services	MEDES – A complex MAGI implementation for the State of Missouri	South Carolina, Department of Health and Human Services	San Diego, Department of Health and Human Services Agency
	DDI, O&M	DDI, O&M, OCM, and Training	DDI, O&M, OCM, and Training	DDI, O&M, and Training
Walter Szyperski *Engagement Director*				✓

	Arkansas Department of Human Services	MEDES – A complex MAGI implementation for the State of Missouri	South Carolina, Department of Health and Human Services	San Diego, Department of Health and Human Services Agency
Ennapadam Padmanabhan *Project Manager*		✓		
Yogi Ganesan *Functional Lead*		✓		
James Collier *Training Lead*				✓
Gaurang Mavani *Testing Lead*				✓
Ramchandra Takkar *Technical Lead*	✓		✓	
Devananda Muthakana *Architect Lead*			✓	✓
Santharam Hanumandhan *M&O Manager*		✓		
Siva Kumar Veluru *M&O Technical Lead*	✓			
James Scholz *Security Expert*	✓			

Template T- 6

Arkansas THE NATURAL STATE + IBM

Functional Requirements Traceability

Response Template **RFP #: SP-17-0012**

State of Arkansas Department of Human Services
Integrated Eligibility and Benefit Management Engagement (IE-BM) RFP
RFP #: SP-17-0012
Template T-6 - Functional Requirements Traceability Matrix

Introduction

This document captures the Functional Requirements for the State of Arkansas's Integrated Eligibility-Benefits Management (IE-BM) Solution Project. These requirements are focused on meeting the full lifecycle of DHS's business processes needs, as well as enhancing the currently implemented Medicaid E&E Solution. This document should be read in conjunction with the Business Process Analysis (BPA) report which documents the Process Flows and Use Cases associated with these requirements and the Medicaid E&E Solution documentation, which captures the capabilities already implemented. DHS envisions the IE-BM Vendor will leverage Medicaid E&E Solution functionality already implemented, if possible. As such, if the DHS functionality enhances the capabilities of the already implemented Medicaid E&E Solution the capabilities should be implemented across the solution. These requirements and the supporting detail in the BPA must be used to create cost and schedule estimates for the design, development, implementation and ongoing support for the Integrated Eligibility and Benefit Management Engagement (IE-BM) RFP.

The Functional Requirements document contains the following sections:

1) Instructions
2) Functional Requirements
3) Use Case List
4) Process Flow List

Within the Functional Requirements, the requirements are categorized by area as detailed below. Each category has its own tab in this workbook.

ID	Section Title
FR	**Functional Requirement Section**
FR1	General Requirements
FR2	Pre-Screening Requirements
FR3	Integrated Eligibility Application Requirements
FR4	Interview Requirements
FR5	Documentation Requirements
FR6	Eligibility Determination/Spend-Down Requirements
FR7	Benefit Issuance Requirements
FR8	Redetermination/Semi-Annual Reporting Requirements
FR9	Client Change Requirements
FR10	Medical Review Team Requirements
FR11	Overpayment, Audits and Appeals Requirements
FR12	Appointment and Caseload Management Requirements
FR13	Reporting and Business Intelligence (BI)

State of Arkansas Department of Human Services
Integrated Eligibility and Benefit Management Engagement (IE-BM) RFP
RFP #: SP-17-0012
Template T-6 - Functional Requirements Traceability Matrix

Instructions

This workbook contains functional requirements for the Integrated Eligibility and Benefit Management (IE-BM) Solution.
The response codes below should be used by IE-BM Vendors to indicate the fit of their solution to the State Requirements specified in this workbook.
This Template must be submitted as an Microsoft Excel file as part of the IE-BM Vendor's Proposal and should be thoroughly completed.

Field	Definition / Instructions
Req. #	**Requirement Identification Number:** This should be used to refer to requirements in correspondence. DO NOT EDIT THIS FIELD.
Requirement	**Requirement:** The detailed description of the requirement. DO NOT EDIT THIS FIELD.
Requirement Met	Vendor response to whether the Requirement will be met by the Vendor The Vendor will reply with a "Yes" to Indicate that the requirement, as currently written, will be met by the Vendor's Proposal without any modifications The Vendor will reply with a "Clarification" to indicate that the Vendor intends to propose a clarification and will clarify with proper justification
Solution Method	Vendor response to how the Functional Requirement will be met by the Vendor solution. Indicate how the requirement will be met by selecting one of: * Leveraged Functionality - The State Requirement will be met by leveraging/enhancing the EEF Solution functionality already configured and implemented for MAGI Medicaid at DHS * Configuration - The State Requirement will be met by configuring the proposed Solution and/or any existing DHS Enterprise assets already in production * Third Party Product - The State Requirement will be met by commercially available third-party software or hardware assets and is included in this proposal. Note: In the "Suggested Clarifying Comments" column, indicate the name of the proposed third-party software vendor and proposed components and indicate its compliance to DHS' technology or architecture standards. * New Development - The State Requirement will be met through development of new software code to provide specific business or technical services where there are no leverageable off-the-shelf functionality or software assets. Note: This column is not included on the Sections (worksheets) where it does not apply
Proposed Phase	The IE-BM Vendor's response to indicate the implementation phase the requirement will be met. Provide the proposed phase for meeting each requirement. *Note: The IE-BM Vendor must identify the number and schedule of proposed implementation phases in the Implementation Approach.*
Suggested Clarifying Comments	If the Response Code is set to "Clarification" the Vendor must provide clarifying comments with appropriate justification

State of Arkansas Department of Human Services
Integrated Eligibility and Benefit Management Engagement (IE-BM) RFP
RFP #: SP-17-0012
Template T-6 - Functional Requirements Traceability Matrix

Defined Terms

Defined Term	Acronym (if used)	Description
Aid for Families with Dependent Children Medically Needy	AFDC MN	This is a medical necessity deprivation factor used by the Medical Review Team.
Aid to Families with Dependent Children	AFDC	A Federal assistance program in effect from 1935 to 1996 created by the Social Security Act (SSA) and administered by the United States Department of Health and Human Services that provided financial assistance to children whose families had low or no income.
Applicant		The Applicant is a person who wishes to apply for benefits and services for themselves and/or their family.
Arkansas	AR	
Arkansas Works	AR Works	This is program is the Medicaid Expansion Waiver that Arkansas has which allows the citizens who qualify for the Medicaid Expansion program to have a private insurance provider with portions of the insurance premium subsidized by the government. Citizens who qualify to participate in the current Private Option Program are not qualified to receive Medicaid (Traditional or MAGI).
Arkansas Department of Health	ADH	Arkansas' principal agency for protecting and improving the health and wellbeing of all Arkansans' by providing public health services statewide
Child Care Development Fund	CCDF	Provides child care assistance to eligible low-income working families and students, TEA clients and individuals transitioning from TEA. CCDF also provides support to child care and early childhood education providers through contracts and grants for training, resource and referral activities, printed materials and online resources that promote high quality.
Children's Health Insurance Program	CHIP	A medical coverage source for individuals under age 19 whose parents earn too much income to qualify for Medicaid, but not enough to pay for private coverage.
Date of Birth	DOB	
Department of Aging and Adult Services	DAAS	Serves as the focal point for all matters concerning older Arkansans and adults with disabilities. DAAS' mission is to promote the health, safety and independence of these populations.
Department of Finance Administration	DFA	Provides state income and business tax forms and information.
Department of Human Services	DHS	Arkansas government's principal agency for protecting the health of all citizens and providing essential human services, especially for those who are least able to help themselves.
Department of Workforce Services	DWS	Provides accessible employment related and support services responsive to the needs of employers, job seekers, and the community.
Disaster Supplemental Nutrition Assistance Program	D-SNAP	Provides temporary food assistance for households affected by a natural disaster. A D-SNAP provides one month of benefits to eligible disaster survivors and can facilitate the issuance of supplemental SNAP benefits for ongoing households. To be eligible for D-SNAP, a household must live in the identified disaster area, have been affected by the disaster, and meet certain D-SNAP eligibility criteria.
Division of County Operations	DCO	An Arkansas DHS Division that accepts and processes applications for nearly a dozen public assistance programs and enrolls consumers in the programs for which they have been approved.

Defined Term	Acronym (if used)	Description
Division of Medical Services	DMS	A DHS Division that oversees the Medicaid, ARKids First, CHIP, and Long-Term Care systems in AR including the licensing and inspection of nursing homes. DMS' mission is to ensure that high-quality and accessible health services are provided to citizens of AR who are eligible for Medicaid and nursing home care.
Electronic Benefit Transfer	EBT	A method of benefit distribution in the form of a "credit card". TEA and SNAP use the same card and process. TEA and SNAP benefits are distributed to the client's card on different timelines. WIC program also uses an EBT card, but it is not the same physical card used for TEA and SNAP. WIC and TEA/SNAP do not use the same EBT vendor.
Employment and Training	E&T	The Arkansas DHS contracts with participating adult education centers, public schools, vocational schools, and community colleges to operate a voluntary Employment and Training (E&T) program in 14 of the state's 75 counties (including a single county program, "Workfare"). SNAP participant in counties that offer E&T or Workfare have the opportunities to participate in: Independent Job Search, Job Search Training, Education, Work Experience, On The Job Training and Job Retention activities.
Enrollment and Eligibility	E&E	
Food and Nutrition Service	FNS	An agency of USDA's Food, Nutrition, and Consumer Services. * The numbering system behind "FNS" in FR13 refers to specific programs within the agency. FNS works to end hunger and obesity through the administration of 15 federal nutrition assistance programs including WIC, Supplemental Nutrition Assistance Program (SNAP), and school meals. In partnership with State and Tribal governments, these programs serve one in four Americans during the course of a year. Working with public, private and non-profit partners, the mission is to increase food security and reduce hunger by providing children and low-income people access to food, a healthful diet and nutrition education in a way that supports American agriculture and inspires public confidence.
Home and Community-Based Services (HCBS) Waivers	HCBS Waivers	Medicaid programs that provide long-term services and supports to individuals in their home or elsewhere in the community, who would qualify for Medicaid if they lived in an institution like a nursing facility or an intermediate care facility for individuals with intellectual disabilities (ICF/IID). Currently Arkansas has three HCBS Waivers, 1) DDS Waiver for individuals with developmental disabilities; 2) Living Choices for individuals living in Assisted Living Facilities; and 3) ARChoices in Homecare for individuals age 65 and over, or individuals age 21 through 64 with a physical disability.
Integrated Eligibility - Benefits Management	IE-BM	This is the name of the effort put forth by this RFP.
Intentional Program Violation	IPV	Applicant or Client status for evaluation during IE-BM eligibility evaluation.
Limited English Proficiency	LEP	An Applicant or Client language proficiency classification.
Long Term Services and Support	LTSS	An umbrella term to refer to the group of categories of Medicaid that provides services to individuals who are in need of institutional care, but may receive these services in institutions, at home, or elsewhere in the community. Categories include Nursing Facility, ICF/IID, home and community-based waivers and PACE.
Low Income Home Energy Assistance Program	LIHEAP	A United States Federal social services program first established in 1981 and funded annually through Congressional appropriations.
Medicaid Management System	MMIS	An Arkansas system that processes all Medicaid claims and provides Medicaid data for program management and various research and care planning activities. AR Medicaid currently has an effort to replace the MMIS.
Medical Review Team	MRT	The team responsible for evaluating applicant's medical status as part of the eligibility process.

Defined Term	Acronym (if used)	Description
Modified Adjusted Gross Income	MAGI	The figure used to determine eligibility for premium tax credits and other savings for Marketplace health insurance plans and for Medicaid and the Children's Health Insurance Program (CHIP). For many people, it's identical to or very close to adjusted gross income. Modified adjusted gross income is adjusted gross income plus untaxed foreign income, non-taxable Social Security benefits, and tax exempt interest. MAGI includes these income sources for all household members required to file a tax return. MAGI doesn't include Supplemental Security Income (SSI). MAGI does not appear as a line on your tax return.
Non-MAGI (not referred to as a non-acronym)	non-MAGI	Non-MAGI refers to person classification group for Medicaid groups who exceed specified income levels but still qualify for pre-defined benefits. The details of non-MAGI qualification are defined by the Federal government. Medicaid provides a variety of medical services including health care coverage, long-term care, mental health services, hospice, orthotics, prescription drugs and various home-based and community-based services for certain eligible low-income and needy populations.
Optical Character Recognition	OCR	This is a technology that enables you to convert different types of documents, such as scanned paper documents, PDF files or images captured by a digital camera into editable and searchable data.
Overpayment Accounting Services Information System	OASIS	- Used by DHS Accounts Receivable group to track Client and Provider overpayments. - Sends notices to clients and participants. - Interfaces with State and Federal Revenue services to intercept tax refunds for repayments.
Quality Control	QC	Activities conducted by various AR DHS staff.
Semi-Annual Report	SAR	A process defined as part of Use Case 12 and 13.
Short Message Service	SMS	This is a text messaging service component of phone, Web, or mobile communication systems. It uses standardized communications protocols to allow fixed line or mobile phone devices to exchange short text messages.
Social Security Number	SSN	
Standard Form	SF-	As seen in FR13 "SF-" refers to a standard form with identifying numbers following the hyphen.
Supplemental Nutrition Assistance Program	SNAP	A program that provides a nutritional safety net for low-income children, families and adults. Recipients receive their benefits on an Electronic Benefits Transfer (EBT) card that works at most grocery stores, approved farmers markets, and some smaller stores that sell food. SNAP recipients cannot get cash back from the cards. More than $685.1 million in benefits were provided to 685,812 people during AR SFY'14.
Tax Equity and Fiscal Responsibility Act	TEFRA	The Tax Equity and Fiscal Responsibility Act of 1982 (Pub.L. 97–248), also known as TEFRA, is a United States law that rescinded some of the effects of the Kemp-Roth Act passed the year before. As a result of ongoing recession, a short-term fall in tax revenue generated concern over the budget deficit. TEFRA as used here refers to section 134 of the Act which allows states the option of providing Medicaid to children with disabilities who live at home, but would qualify in an institution. Some states refer to this as Katie Becket children.
Temporary Assistance for Needy Families	TANF	This program provides temporary financial assistance for pregnant women and families with one or more dependent children. TANF provides financial assistance to help pay for food, shelter, utilities, and expenses other than medical.
Transition Employment Assistance	TEA	A program that provides time-limited cash assistance and employment-related services each month to low-income families with dependent children. There were 24,681 people receiving services in AR SFY'14.
Veteran's Administration	VA	
Women, Infants and Children	WIC	The Special Supplemental Nutrition Program for Women, Infants, and Children provides Federal grants to States for supplemental foods, health care referrals, and nutrition education for low-income pregnant, breastfeeding, and non-breastfeeding postpartum women, and to infants and children up to age five who are found to be at nutritional risk.

State of Arkansas Department of Human Services
Integrated Eligibility and Benefit Management Engagement (IE-BM) RFP
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Template T-6 - Functional Requirements Traceability Matrix

General Requirements

Req. #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
General Requirements					
FR1.1	The System will use branching logic for all Client facing data input screens (e.g., applications and changes) to display questions based on the user responses to previous questions including, but not limited to: a. Type of assistance b. Income, expenses and health status	Y	C	Phase 1	
FR1.2	The System will, wherever possible, pre-populate documents being completed by the Clients with information already provided to DHS including, but not limited to: a. Information collected by DHS (e.g., from prior applications) b. Information provided using the Client's online account	Y	D	Phase 2	
FR1.3	The System will track all activity associated with a case and time stamp the receipt of all submissions including, but not limited to, the receipt of: a. Integrated eligibility applications b. Program specific applications (or program specific portions of the integrated eligibility application) c. Redetermination applications/Semi-Annual Reports d. Change submissions e. Additional documentation f. Other submissions as defined by DHS	Y	L	Phase 3	
FR1.4	The System will track Clients who complete an action via the self-service portal and those who complete the same action via a paper form/submission to identify common characteristics among these two populations to allow DHS staff to execute targeted outreach efforts aimed at increasing usage of self-service channels	Y	L	Phase 2	
FR1.5	The System will support tracking each program-specific application through the eligibility process including, but not limited to: a. Completing the application and providing all required documentation b. Interview process c. Additional program-specific steps as defined by DHS	Y	C	Phase 3	

Req. #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
FR1.6	The System will allow the Client to withdraw their application (integrated eligibility or redetermination application). The System will send the Client a confirmation/notification via their preferred method of communication indicating each program for which their application has been withdrawn	Y	L	Phase 1	
FR1.7	The System will cancel any eligibility interview appointments scheduled by the Client if he/she withdraws their application for all programs and provide confirmation to the Client through their preferred method of communication(s)	Y	D	Phase 3	
FR1.8	The System will support Client access through multiple on-line channels including computers and mobile devices (e.g. tablets and smart phones)	Y	C	Phase 1	
FR1.9	The System will support self-service capabilities which allow Clients to view their case information on-line through the entire Life of a Case to address the majority of their questions, including but not limited to: a. Their application, redetermination and any changes submitted b. Payments c. Overpayments d. Scheduled appointments	Y	C	Phase 3	
FR1.10	The System will provide a mechanism to change the eligibility status for multiple Clients at once	Clarification	L	Phase 3	The IBM team recommends modifying this requirement to read: "The System will provide a mechanism to change the eligibility status of multiple clients associated to one program case." We believe this is the intent of the requirement and is a capability provided OOTB by Cúram.
FR1.11	The System will allow DHS users with the appropriate rights to view a Client's information associated with any program, regardless of eligibility	Y	C	Phase 3	
FR1.12	The System will leverage information provided to other programs (e.g., Medicaid) to determine status of a Client's case by providing Eligibility Workers access to the available information and by flagging the case for additional review by an Eligibility Worker	Y	C	Phase 3	
FR1.13	The System will support authorized external organizations' read-only access to the System	Clarification	C	Phase 3	The IBM team wishes to clarify that external users can be configured to have read-only access to the internal state's network, through VPN for example.

Req. #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
FR1.14	The System will accept and track electronic and telephonic signatures at the appropriate points throughout the Life of a Case (e.g., application process)	Y	L	Phase 1	
FR1.15	The System will have rules-based access control at the data field level and display information based on the following: a. User role and program affiliation b. Consent provided by a Client c. Any other regulatory or policy-based restrictions	Y	D	Phase 3	
FR1.16	The System will maintain a record (e.g., audit trail) of all changes made to data in the System - including both System initiated changes or user initiated changes. This should be readily searchable by user ID, System ID or Client ID. This must include, but is not limited to: a. The user ID of the person who made the change or System ID if the change was System generated b. The date and time of the change c. The information that was changed d. The data before and after it was changed e. The data source if the change was System generated	Y	C	Phase 3	
FR1.17	The System will record the date, time, and name of users viewing Client information	Y	C	Phase 3	
FR1.18	The System will provide a real-time view of all users accessing a case	Clarification	C	Phase 3	The IBM team recommend modifying this requirement to read: "The System will update audit information in real-time of users who have accessed a case." We believe this is the intent of the requirement and is a capability provided OOTB by Cúram.
FR1.19	The System will allow DHS users to search for a Client's account when a Client calls a DHS facility and address the Client's needs including, but not limited to: a. Make a change to the Client's information b. Schedule an interview c. Look up the Client's case and answer any questions	Y	L	Phase 3	
FR1.20	The System will accommodate leap year processing and daylight savings time start/end dates as part of the design	Y	L	Phase 1	
FR1.21	The System will support communicating with Clients through a variety of methods including, but not limited to: a. Paper communications/mail b. Email c. Text	Y	L	Phase 2	

Req. #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
FR1.22	The System will support establishing and issuing emergency benefits, and issuing benefits resulting from court cases	Y	C	Phase 3	
FR1.23	The System will comply with the Americans with Disabilities Act	Y	L	Phase 1	
FR1.24	The System must support sanctioning a client for a specific time period	Y	L	Phase 3	
FR1.25	The System must track sanctions by individual client, not the household	Y	L	Phase 3	
FR1.26	The System will track the history of clients' data and provide access to authorized DHS workers, such as, but not limited to: a. Program status b. Status reason c. Denial closure reason d. Changes to the client's account information	Y	L	Phase 3	
FR1.27	The System will provide users capabilities to cleanse/manage master data/client information including, but not limited to, identifying potential duplicates within the system, mapping/analyzing data received from external interfaces	Y	L	Phase 2	
User Interface					
FR1.28	The System will provide menus that are understandable, and easy to navigate, by non-technical users	Y	C	Phase 1	
FR1.29	The System will provide secure access to all functional areas	Y	L	Additional Phases	
FR1.30	The System will allow DHS workers to customize the user interface based on user rights and roles	Y	C	Phase 1	
FR1.31	The System will provide a user interface which allows for DHS workers to perform their tasks efficiently (e.g., providing wizards, hot keys, screen design to align with the user type's needs)	Y	C	Phase 1	
FR1.32	The System will provide the ability to incorporate a non-restrictive environment for experienced users to directly access a screen or to move from one screen to another without reverting to the menu structure	Y	L	Phase 3	
FR1.33	The System will use language (including warnings, notifications and user prompts) aligned with the educational level of the users and free of grammatical errors and typos	Y	L	Phase 1	
FR1.34	The System will provide the capability to capture an individual's language preference to be used on all notices, correspondence, user interface and other materials	Y	C	Phase 1	

Req. #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
FR1.35	The System will provide Clients and Applicants access to all self-service functionality in multiple languages including: a. English b. Spanish c. Marshallese Translations must be available for all static text and all drop down menus and conditional statements	Y	C	Phase 1	
FR1.36	The System will support users requesting translation services (on-line or via phone) and track and report on all requests	Y	L	Phase 3	
FR1.37	The System will allow the Eligibility Worker to view an English version of any translated notices and documents produced by the System	Y	C	Phase 3	
FR1.38	The System will be designed to minimize the effort required to add support for additional languages	Y	C	Phase 1	
FR1.39	The System will allow a user to navigate through screens (backwards or forwards) without losing data entered	Y	C	Phase 1	
FR1.40	The System will simplify the tasks required for users to independently complete intended actions (e.g., to apply for medical benefits and financial benefits) by providing an intuitive user interface with detailed instructions and additional help information	Y	C	Phase 1	
FR1.41	The System will provide context sensitive help (i.e., pop up text when the user positions the mouse over a specific field) through the user interface. These will refer to specific business rules and must be updated automatically when business rules or policies are amended or updated	Y	C	Phase 1	
FR1.42	The System will display the reference to the applicable policies/business rules, as appropriate, throughout the eligibility determination process (e.g., provide the Eligibility Worker with feedback)	Y	C	Phase 3	
FR1.43	The System will provide the user easy access to self-service help files or multi-media procedure documentation	Y	C	Phase 1	
FR1.44	The System will provide an online help system, available from any screen and any screen field, that provides a description of and the processing performed by a screen or window, data entry format and restrictions, explanation of error messages and other information helpful to the user	Y	C	Phase 1	
FR1.45	The System will provide Clients with access to a mapping tool with directions to DCO County offices	Y	C	Phase 1	
FR1.46	The System will provide the ability to generate drop-down lists to identify options available, valid values and code descriptions, by screen field	Y	C	Phase 1	

Req. #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
FR1.47	The System will conform to State and industry-recognized user interface standards for all System screens, windows, and reports. For example: a. All headings and footers standardized b. Current date and local time displayed c. All references to dates displayed consistently throughout the System d. All data labels and definitions consistent throughout the System and clearly defined in user manuals and data element dictionaries e. All generated messages should be clear and sufficiently descriptive to provide enough information for problem correction and be written in full text f. Specify user (name) with associated data input g. All dropdown lists displayed consistently throughout the System h. All search results displayed consistently throughout the System (i.e., name formats standardized)	Y	C	Phase 3	
FR1.48	The System will allow Users to see a list of, and review, past applications and other activities related to the Applicant and have the capability to filter access to information based on user permissions	Y	L	Phase 3	
FR1.49	The System will allow the Applicant to explore additional services available through the DHS portal	Y	L	Phase 1	
FR1.50	The System will provide real-time visibility to case information to all internal case workers and external Clients	Y	C	Phase 3	
FR1.51	The System will make all applicable forms available for users to download, pre-populated with the Client's information previously provided to any IE-BM Program (e.g., TANF/TEA, Medicaid or SNAP)	Y	D	Additional Phases	
FR1.52	The System will make forms available on-line for specific time periods established through predefined business rules	Y	D	Phase 1	
User Account Management					
FR1.53	The System will support one Client account for all programs on the IE-BM Platform (e.g., the Client account is shared between Programs)	Y	L	Phase 1	
FR1.54	The System will allow users to create a new client record if a Client cannot be uniquely identified	Y	L	Phase 1	
FR1.55	The System will only allow one case per Client and provide safeguards to avoid Clients establishing multiple cases. This includes accounts for all programs running on the IE-BM System	Y	C	Phase 1	
FR1.56	The System will allow users to report duplicative records to the system administrator, where multiple matches correctly identify the same Client	Y	C	Phase 2	

Req. #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
FR1.57	The System will provide the ability for authorized third party representatives to support multiple Clients through the eligibility process with their own unique log-in information	Y	D	Phase 3	
FR1.58	The System will provide the ability to historically track changes to Client's information for all of the information collected during the redetermination and change submission processes	Y	L	Phase 3	
FR1.59	The System will time and date stamp all changes made to a Client record and maintain an audit trail that records what information was changed, when the change was entered and by whom	Y	C	Phase 1	
FR1.60	The System will create a user account for new users. Data elements may include, but are not limited to: a. First name b. Last name c. Account password d. Contact information (e.g., email address, phone number, etc.) e. Preferred method of communications f. Emergency contact	Y	C	Phase 1	
FR1.61	The System will grant and limit access to Clients, State staff, and authorized representatives to view/update information, based on user role, access rights and program rule	Y	C	Phase 3	
FR1.62	The System will assign a user the proper access role(s) and create a username and temporary password	Clarification	C	Phase 1	The IBM team wishes to clarify that we recommend allowing users to create their own user name and password as that is the industry standard.
FR1.63	The System will ensure that Applicants new to the IE-BM System applying online establish a user account before applying for benefits. The System will allow DHS staff with the appropriate permissions to create accounts for Applicants new to the IE-BM System if they apply through other means.	Y	C	Phase 1	
FR1.64	The System will allow users to update their username and password for those accounts that have not been flagged as potential or actual cases of fraud or abuse	Clarification	L	Phase 1	The IBM team wishes to clarify that it is common to allow users to change their password, but not their username. We recommend modifying this requirement to read: "The System will allow users to update their password for those accounts that have not been flagged as potential or actual cases of fraud or abuse." as that is the industry standard.

Req. #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
FR1.65	The System will display options for users who have already created a user account but have forgotten their login credentials	Y	C	Phase 1	
FR1.66	The System will allow managing access rights through predefined user profiles	Y	C	Phase 1	
FR1.67	The System will allow the system administrator to create and customize predefined user profiles	Y	C	Phase 1	
FR1.68	The System will support multiple user profiles and roles. Authorized users must be able to define and change the functions, capabilities and data access rights associated with each role or profile	Y	C	Phase 1	
FR1.69	The System will capture the Client's preferred method of contact and will be able to capture multiple mailing and physical addresses for each person, including a primary mailing and physical address	Y	C	Phase 1	
FR1.70	The System will have the capability to automatically deactivate a user account based on business rules	Y	C	Phase 1	
FR1.71	The System will have the capability to lock out a user after a specified number of failed log-in attempts	Y	C	Phase 1	
FR1.72	The System will enforce minimum password requirements compliant with State security policies	Y	C	Phase 1	
FR1.73	The System will display all current user specified preferences (if existing) or default preferences (if none exist)	Y	C	Phase 2	
FR1.74	The System will allow a Client to specify or update their preferences. Preferences may include, but are not limited to: a. Preferred method of communication (e.g., e-mail, SMS, phone, etc.) b. Subscription to alerts and notifications (e.g., changes to Client record, new messages, referral changes, etc.) c. Notification types desired d. Preferred language	Y	C	Phase 2	
FR1.75	The System will allow authorized State users to disable external login for specific cases (e.g., if fraud is detected)	Y	L	Phase 1	
FR1.76	The System will automatically sign off external users (e.g., Clients and service providers) after a certain amount of inactive time	Y	L	Phase 1	
FR1.77	The System will allow an Authorized Representative to perform all functions available through the self-service Portal on behalf of the Client	Y	C	Phase 3	
FR1.78	The System will support establishing Authorized Representative(s) for each user account and capturing their contact information, preferred method of communication, and demographic information	Y	D	Phase 3	
FR1.79	The System will require an Eligibility Worker to verify, during an in-person appointment, that the Client approves adding an Authorized Representative prior to establishing an account	Y	C	Phase 3	

Req. #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
FR1.80	The System will provide the capability for a single Authorized Representative to represent multiple Clients	Y	D	Phase 3	
FR1.81	The System will send all correspondence to the Authorized Representative in addition to the Client	Y	C	Phase 3	
FR1.82	The System will support de-authorizing an Authorized Representative per Client's, Authorized Representative's or DHS staff's request and notify the parties of the change	Y	C	Phase 3	
FR1.83	The System will allow appropriate users to prevent normally-authorized users accessing and/or updating a case, including, but not limited to: a. Specific "high-profile" cases b. Employees' or relatives' cases	Y	C	Phase 3	
FR1.84	The System will support name structure including special characters and other symbols common to DHS	Y	L	Phase 1	
Validation Checks					
FR1.85	The System will validate information as the data is entered including, but not limited to: a. Required field completion b. Field content types (e.g., names must not contain numbers) c. Acceptable values (e.g., no birth dates before 1/1/1900, zip code must have 5 characters and valid for State of Arkansas, etc.) d. Prevent duplicate data (e.g., social security numbers)	Y	L	Phase 1	
FR1.86	The System will ensure that data is formatted (e.g., entered and presented) similarly for similar data fields including, but not limited to: a. Phone numbers b. Addresses c. Social Security Numbers d. Email addresses e. Other data fields as defined by DHS	Y	L	Phase 1	
FR1.87	The System will have a spell check function for all text (e.g., secure messages, case notes)	Y	L	Phase 3	
FR1.88	The System will validate that all mandatory data fields have been completed when a user attempts to submit a form	Y	L	Phase 1	
FR1.89	The System will validate address information including address, zip code, census tract, etc. and provide the capability for users to update their information to the validated information	Y	L	Phase 1	
FR1.90	The System will allow for a system administrator to indicate mandatory and optional fields in forms	Y	C	Phase 1	

Req. #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
FR1.91	The System will provide the ability for users to format text in the System (e.g., capitalization, special characters, highlight, bold, underline)	Y	L	Phase 1	
FR1.92	The System will ensure a Client's information (education level, income, household) is maintained and consistent between the different Programs within the scope of the IE-BM System	Y	C	Additional Phases	
FR1.93	The System will standardize address information against an external database	Y	L	Phase 1	
FR1.94	The System will have the capabilities to upload images from a variety of media including, but not limited to, CDs, flash drives and scanners	Y	C	Phase 1	
FR1.95	The System will allow the Intake Worker with proper authorization to override the deadline before which additional actions must be taken	Y	L	Phase 3	
Alerts and Notifications					
FR1.96	The System will have the ability to manually or automatically generate alerts and notifications for users (Worker or Client) according to the rules defined by DHS including, but not limited to: a. Events that occur throughout the entire life of the case b. Actions that need to be taken c. Changes to a case (e.g., age threshold has been hit) d. Calendar-based events e. Events independent of case events (e.g., alerts related to emergencies)	Y	L	Phase 3	
FR1.97	The System will support sending global alerts/notifications to a broad user group based on a variety of factors including, but not limited to: a. User Role b. Profile (e.g., subscriptions preferences) c. Client consent provided d. Access rights	Y	D	Phase 3	
FR1.98	The System will support Client's selected preferred method of communication (e.g., SMS, email, paper, secure messaging)	Y	C	Phase 2	
FR1.99	The System will support requiring notifications be sent by a specific method (e.g., some documents must be mailed, some via certified mail, certain messages cannot be sent via SMS due to security reasons) and restrict notifications be sent through certain method (e.g., certain acknowledgements will only be sent electronically)	Y	C	Phase 2	
FR1.100	The System will send notifications based on the user's preferred method of communications and the notification's configured method of communication. Where possible, electronic delivery methods (email, SMS) will be selected.	Y	D	Phase 2	

Req. #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
FR1.101	The System will provide the capability to simultaneously send notices, correspondence or other materials to multiple Clients via various channels as per State policy	Y	L	Phase 1	
FR1.102	The System will have the capability to consolidate multiple, mandated communications into one mailing per predefined business rules (e.g., if multiple different communications are being sent to a Client on the same day they should be consolidated)	Y	L	Phase 1	
FR1.103	The System will allow Clients and other users to subscribe and unsubscribe to certain alerts and notifications, based on policy and role	Y	D	Phase 1	
FR1.104	The System will provide the ability for authorized users to generate and send mandatory alerts and notifications to all Clients and other users of the System	Y	D	Phase 1	
FR1.105	The System will allow the inclusion of hyperlink references within the content of the alert or notification	Y	D	Phase 1	
FR1.106	The System will save all notifications generated and sent to users	Y	L	Phase 1	
FR1.107	The System will support users producing printable versions of all notifications	Y	C	Phase 1	
FR1.108	The System will provide the ability for authorized users to direct notifications for deceased Clients to the emergency contact in the Client record	Y	C	Phase 1	
FR1.109	The System will send alerts/notifications to users who have: (1) subscribed or been assigned to these types of notifications, (2) the correct access rights, and (3) have a valid reason for viewing this data	Y	C	Phase 1	
FR1.110	The System will be able to generate reminder e-mail, text message or other notifications to remind Clients of required activities throughout the entire life of the case (e.g., eligibility review, Semi-Annual Report, medical evaluations, appointments, pended documents, etc.)	Y	D	Phase 2	
FR1.111	The System will track the status of each Program’s eligibility status through the entire eligibility process and allow the Applicant to view the status from their account	Y	C	Phase 3	
FR1.112	The System will save un-editable versions of all notices and forms completed or submitted	Y	L	Phase 3	
FR1.113	The System will require the appropriate security is required to view sensitive information (e.g. rather than sending sensitive information via email or text, provide a link which requires the client to log in before viewing the notification)	Y	L	Phase 1	

State of Arkansas Department of Human Services
Integrated Eligibility and Benefit Management Engagement (IE-BM) RFP
RFP #: SP-17-0012
Template T-6 - Functional Requirements Traceability Matrix

Pre-Screening

Req. #	Requirement Description	Use Case #	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
FR2.1	The System will allow the public to access the anonymous pre-screening tool (e.g., no login required) via the Internet and receive eligibility guidance (e.g., probably eligible for benefits, not eligible for benefits or not enough information to issue eligibility guidance) for user-selected programs based on predefined program rules	1	Y	L	Phase 1	
FR2.2	The System will display the various program options and program information with drill-down capability for detailed information and will prompt the user (e.g., the Client, Eligibility Worker) completing the pre-screening tool or application to select one or more of the following programs: a. All Programs b. Medicaid/CHIP (Traditional and MAGI) c. AR Works d. SNAP e. TEA f. WIC g. LIHEAP h. CCDF i. VA j. Other, as determined by the State	1	Clarification	C	Phase 1	The IBM team suggests removing "Other as determined by the State". Our proposed Solution provides the functionality for a DHS System Administrator to maintain the list of programs and their detailed information, including adding new programs in the future (assuming other programs are not part of the scope of this RFP). However, in order for potential eligibility to be determined for new programs, the corresponding eligibility rulesets would need to be documented, configured, and tested.
FR2.3	The System will allow the Applicant to complete one pre-screening questionnaire and get an eligibility assessment for all AR DHS benefits, regardless of whether the System supports the Program rules for final eligibility determination	1	Y	D	Phase 1	
FR2.4	The System will provide a set of questions to capture Applicant data for use in providing guidance for programs or benefits and will only	1	Y	D	Phase 1	
FR2.5	If the Applicant chooses specific Program(s), the System will ask only those questions required to make a preliminary eligibility determination for the chosen Program(s)	1	Y	C	Phase 1	

Req. #	Requirement Description	Use Case #	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
FR2.6	The System will capture all current sources of gross income (estimated) and will calculate the monthly income if the Applicant does not know or cannot estimate their monthly income	1	Y	D	Phase 1	
FR2.7	The System will provide guidance to the Applicant regarding which assets/resources to include in the calculation for total value of the assets including, but not limited to, the following types of assets: a. Bank accounts b. Liquid assets c. Real estate d. Life insurance e. Other assets/resources as defined by DHS	1	Y	C	Phase 1	
FR2.8	The System will provide guidance to the Applicant regarding expenses criteria including, but not limited to, the following types: a. Medical expenses b. Living arrangement expenses c. Utility expenses d. Alimony/child support e. Dependent care expense f. Incapacitate adult expenses g. Shelter expenses h. Other expenses as defined by DHS	1	Y	C	Phase 1	
FR2.9	The System will determine and display, based on predefined eligibility business rules, the preliminary eligibility assessment for selected programs including, but not limited to, the following program specific determinations: a. The Applicant may be eligible for these benefits b. The Applicant may not be eligible for these benefits c. The Applicant did not provide enough information to determine whether or not the Applicant may be found eligible for benefits	1	Y	C	Phase 1	
FR2.10	The System will display text explaining how the eligibility guidance was made and any limitations (e.g., the guidance is not a guarantee of eligibility)	1	Y	C	Phase 1	
FR2.11	The System will provide the Applicant easy access to the online integrated application and provide instructions how to apply for benefits and receive an official decision about his/her (or household) eligibility, even if the pre-screening tool indicates that the Applicant may not be eligible	1	Y	C	Phase 1	

Req. #	Requirement Description	Use Case #	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
FR2.12	The System will provide easy access to the integrated application and the option of transferring the Applicant's data from the anonymous pre-screening tool to the self-service integrated application, even if the pre-screening tool indicates that the Applicant may not be eligible	1	Y	C	Phase 1	
FR2.13	The System will require the Applicant to create an account online and allow information to pre-populate pre-screening data entry fields into the integrated eligibility application, where appropriate, if the Applicant elects to apply in the same session	1	Y	L	Phase 1	
FR2.14	The System will allow pre-screening queries from potential Applicants who currently reside in other states besides Arkansas	1	Y	C	Phase 1	
FR2.15	The System will alert the Applicant of their rights and options for voter registration	1	Y	C	Phase 1	
FR2.16	The System provides the Applicant a list of community action agencies at which the Applicant can apply if the Applicant appears eligible for LIHEAP	1	Y	C	Phase 1	
FR2.17	The System will provide any available information regarding actions the Applicant may take such as seeking assistance from supplemental resources, if the Applicant does not appear to qualify for a specific Program	1	Y	C	Phase 1	
FR2.18	The System will provide the Applicant the available options for receiving and completing an application, including but not limited to: a. Contacting a DCO County Office b. Mailing a paper application c. Accessing the online application if they choose to apply at a later time	1	Y	C	Phase 1	
FR2.19	The System will allow the Applicant to re-start the process and enter a new set of information at any time	1	Y	C	Phase 1	
FR2.20	The System will allow the Applicant to erase all entered information at any time prior to final submission of the pre-screening questionnaire	1	Y	L	Phase 1	
FR2.21	The System will allow the Applicant to exit the pre-screening process at any time before final submission without formal application to any Program	1	Y	L	Phase 1	
FR2.22	The System will allow the Applicant to complete an application to get an official decision about his/her (or household) eligibility even if the Pre-screening tool indicates that the Client may not be eligible	1	Y	C	Phase 1	

Req. #	Requirement Description	Use Case #	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
FR2.23	The System will provide the Applicant a PDF version of the information presented and the preliminary eligibility determination that can be printed or emailed to the Applicant (i.e. a receipt)	1	Y	L	Phase 1	
FR2.24	The System will allow Arkansas staff to easily update/add/modify the rules applied to and Programs included in the pre-screening application	1	Y	C	Phase 1	
FR2.25	The System will provide context sensitive help (i.e., pop up text when the Applicant positions the mouse over a specific field)	1	Y	C	Phase 1	
FR2.26	The System will display the DHS contact number(s) throughout the application process	1	Y	C	Phase 1	
FR2.27	The pre-screening questionnaire will be written in such a way that complies with Limited English Proficiency (LEP) requirements as defined by Program policy	1	Y	C	Phase 1	
FR2.28	The pre-screening questionnaire and instructions will be available per State language requirements (for example Spanish and Marshallese in addition to English), and the Applicant will be offered the choice of language at the beginning	1	Y	C	Phase 1	

State of Arkansas Department of Human Services
Integrated Eligibility and Benefit Management Engagement (IE-BM) RFP
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Template T-6 - Functional Requirements Traceability Matrix

Integrated Eligibility Application

Req. #	Requirement Description	Use Case #	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
Application General Requirements						
FR3.1	The System will support the following application submission approaches: a. On-line via the portal b. Fax c. Email d. Mail e. In person f. Drop off g. On the telephone	2, 3, 4	Y	C	Phase 1	
FR3.2	The System will prompt the Applicant to select one or more of the following: a. All Programs b. Medicaid/CHIP (Traditional and MAGI) c. AR Works d. SNAP e. TEA C39 f. WIC g. CCDF h. VA i. Other, as determined by the State	2	Y	C	Phase 1	
FR3.3	The System will pre-populate the information fields whenever available, including, but not limited to information from the Applicant's DHS account and pre-screening application: a. Name b. SSN c. DOB d. Address e. Household members f. Income g. Assets/Resources h. Others to be defined by the State	2, 3, 4	Y	C	Phase 1	
FR3.4	The System will search the Client's existing IE-BM case record and link it to the new application if the Applicant has submitted an application or received benefits for any DHS, DWS and/or ADH (WIC) Program	2	Y	C	Additional Phases	
FR3.5	The System will present the Applicant the option to start a new application or continue a previous application, if one is available	2	Y	C	Phase 1	

Req. #	Requirement Description	Use Case #	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
FR3.6	The System will capture the Applicant's consent to share and use their information according to State policy	2, 3, 4	Y	C	Phase 1	
FR3.7	The System will present the history of any disability to the Applicant including, but not limited to: a. Whether the Applicant has previously been evaluated for a disability b. History of closures to benefits, especially recent closures c. Information regarding treatment compliance (e.g., proof of compliance)	2	Y	C	Additional Phases	
FR3.8	The System will determine if the Applicant must be reviewed by the Medical Review Team (MRT) to verify the disability. If this is the case, the MRT will be notified by the System	2, 3, 4	Y	C	Additional Phases	
FR3.9	The System will determine and display the list of documentation required for the application to be considered complete	2	Y	C	Phase 1	
FR3.10	The System will allow the Applicant to proceed with the application process (i.e., to schedule and attend the interview, if applicable), but will prevent the Applicant from receiving benefits until the Applicant submits the required documents and the Eligibility Worker has verified the documents and completed the required interview	2	Y	C	Phase 3	
FR3.11	The System will display the summary of the information collected and allow the Applicant to make final changes/updates to all data elements	2	Y	L	Phase 1	
FR3.12	The System will start the timer for the deadline against which the application must be processed, according to State and Federal guidelines, if the Applicant has completed the minimum requirements (i.e., Applicant name, address, electronic signature)	2, 3, 4	Y	C	Phase 1	
FR3.13	The System will capture key information required to prioritize, route and track the application (at the Program specific application level). This may include, but is not limited to: a. Presumptive eligibility for Medicaid b. Expedited SNAP benefits c. Disaster SNAP (D-SNAP)	2, 3, 4	Y	D	Phase 2	
FR3.14	The System will require the Applicant to complete additional data fields, to be defined by the State, for the State to conduct child support enforcement activities. The System will provide the Applicant's furnished information to the Child Support System	2	Y	C	Phase 2	
FR3.15	The System will determine the Program specific deadline by which outstanding items must be completed	2, 3, 4	Y	L	Phase 3	
FR3.16	The System will validate information based on available real-time and stored data sources	2, 3, 4	Y	C	Phase 2	
FR3.17	The System will flag information for review by the Eligibility Worker if the results of the verifications are different than what is reported by the Applicant (If the person is only applying for programs that are not administered by IE-BM (WIC, VA Benefits, Child Care) the data will be flagged and sent to the appropriate system.)	2, 3, 4	Y	C	Phase 2	
FR3.18	The System will allow the Applicant to schedule the appointment for their eligibility interview if the System determines an interview is required	2	Y	D	Phase 3	
FR3.19	The System will generate a formal notification, reporting each Program for which the Applicant has submitted an application (or for all DHS/DWS Programs) and send the notification to the Applicant via their preferred method of written contact	2, 3, 4	Y	D	Phase 1	

Req. #	Requirement Description	Use Case #	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
FR3.20	The System will provide the Applicant with the ability to withdraw the application at any point in the application process	2	Y	L	Phase 1	
FR3.21	The System will send the Applicant a notification reporting each Program for which the Applicant has withdrawn the application	2	Y	D	Phase 1	
FR3.22	The System will cancel the appointment scheduled if the Applicant has withdrawn all of their Program specific applications	2, 21	Y	C	Phase 3	
FR3.23	The System will allow Applicants to leverage documents and information submitted across divisions (e.g., Applicants do not need to submit information and documents required for DHS if they have already been submitted)	2, 3, 4, 9, 11, 12, 13, 15, 17	Y	C	Phase 1	
FR3.24	The System will allow appropriate State users to leverage documents and information submitted across agencies		Y	C	Phase 1	
FR3.25	The System will support one Applicant account for DHS, DWS, ADH (WIC) and DFA Programs. The system will not allow users to establish multiple accounts within the system	2	Y	L	Phase 3	
FR3.26	The System will prevent the submitted application from being edited until the eligibility interview	2	Clarification	L	Phase 3	The IBM team would like to clarify that OOTB Curam maintains the original submitted application as a PDF, but allows the captured data to be further edited by those with security access before and after the interview while retaining a history of changes. This can be leveraged to add edits to meet the specific requirement to prevent editing until the eligibility interview.
FR3.27	The System will track the information required to establish the Program specific application's priority (e.g., expedited applications for faster processing)	2, 3, 4	Y	L	Phase 3	
FR3.28	The System will provide a PDF version of the information presented that can be printed or emailed to the Applicant	2	Y	L	Phase 1	
FR3.29	The System will send a State-defined message to the Applicant using email or SMS/text based on their preferred method of communication if an application remains in "draft" state for a predefined time period	2	Y	D	Phase 2	
FR3.30	The System will assign priority and track deadlines to comply with State and Federal guidelines	2, 3, 4	Y	C	Phase 1	
FR3.31	The System, user interface, and Application will minimize the use of complex language and terms (i.e., fourth grade level), as defined by Program policy	all	Y	C	Phase 1	
FR3.32	The application and instructions will be available per State language requirements (for example Spanish and Marshallese)	all	Y	C	Phase 1	
FR3.33	The System will track all historical actions taken on a case	all	Y	L	Phase 3	
FR3.34	The System will allow State staff (those with proper authorization only) to easily add, remove, and edit questions in the eligibility application	2, 3, 4	Y	L	Phase 1	

Req. #	Requirement Description	Use Case #	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
FR3.35	The System will provide the capability to capture multiple addresses for each person and select different mailing address for notices, correspondence and other materials by type and/or by period of time	all	Y	L	Phase 1	
FR3.36	The System will allow appropriate staff (e.g., site supervisors, unit supervisors, Program administrators) to access case files and review the eligibility determinations made by Intake Workers	3	Y	L	Phase 3	
FR3.37	The System will support receiving applicatoins from the Federally Funded marketplace, confirming they are complete, alerting eligibilty workers if they are not complete and processing the applications through a flow similar to applicatoins received on line if they are complete	all	Y	L	Phase 1	
Application Completed Online						
FR3.38	The System will allow the Applicant to select the “Integrated Eligibility Application” on the DHS internet portal in order to begin the application process	2	Y	D	Phase 1	
FR3.39	The System will require the Applicant to enter their credentials to log in if the Applicant has already created a user account for DHS	2	Y	L	Phase 1	
FR3.40	The System displays options to recover the Applicants credentials if the Applicant has already created a user account but has forgotten their login credentials. Options include but are not limited to: a. Correctly answering their security questions b. Contacting a help line c. Asking to have a new, temporary password emailed to their email address on file	2	Clarification	L	Phase 1	Based on past implementations, the IBM team recommends combining a and c for a more secure process. Users would need to answer their security question, and then a temporary password would be emailed.
FR3.41	The System will allow the Applicant to create a new account if the Applicant has not yet created a user account	2	Y	L	Phase 1	
FR3.42	The System will display the various Program options and Program information including the ability to review additional details about each Program, the benefits it provides, and the primary eligibility criteria	2	Y	C	Phase 1	
FR3.43	The System will display a step-by-step form with branching logic requesting required and optional data elements (as defined by State and Federal policy) about themselves and all household members	2	Y	C	Phase 1	
FR3.44	The System will provide context sensitive help (e.g., knowledge repository, procedure documentation, etc.) through the user interface	2	Y	C	Phase 1	
FR3.45	The System will provide the option to attach electronic documentation	2	Y	C	Phase 2	
FR3.46	The System will present the preliminary eligibility determinations by Program to the Applicant and display additional actions by Program that the Applicant will need to complete before they can receive benefits	2	Y	C	Phase 1	
FR3.47	The System will be designed for Applicants to enter their data into the System once	all	Y	L	Phase 1	
FR3.48	The System will support users submitting the required approvals (consents) to share their information between Programs	2	Y	C	Phase 1	
FR3.49	The System will allow the Applicant to restart the process and enter a new set of information at any time prior to final submission of the application	2	Y	L	Phase 1	

Req. #	Requirement Description	Use Case #	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
FR3.50	The System will allow the Applicant to save the application and exit at any time before final submission without formal application to any Program	2	Y	L	Phase 1	
FR3.51	The System will allow the Applicant to resume saved applications from the most advanced location of the application	2	Y	L	Phase 1	
FR3.52	The System will allow the Applicant to give access to their draft or completed applications to an Intake or Eligibility Worker	2, 3	Y	D	Phase 1	
FR3.53	The System will archive or remove applications in un-submitted, approved or denied status in accordance with record retention and other state policies	2, 3, 4	Y	D	Phase 1	
FR3.54	The System will accept electronic/telephonic signatures at the appropriate points in the application process	2	Y	L	Phase 1	
FR3.55	The System will display DHS contact numbers throughout the application process	2	Y	C	Phase 1	
Application Completed with an Intake Worker						
FR3.56	The System will provide a User Interface configured for use by Intake Workers to complete the application with the Applicant	3	Y	L	Phase 1	
FR3.57	The System will allow the Intake Worker to create a new record for the Applicant if the Applicant does not exist in System	3	Y	L	Phase 1	
FR3.58	The System will support Intake Workers searching for an Applicant across all Programs on the System	3	Y	L	Phase 1	
FR3.59	The System will allow the Intake Worker to record any notes taken	3	Y	L	Phase 1	
FR3.60	The System will allow the Intake Worker to see a list of, and review, past applications for the Applicant	3	Y	L	Phase 1	
FR3.61	The System will allow the Intake Worker to confirm, deny and add comments to information collected from external database queries and search results	3	Y	L	Phase 3	
Application Completed by Applicant on a Paper Form						
FR3.62	The System will utilize bar coding and Optical Character Recognition (OCR) to read the application and pre-populate information whenever possible	4	Y	L	Phase 1	
FR3.63	The System will display the scanned application in order for the Intake Worker to confirm any pre-populated fields	4	Y	L	Phase 1	
FR3.64	The System will pre-populate the information fields from the Applicant's DHS account and pre-screening application where the information is not available from the scanned image	4	Y	L	Phase 1	
FR3.65	The System will allow the Intake Worker to review the pre-populated fields and enter in corrected or new information	4	Y	L	Phase 1	
FR3.66	The System will display the application information in the same sequence as on the paper application in order to facilitate data verification and entry	4	Y	L	Phase 1	

Req. #	Requirement Description	Use Case #	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
Authorized Representatives						
FR3.67	The System will support account registration of third parties who are authorized to help Applicants complete the application in the field, including hospitals certified by the State to support a client's presumptive eligibility for Medicaid	all	Y	D	Phase 2	
FR3.68	If the application is completed with the help of a third party, the System will record the user (third party) who helped the Applicant complete the application	all	Y	L	Phase 2	
FR3.69	The System will allow the Intake Worker to associate an Applicant with an Authorized Representative	3	Y	L	Phase 2	
FR3.70	The System will capture the Authorized Representative's relationship to the Applicant	all	Y	C	Phase 2	
FR3.71	The System will display a list of Applicants for whom the individual can act as an Authorized Representative. An Authorized Representative is an individual empowered to act on behalf of another Applicant	all	Y	D	Phase 2	
FR3.72	The System will capture the Authorized Representative's contact information and preferred method of contact	all	Y	L	Phase 2	
FR3.73	The System will send all correspondence to the Authorized Representative in addition to the Applicant until the Authorized Representative is de-authorized	all	Y	C	Phase 2	
FR3.74	The System will allow the Applicant or the Authorized Representative to de-authorize the Authorized Representative from viewing and acting on behalf of the Applicant, when the Authorized Representative is not a legal guardian, under specified conditions	all	Y	C	Phase 2	
FR3.75	The System will notify both parties of authorization or de-authorization of an Authorized Representative to act on behalf of an Applicant	all	Y	D	Phase 2	

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Interviews

Req. #	Requirement Description	Use Case #	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
FR4.1	The System will allow authorized users to search for Applicants/Clients and completed applications using fuzzy logic	all	Clarification	L	Phase 3	The term "fuzzy logic" is not measureable and will be difficult for the State and vendor to easily verify the requirement is met. The IBM team recommends modifying the requirement to read: "The System will allow authorized users to search for Applicants/Clients and completed applications using complex search screens which can search based on partial name searches, soundex searches, date ranges, addresses, program type, and application status and reference numbers."
FR4.2	The System will present relevant information to the Eligibility Worker related to the Applicant that is already in the System, as allowed by State policy, including previous applications, determinations, flags, determinations of fraud, and existing overpayments	5, 14	Y	D	Phase 3	
FR4.3	The System will issue a request to the Applicant to contact the DCO County Office to reschedule the required interview if the Applicant does not attend a scheduled appointment if required by the Program policy	5, 14	Y	D	Phase 3	
FR4.4	The System will display the steps (i.e. a script) for the Eligibility Worker to conduct the interview	5, 14	Y	D	Phase 3	
FR4.5	The System will associate interview notes with the specific Program for which the interview is being conducted	5, 14	Y	D	Phase 3	
FR4.6	The System will record the Applicant’s worker classification (e.g., mandatory, voluntary, not work eligible) and make it available to the E&T or DWS Systems	5, 14	Y	L	Phase 3	

Req. #	Requirement Description	Use Case #	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
FR4.7	The System will display all information required to complete the interview and prompts the interviewer to collect any additional content	5, 14	Y	D	Phase 3	
FR4.8	The System will record which data the Eligibility Worker has validated and confirmed during the interview	5, 14	Y	D	Phase 3	
FR4.9	The System will present a list of the documents still outstanding for each Program applied	5, 14	Y	L	Phase 3	
FR4.10	The System will record any additional documentation requested by the Eligibility Worker	5, 14	Clarification	D	Phase 3	The IBM team would like to clarify that Cúram OOTB is configured with policy to specify verification requirements based on policy and evidence provided by the Client in the interview. We have assumed the State is requesting the ability for Workers to manually define what documentation is required beyond captured policy, which is why we have identified the Solution Method as New Development.
FR4.11	The System will allow the Eligibility Worker to override data fields if the Applicant indicates the pre-populated application data is not correct or current and the System will record both the original data as well as the modified data	5, 14	Y	L	Phase 3	
FR4.12	The System will alert the authorized approver of the change to the original data and will require approval of the override, if required by policy	5, 14	Y	C	Phase 3	
FR4.13	The System will validate the information provided by the Eligibility Worker during the interview based on available real-time and stored data sources	5, 14	Y	D	Phase 3	
FR4.14	The System will display the summary of the collected information and allows the Eligibility Worker to make final changes/updates after reviewing the collected information with the Applicant	5, 14	Y	L	Phase 3	
FR4.15	The System will save a summary of all the documents provided, any outstanding actions, and actions taken during the interview	5, 14	Y	L	Phase 3	
FR4.16	The System will allow the Eligibility Worker to record any notes taken while conducting the interview	5, 14	Y	L	Phase 3	
FR4.17	The System will track documents — electronic and paper — received and/or verified	5, 14	Y	L	Phase 3	

Req. #	Requirement Description	Use Case #	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
FR4.18	The System will send interview appointment reminders to Applicants, using the Applicants preferred electronic communications method and at a frequency and timeframe determined by the State	5, 14	Y	D	Phase 3	
FR4.19	The System will prompt the Eligibility Worker to ask any IE-BM Program-specific application and interview questions the Client has not already answered if the Client is interested in receiving benefits from an IE-BM Program in which they are not yet enrolled	5, 14	Y	C	Phase 3	
FR4.20	The System must track tasks by type, deadline, and priority		Y	L	Phase 3	

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Documentation

Req. #	Requirement Description	Use Case #	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
Electronic Documentation						
FR5.1	The System will display to the Applicant/Client any outstanding required documents when Applicant/Client logs into their online account	all	Y	D	Phase 1	
FR5.2	The System will display a list of documents, as defined by the State, that can be submitted by the Applicant/Client at any point	6	Y	D	Phase 1	
FR5.3	The System will allow the Applicant/Client to select the specific document type to be uploaded	6	Y	D	Phase 2	
FR5.4	The System will allow the Applicant/Client to upload the electronic version/picture of the required documents	6	Y	D	Phase 2	
FR5.5	The System will determine if the document(s) provided are readable and in a file format acceptable to the State	6	Y	D	Phase 2	
FR5.6	The System will allow the Applicant/Client to enter any additional information required including free form text comments	6	Y	D	Phase 1	
FR5.7	The System will associate all attachments with the Applicant/Client record and application and provide confirmation after saving the additional information successfully	6	Y	D	Phase 2	
FR5.8	The System will create an itemized list of documents that have been provided. The itemized list will serve as a receipt and will be issued to the Applicant/Client in the manner chosen by the Applicant/Client (e.g., printed, emailed, mailed)	6	Y	D	Phase 2	
FR5.9	The System will support authorized DHS Workers uploading electronic documents (e.g. medical records) to an Applicant/Client's record	6	Y	L	Phase 3	
FR5.10	The System will allow Applicants/Clients to leverage documents and information submitted across divisions	all	Y	L	Phase 3	
FR5.11	The System will recognize that documents submitted for one benefits Program will also be applied to the same Applicant/Client's application to other benefits Programs when the other benefits Program requires the same document; the Applicant/Client will not be required to resubmit the same document	all	Y	L	Phase 3	

Req. #	Requirement Description	Use Case #	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
FR5.12	The System will recognize that a certain type of document may be required for some cases in order to render an eligibility determination whereas in other cases the same type of document will only be required to submit a change in circumstance	all	Y	C	Phase 3	
Paper Documentation						
FR5.13	The System will provide a user interface configured to allow Document Processing Staff to upload imaged paper documents	7	Y	L	Phase 1	
FR5.14	The System will allow the Documentation Processing Staff Worker to upload documents to the Applicant's record	7	Y	L	Phase 1	
FR5.15	The System will identify if the document contains a DHS barcode, and the information about the form will be read from the barcode and uploaded with the document	7	Y	L	Phase 1	
FR5.16	The System will determine if the document(s) provided are readable	7	Y	L	Phase 1	
FR5.17	The System will recognize that a blank document has been submitted, delete the image and prompt the Documentation Processing Staff Worker to repeat the upload	7	Y	L	Phase 1	
FR5.18	The System will require the Documentation Processing Staff Worker to indicate the type of document if the document was not barcoded	7	Y	L	Phase 1	
FR5.19	The System will allow the Documentation Processing Staff Worker to enter additional information or comments in a free text box	7	Y	L	Phase 1	
FR5.20	The System will notify the Client/Applicant of receipt of the document and next steps the Client/Applicant must take	7	Y	D	Phase 1	
FR5.21	The System will begin the timer, upon successful upload, indicating when the paper documents should be destroyed	7	Y	L	Phase 1	
FR5.22	The System will time stamp the document entry and save the document in the repository of documents that were unable to be associated with a case record if the Document Processing Staff Worker is unable to identify the specific case to which the document should be associated	7	Y	L	Phase 1	
FR5.23	The System will make the documents searchable and able to be associated with a case record if more identifying information is associated with the document at some point in the future	7	Y	L	Phase 1	
FR5.24	The System will receive electronic versions of the paper documents (e.g., email or fax) and consider these similar to electronic documents	6, 7	Y	L	Phase 1	
FR5.25	The System will purge unassociated documents based on State policy	7	Y	L	Phase 1	

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Eligibility Determination/Spend-Down

Req. #	Requirement Description	Use Case #	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
Eligibility Determination						
FR6.1	The System will continuously review all submitted applications and redeterminations to determine if all of the required documents and information for a Program specific application or redetermination have been submitted		Y	C	Phase 3	
FR6.2	The System will notify the Eligibility Worker that there are applications or redeterminations that require Eligibility Worker review if the System identifies an application/redetermination which, based on State or Federal policy, requires Eligibility Worker review in order to process the determination	8	Y	C	Phase 3	
FR6.3	The System will prioritize the work queue of eligibility determinations based on policy	8	Y	C	Phase 3	
FR6.4	The System will allow the Eligibility Worker to search for applications or redeterminations by a number of factors including, but not limited to: a. Date of application b. Expedited applications c. Program(s) d. Geography/DCO County Office e. Eligibility Worker conducting interview	8	Y	D	Phase 3	
FR6.5	The System will allow the Eligibility Worker to select an application that is ready for processing	8	Y	L	Phase 3	
FR6.6	The System will indicate that it has validated the information provided based on available real-time and stored data sources and allow the Eligibility Worker to view the information/documents provided to determine whether they satisfy the information/documentation requirements	8	Y	L	Phase 3	
FR6.7	The System will calculate the benefit amount	8	Y	C	Phase 3	
FR6.8	The System will allow the Eligibility Worker to authorize the benefits issuance, if required by policy	8	Y	L	Phase 3	
FR6.9	The System will incorporate existing overpayments information and any flags to the Client/Applicant’s eligibility (e.g., IPV first offender, IPV second offender, or IPV third offender) into the eligibility determination and update overpayments information accordingly	8	Y	L	Phase 3	
FR6.10	The System will display the Program specific eligibility determinations and benefit amounts for each Program applied	8	Y	L	Phase 3	

Req. #	Requirement Description	Use Case #	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
FR6.11	The System will make one of two determinations: a. Approved, whereby no actions are outstanding, a certification/eligibility period is established, and the benefits are approved b. Denied and/or closed (for redetermination/recertification), whereby the Program specific determination or redetermination application is denied or closed outright, respectively	8	Y	L	Phase 3	
FR6.12	The System will record why the application was denied	8	Y	C	Phase 3	
FR6.13	The System will allow the Client/Applicant to submit new information before a certain deadline as defined by Program policy if the application is denied	8	Y	L	Phase 3	
FR6.14	The System will not create a new case but will re-open the previously closed one if the Client Case was “closed” but then the Client was “approved” for benefits based on a subsequent case action		Y	D	Phase 3	
FR6.15	The System will generate a notification to the Client/Applicant indicating their application’s status and any outstanding actions and send the notification via the Client/Applicant’s preferred method of communication	8	Y	D	Phase 3	
FR6.16	The System will deny benefits or change the Client/Applicant’s status to ineligible and terminate any benefits currently being issued to the Client/Applicant if all outstanding actions have not been completed within the predetermined time	8	Y	D	Phase 3	
FR6.17	The System will allow the Eligibility Worker to update the deadline on the System if the Eligibility Worker determines that the Client/Applicant is not at fault (e.g., the third party Service Provider has not yet scheduled or conducted the evaluation)	8	Y	L	Phase 3	
FR6.18	The System will provide the WIC eligibility information to the ADH WIC System for all applicants	8	Y	D	Phase 3	
FR6.19	The System will provide the TEA eligibility information to the DWS Welfare-to-Work System	8	Y	D	Phase 4	
FR6.20	The System will receive information about the required participation for Able-Bodied Adults Without Dependents		Y	D	Phase 3	
FR6.21	The System will provide the SNAP referral information to the E&T Vendor System for appropriate participants	8	Y	D	Phase 3	
FR6.22	The System will capture E&T or Workfare participants who do not comply with mandatory participation requirements	8	Y	L	Phase 3	
FR6.23	The System will provide the Medicaid/CHIP/AR Works eligibility information and cost of care amount to the Division of Medical Services MMIS	8	Y	L	Phase 3	

Req. #	Requirement Description	Use Case #	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
FR6.24	The System will produce a report of all Clients who are eligible for HCBS Waivers and the date and time of their eligibility. This report will include all Clients for whom a HCBS Waivers enrollment has not yet occurred (i.e. those waiting for a program slot)		Y	D	Phase 3	
FR6.25	The System will allow the Eligibility Worker to enter the date of the program placement upon placement of a Client in a HCBS Waivers program slot		Y	C	Phase 3	
FR6.26	The System will update the required annual review date to be the date of placement into a HCBS Waivers program		Y	C	Phase 3	
FR6.27	The System will allow, based on business rules, certain Program specific applications to be denied or payments to be authorized automatically based on the new information without a review by an Eligibility Worker	8	Y	C	Phase 3	
FR6.28	The System will monitor deadlines on a continuous basis and notify the Client/Applicant and Eligibility Worker at a predefined frequency per State policy, send communications reminding them of the missing information/documentation	8	Y	D	Phase 3	
FR6.29	The System will allow the Eligibility Worker to override the deadline before which additional actions must be taken	8	Y	L	Phase 3	
FR6.30	The System will allow DHS staff (e.g., site supervisors, unit supervisors, Program administrators) to access case files and review, override and approve the eligibility determinations made by Eligibility Workers	8	Y	C	Phase 3	
FR6.31	The System will allow the Eligibility Worker to request additional verifications and will notify the Client for each verification that has been requested and the deadline before which each verification must be provided	8	Y	D	Phase 3	
FR6.32	The System will generate reminders that a vendor payment is due	8	Y	C	Phase 3	
FR6.33	The System will re-run eligibility for all when the rules engine changes (for example annual April FPL table updates)	8	Y	L	Phase 3	
FR6.34	The System will not create a new case but will re-open the previously closed one if the Client case was “closed” but then the Client was “approved” for benefits based on a subsequent case action		Y	D	Phase 3	
Spend-Down						
FR6.35	The System will determine the spend-down amount by calculating the difference between the Applicant’s countable income and the Medicaid countable income threshold upon determination of categorical eligibility with the exception of the countable income threshold for Medicaid (categorically eligible — Medicare/over 65, disabled, elderly, pregnant, U18) by the System	9	Y	C	Additional Phases	
FR6.36	The System will notify the Eligibility Worker that there is an Applicant with a spend-down determination	9	Y	C	Additional Phases	
FR6.37	The System will allow the Eligibility Worker to enter each expense into the System	9	Y	L	Additional Phases	

Req. #	Requirement Description	Use Case #	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
FR6.38	The System will calculate if the spend-down amount has been met for the spend-down period, any unmet liability, and the date that eligibility begins and ends for the period	9	Y	L	Additional Phases	
FR6.39	The System will send a notification to the Client whether the spend-down amount has or has not been met	9	Y	D	Additional Phases	
FR6.40	The System will inform the DMS MMIS of any unmet liability and the eligibility start date when the spend down amount has been met	9	Y	D	Additional Phases	
FR6.41	The System will prevent duplicate expenses by warning the Eligibility Worker of expenses with matching date, type and amounts	9	Y	C	Additional Phases	
FR6.42	The System will calculate and notify Eligibility Worker if bills were paid outside of the spend-down period	9	Y	D	Additional Phases	
Processing the Semi-Annual Reports (SAR) or Annual Review						
FR6.43	The System will display to the Eligibility Worker a queue of submitted Semi-Annual Reports	13	Y	C	Phase 3	
FR6.44	The System will allow the Eligibility Worker to review the eligibility redetermination and benefit amount for each Program for which the Client submitted the Semi-Annual Report	13	Y	L	Phase 3	
FR6.45	The System will provide access to external databases for the Eligibility Worker to conduct any additional research that may be required	13	Y	D	Phase 3	
FR6.46	The System will identify if the verification differs from the information provided by the Client and issue a notification to the Client requesting additional information	13	Y	C	Phase 3	
FR6.47	The System will generate a notification for the Client with information regarding the status of their SAR or Annual Review	13	Y	D	Phase 3	
FR6.48	The System will assign the review to Eligibility Workers based on the business process defined by the State	13	Y	C	Phase 3	

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Benefit Issuance

Req. #	Requirement Description	Use Case #	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
FR7.1	The System will determine the appropriate benefit payment dates	10	Y	L	Phase 3	
FR7.2	The System will identify all payments that are due for the specific time period for all Clients based on approval status and issuing date (for recurring payments)	10	Y	L	Phase 3	
FR7.3	The System captures the information associated with these transactions, including, but not limited to: a. All funds to be transferred to an EBT account 1. The account number 2. The amount 3. The Program b. Client demographic information for 1. All new accounts (initial card) 2. Accounts that have updated information	10	Y	C	Phase 3	
FR7.4	The System will send the benefit issuance information to the EBT vendor's system	10	Y	D	Phase 3	
FR7.5	The System will update the Client's case to indicate that funds have been added when the EBT vendor's system acknowledges receipt of the file	10	Y	D	Phase 3	
FR7.6	The System will generate a notification for the Client of the availability of funds if the Client has provided an email address and indicated it as the preferred method of communication	10	Y	C	Phase 3	
FR7.7	The System will allow the authorized staff person to withdraw the issuance and will reflect issuances that are withdrawn via the IE-BM System and via the EBT system	10	Y	D	Phase 3	
FR7.8	The System will authorize Program specific funds to the same EBT card when the Client is receiving benefits from multiple Programs	10	Y	L	Phase 3	
FR7.9	The System will notify the EBT vendor of all changes of address, date of birth, name and other demographic information as defined by the State, regardless of benefit issuance date	10	Y	D	Phase 3	
FR7.10	The System will support the sending of emergency benefits issuance information to the EBT vendor outside of the normally scheduled payment schedule	10	Y	D	Phase 3	
FR7.11	The System will identify benefits over a State-specified amount for approval prior to issuance		Y	C	Phase 3	
FR7.12	The System will include the capability for appropriate DHS staff to issue benefits as needed		Y	L	Phase 3	

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Redetermination/Semi-Annual Reporting

Req. #	Requirement Description	Use Case #	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
Redetermination/SAR or Annual Review Submitted Online/Paper						
FR8.1	The System will indicate which review the Client is scheduled to complete when a Client logs-in to his/her account	all	Y	D	Phase 3	
FR8.2	The System will present the Client the option to start a new Eligibility Redetermination Application/Semi-Annual Report or continue a previous application, if one is available	11	Y	D	Phase 3	
FR8.3	The System will pre-populate the information fields whenever available	11	Y	C	Phase 3	
FR8.4	The System will display a step-by-step questionnaire which collects data that has changed and is required to issue Program specific preliminary eligibility redeterminations	11	Y	C	Phase 3	
FR8.5	The System will display the option to attach electronic documentation if the System determines documentation is required for the application to be considered complete	11	Y	D	Phase 3	
FR8.6	The System will display the summary of the collected information and allows the Client to make final changes/updates prior to submitting the redetermination or Semi-Annual Report	11	Y	C	Phase 3	
FR8.7	The System will assess whether the Client may be qualified to receive benefits from other Programs and will prompt the Client whether they would like to apply	11	Y	C	Phase 3	
FR8.8	The System will validate information based on available real-time and stored data sources	11	Y	D	Phase 3	
FR8.9	The System will display additional actions by Program that the Client will need to complete	11	Y	C	Phase 3	
FR8.10	The System will flag the appropriate Program specific redetermination application for an interview or appointment	11, 12	Y	D	Phase 3	
FR8.11	The System will provide the Applicant an option to withdraw the redetermination application	11	Y	L	Phase 3	
FR8.12	The System will send a notification to the Client, through their preferred communication mechanism, of receipt of the Eligibility Redetermination Application/Semi-Annual Report and provide a link to the updated case file	11, 12	Y	D	Phase 3	
FR8.13	The System will, upon request by an authorized user, generate a paper form pre-populated with the Client's information	11	Y	D	Phase 3	

Req. #	Requirement Description	Use Case #	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
FR8.14	The System will utilize bar coding and Optical Character Recognition (OCR) to read the completed redetermination application and populate information whenever possible	11	Y	D	Phase 3	
FR8.15	The System will display the scanned application in order for the Intake Worker to confirm any populated fields	11	Y	D	Phase 3	
FR8.16	The System will display the redetermination application information in the same sequence as on the paper application in order to facilitate data verification and entry	11	Y	C	Phase 3	
FR8.17	The System will generate a notification for the Client via their preferred method of communication reminding the Client to complete their eligibility redetermination application if the deadline by which the eligibility redetermination application must have been received passes	11, 12	Y	D	Phase 3	
FR8.18	The System will send a predefined number of notifications to Clients at various times before the eligibility redetermination application is due	11, 12	Y	D	Phase 3	
FR8.19	The System will provide a link to the eligibility redetermination application/Semi-Annual Report in the notifications sent to the Client	11, 12	Y	D	Phase 3	
FR8.20	The System will indicate missing information in the notifications sent to the Client	11, 12	Y	D	Phase 3	
FR8.21	The System will allow the Client to submit an incomplete eligibility redetermination application/Semi-Annual Report, as long as the minimum requirements have been submitted	11, 12	Y	C	Phase 3	
FR8.22	The System will immediately send notifications to Clients who submit incomplete applications and will specify the information that is missing	11	Y	D	Phase 3	
FR8.23	The System will allow the Client to restart the process and enter a new set of information at any time prior to final submission of the redetermination form	11	Y	L	Phase 3	
FR8.24	The System will allow the Client to delete all entered information and exit at any time prior to final submission of the eligibility redetermination application/Semi-Annual Report	11	Y	L	Phase 3	
FR8.25	The System will allow the Client to save the eligibility redetermination application and exit at any time before final submission without a formal redetermination request to any Program	11	Y	L	Phase 3	
FR8.26	The System will allow the Client to resume the saved eligibility redetermination application from the most advanced location of the redetermination form	11	Y	L	Phase 3	
FR8.27	The System will allow the Client to see a list of, and review, past applications and/or redetermination requests	11	Y	L	Phase 3	
FR8.28	The System will accept electronic signature at the appropriate points in the redetermination process	11	Y	C	Phase 3	

Req. #	Requirement Description	Use Case #	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
FR8.29	The System will not consider the redetermination application complete until the Client provides all of the information, which can occur any time before the Program specific deadline to complete the Redetermination (i.e., the eligibility redetermination application/Semi-Annual Report and, if necessary, the interview)	11, 12	Y	D	Phase 3	
FR8.30	The System will allow the redetermination application to be processed separately from any Program specific application for which the Client is applying and is not currently enrolled	11, 12	Y	L	Phase 3	
FR8.31	The System will allow Eligibility Workers to view partially completed and saved redetermination applications	11, 12	Y	D	Phase 3	
FR8.32	The System will allow the Eligibility Worker to override the deadline by which the Client must complete the eligibility redetermination application/Semi-Annual Report	11, 12	Y	D	Phase 3	
FR8.33	The System will notify the Client of the updated deadline by which the Client must complete the eligibility redetermination application/Semi-Annual Report	11, 12	Y	D	Phase 3	
FR8.34	The System will flag any updates to the Client's information for the Eligibility Worker to verify when reviewing the application, conducting the appointment, or conducting the redetermination interview	8, 11, 12	Y	L	Phase 3	
FR8.35	The System will allow administrators to easily update which fields are pre-populated and which fields require manual entry on the redetermination application/SAR or Annual Review	11	Y	C	Phase 3	
FR8.36	The System will not allow Clients to complete and submit redetermination applications after the deadline specified by Program policy	11, 12	Y	D	Phase 3	
FR8.37	The System will track cases for which a redetermination application has been submitted but a required interview has not been conducted	11, 12	Y	D	Phase 3	
FR8.38	The System will track all historical actions taken on a case	all	Y	L	Phase 3	
FR8.39	The System will synchronize the Semi-Annual Report and redetermination/recertification dates so that households with multiple Programs will receive a single Semi-Annual Report and a single Eligibility Review	11, 12	Y	D	Phase 3	
FR8.40	The System will, for Clients who apply to additional Programs during the redetermination process, synchronize interview dates for redeterminations and new applications to prevent the Client from attending multiple interviews	11, 12	Y	D	Phase 3	

Req. #	Requirement Description	Use Case #	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
Redetermination/SAR or Annual Review Completed by Intake Worker						
FR8.41	The System will provide a user interface for the Intake Worker to select the option to enter an Eligibility Redetermination application	12	Y	D	Phase 3	
FR8.42	The System will prompt the Intake Worker to validate the benefit amount and information previously submitted and to report any changes	12	Y	D	Phase 3	
FR8.43	The System will allow the Intake Worker to resume saved applications from the most advanced location of the application	12	Y	L	Phase 3	
FR8.44	The System will allow the Intake Worker to see a list of, and review, past applications for the Client	12	Y	D	Phase 3	
FR8.45	The System will allow the Intake Worker to continue in process applications that the Client has previously saved but not submitted	12	Y	D	Phase 3	
FR8.46	The System will provide a tool for the Intake Worker to verify the value of the Client's assets/resources when the value is required to render an eligibility determination	12	Y	D	Phase 3	
FR8.47	The System will allow the Intake Worker to override the deadline before which additional actions must be taken	12	Y	D	Phase 3	
FR8.48	The System will allow the Intake Worker to confirm, deny and add comments to information collected from external database queries and search results	12	Y	L	Phase 3	

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Client Change

Req. #	Requirement Description	Use Case #	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
FR9.1	The System will provide the option for a Client to report a change upon log-in to his/her account	15	Y	L	Phase 3	
FR9.2	The System will display the Client’s information and prompt the Client to indicate the information that requires an update	15	Y	L	Phase 3	
FR9.3	The System will provide a user interface for the Client to enter the new information	15	Y	L	Phase 3	
FR9.4	The System will validate the information based on available real-time and stored data sources	15	Y	D	Phase 3	
FR9.5	The System will determine if documentation is required for the change to be considered submitted and display the option to attach electronic documentation	15	Y	C	Phase 3	
FR9.6	The System will generate a notice, resulting from reported changed, to the Client identifying the specific verifications necessary and the due date by which the verification must be provided and any action that will occur, based on State and Federal policy, if the verification is not provided	15	Y	D	Phase 3	
FR9.7	The System will display the summary of the collected information and allow the Client to make final changes/updates	15	Y	L	Phase 3	
FR9.8	The System will determine whether the change requires an Eligibility Worker to review the information, based on State and Federal policy, and add the case to the queue of cases that require the Eligibility Worker to review the Client’s case file and change and redetermine eligibility	15	Y	C	Phase 3	
FR9.9	The System will generate a notification for the Client of the summary of the changes made	15	Y	D	Phase 3	
FR9.10	The System will allow the Intake Worker to access the Client’s electronic case file and indicate on the System that the Client is self-reporting a change	15	Y	L	Phase 3	
FR9.11	The System will allow the Intake Worker to enter the updated information	15	Y	L	Phase 2	
FR9.12	The System will create a paper change form (currently Form 234) pre-populated with a Client's information to be mailed at the Client's request	15	Y	D	Phase 3	

Req. #	Requirement Description	Use Case #	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
FR9.13	The System will utilize bar coding and Optical Character Recognition (OCR) to read the completed change form and populate information whenever possible	15	Y	L	Phase 3	
FR9.14	The System will display the scanned application or change form in order for the Intake Worker to confirm any populated fields	15	Y	L	Phase 3	
FR9.15	The System will display the change form information in the same sequence as on the paper form in order to facilitate data verification and entry	15	Y	C	Phase 3	
FR9.16	The System will identify changes to Client information based on data available on external systems	15	Y	D	Phase 3	
FR9.17	The System will alert the Eligibility Worker that a change has been identified by an external system	15, 16	Y	C	Phase 3	
FR9.18	The System will generate a notice to the Client of the change, the source of the change, and the next actions required, when requested by the Eligibility Worker	15, 16	Y	D	Phase 3	
FR9.19	The System will allow authorized DHS Staff to implement a mass change (i.e. a policy or benefit level change) to all relevant Client records	15, 16	Y	D	Phase 3	
FR9.20	The System will time and date stamp all changes made to a Client record	15, 16	Y	L	Phase 1	
FR9.21	The System will maintain a record of the case file before the change was submitted	15, 16	Y	L	Phase 2	
FR9.22	The System will maintain a record of the user who submitted the change	15, 16	Y	L	Phase 2	
FR9.23	The System will determine to which Programs the changes apply (i.e., relevant to all Programs for which the Client is enrolled) and flag the case for the appropriate actions	15, 16	Y	C	Phase 3	
FR9.24	The System will allow, based on business rules, certain Program specific changes to be redetermined automatically based on the new information without a review by an Eligibility Worker (e.g., death match, Notice to TPL/Estate Recoveries)	15, 16	Y	C	Phase 3	
FR9.25	The System will display to the Eligibility Worker the Client's electronic case file and the potential impact of the change that has been reported/identified	15, 16	Y	L	Phase 3	
FR9.26	The System will allow the Eligibility Worker to process the change and capture any ancillary information (e.g., effective date), updates to Client status and Program eligibility status	15, 16	Y	L	Phase 3	
FR9.27	The System will generate a notification for the Client of the impact of the change and send the relevant information to the appropriate external systems (e.g., E&T Vendors, ADH WIC) and DHS Staff (e.g., Overpayments Staff)	15, 16	Y	D	Phase 3	
FR9.28	The System will accept and record a Client match file from the ADH WIC System to confirm participation in the WIC Program	15, 16	Y	D	Phase 3	

Req. #	Requirement Description	Use Case #	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
FR9.29	The System will provide a mechanism to change the status for multiple Clients at once (e.g., all family members at the same address)	15, 16	Y	L	Phase 3	
FR9.30	The System will periodically query external databases to try and proactively identify where Client benefits may need to be adjusted	15, 16	Y	D	Phase 3	
FR9.31	The System will track Clients who have appeared on external databases in error to avoid future false positives	15, 16	Y	C	Phase 3	
FR9.32	The System will ensure a Client's information (education level, income, household) is consistent between the different benefits Programs	15, 16	Y	C	Phase 3	
FR9.33	The System will allow the Eligibility Worker to confirm, deny and add comments to information collected from external database queries and search results	15, 16	Y	D	Phase 3	
FR9.34	The System will send change notifications to DAAS Client Providers	15, 16	Y	D	Phase 3	
FR9.35	The System will send all DAAS Client notifications to Client Providers	15, 16	Y	D	Phase 3	
FR9.36	The System will be able to create a report to be used to match with WIC participants	15, 16	Y	D	Phase 2	
FR9.37	The System will continuously monitor cases for critical updates including but not limited to: a. Periods of inactivity b. Turning a critical age (e.g., 18, 65, etc.) c. Expiration dates d. Change in household composition	15, 16	Y	D	Phase 3	

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Medical Review Team

Req. #	Requirement Description	Use Case #	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
FR10.1	The System will determine that a medical review of disability is required based on the Program to which the Applicant has applied. These Programs include but are not limited to: a. Aid to Disabled b. Aid to the Blind c. AFDC MN – establishing parental deprivation d. TEA – exemption from work requirement e. TEFRA f. Long Term Care g. Home Care Services h. Assisted Living i. Autism Waiver j. TEFRA Waiver k. Workers with Disabilities l. Program of All Inclusive Care for the Elderly	17	Y	C	Additional Phases	
FR10.2	The System will alert the Medical Reviewer that an Applicant requires a review	17	Y	C	Additional Phases	
FR10.3	The System will provide the Medical Reviewer a view of the Applicant's information	17	Y	C	Additional Phases	
FR10.4	The System will, based on information entered by the Medical Reviewer, generate and issue requests for medical records electronically to the Provider(s) and will record the date the request is issued	17	Y	D	Additional Phases	
FR10.5	The System will, upon receipt of the record from the Provider(s), allow the Medical Reviewer to indicate the document has been received and is to be used in the determination of disability, and associate it to the appropriate Applicant's file	17	Y	C	Additional Phases	
FR10.6	The System will allow the Medical Reviewer to request additional medical records at any point in the process	17	Y	D	Additional Phases	
FR10.7	The System will alert the MRT Physician identified by the Medical Reviewer of the need for a disability decision	17	Y	C	Additional Phases	
FR10.8	The System will allow the MRT Physician to review the Application and all relevant records received and render a determination of: a. Approved – the medical evidence matches the Applicant's stated condition or b. Denied – the medical evidence does not support the Applicant's stated condition	17	Y	C	Additional Phases	

Req. #	Requirement Description	Use Case #	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
FR10.9	The System will alert the MRT Supervisor when a decision has been made by the MRT Physician	17	Y	C	Additional Phases	
FR10.10	The System will allow the MRT Supervisor to review the decision and the records for completeness and generate a notice to all appropriate parties (i.e. authorized representatives, DAAS, providers, etc.)	17	Y	D	Additional Phases	
FR10.11	The System will track if the Provider fulfills the request for medical records within the time period established per State policy	17	Y	C	Additional Phases	
FR10.12	The System will generate a notice to the Applicant when the Provider has not fulfilled the request for medical records	17	Y	D	Additional Phases	
FR10.13	The System will notify the MRT Physician if the Applicant has been notified of the lack of information and the Provider has not provided the requested information	17	Y	C	Additional Phases	
FR10.14	The System will allow the MRT Physician to review the available information and render the determination as ‘Denied’ due to lack of medical evidence if the Provider fails to fulfill the request for medical records within the time period established per State policy	17	Y	C	Additional Phases	
FR10.15	The System will generate a notice to the Applicant when the Provider has not provided sufficient medical records, as recorded by the Medical Reviewer	17	Y	D	Additional Phases	
FR10.16	The System will notify the MRT Physician if the Applicant has been notified of the lack of sufficient information and the Provider has not provided sufficient medical records, as recorded by the Medical Reviewer	17	Y	C	Additional Phases	

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Overpayment, Audits and Appeals

Req. #	Requirement Description	Use Case #	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
Overpayments						
FR11.1	The System will generate an alert for the Overpayments Staff that a potential overpayment has been calculated and send the information to the OASIS system	18	Y	D	Phase 3	
FR11.2	The System will collect the overpayment information from OASIS, including the amount of the overpayment and the method by which the collection will occur, and ensure the adjusted amount is provided to the EBT vendor	18	Y	D	Phase 3	
FR11.3	The System will stop payment of benefits of the Clients who have not responded to the Demand Letter, as documented on the System by the Overpayments Staff	18	Y	C	Phase 3	
FR11.4	The System will identify overpayments for Clients who re-apply for benefits and have an outstanding overpayment balance	18	Y	C	Phase 3	
FR11.5	The System will reflect the original amount and the net benefit amount resulting from an overpayment recoupment when calculating all benefit amounts	18	Y	C	Phase 3	
FR11.6	The System will notify the Client of ongoing recoupments and established overpayments at all case actions		Y	D	Phase 3	
FR11.7	The System will generate and send, via the Client's preferred communication method, the need for the Client to establish the payment plan when benefits have already expired or are set to expire before the entire overpayment can be recouped		Y	D	Phase 3	
FR11.8	The System will send information to OASIS about all recoupments made including, but not limited to: a. The amount of the recoupment b. The date of the recoupment c. The Client on whose behalf the recoupment was made d. The Program from which the benefit was recouped		Y	D	Phase 3	
Conduct Audit/Review						
FR11.9	The System will allow the Quality Control Supervisor to select one or more cases and assign them to a Quality Control Reviewer for audit/review for a specific sample month	19	Y	C	Phase 3	
FR11.10	The System will alert the Quality Control Reviewer that one or more cases have been assigned for review	19	Y	C	Phase 3	

Req. #	Requirement Description	Use Case #	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
FR11.11	The System will allow the Quality Control Reviewer to review actions taken by Eligibility Workers in the sample month	19	Y	C	Phase 3	
FR11.12	The System will generate an appointment request notice to the Client for the QC interview (if required e.g., SNAP based on business rules)	19	Y	D	Phase 3	
FR11.13	The System will allow the Quality Control Reviewer to conduct the audit/review interview following the established questionnaire in the System and to record the results	19	Y	D	Phase 3	
FR11.14	The System will generate an alert to the Eligibility Worker if the Client fails to respond to the interview appointment	19	Y	C	Phase 3	
FR11.15	The System will allow the Quality Control Reviewer to capture information related to their review and actions (interview and validation activities) in the System on a worksheet, as defined by the State for each Program and Review type	19	Y	D	Phase 3	
FR11.16	The System will present a comparison of the information provided during the QC interview and/or verification activities with the information contained in the Client's electronic case file	19	Y	D	Phase 3	
FR11.17	The System will store the information entered into the worksheet separately from the original information being verified, as per State and Federal policy		Y	D	Phase 3	
FR11.18	The System will recalculate the Client's eligibility based on the QC audit/review information recorded according to the Program policy	19	Y	C	Phase 3	
FR11.19	The System will allow the Quality Control Reviewer to create a Findings Report if the Quality Control Reviewer determines an error was made when eligibility and benefit amount was determined	19	Y	C	Phase 3	
FR11.20	The System will allow the Quality Control Reviewer to record the Findings Report as complete with no finding if no finding is identified (the eligibility and benefit amount was determined correctly)	19	Y	C	Phase 3	
FR11.21	The System will alert the Quality Control Supervisor that a case requires review upon completion of a Findings Report	19	Y	C	Phase 3	
FR11.22	The System will alert the Quality Control Reviewer to send missing documentation to the Quality Control Supervisor (or highlight the policy which is being interpreted differently) if the Quality Control Supervisor rebuts the finding	19	Y	C	Phase 3	
FR11.23	The System will notify the appropriate AR DHS/DWS staff if the Quality Control Supervisor accepts the error		Y	C	Phase 3	
FR11.24	The System will allow the Eligibility Worker to create the recommended Corrective Action specifically addressing each error in the finding report if the Quality Control Supervisor accepts the error	19	Y	D	Phase 3	

Req. #	Requirement Description	Use Case #	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
FR11.25	The System will require that Corrective Action Plan is reviewed by the authorized approver (based on business rules) and approved	19	Y	C	Phase 3	
FR11.26	The System will notify the Overpayments Staff if the audit/review finding has resulted in a potential overpayment		Y	C	Phase 3	
FR11.27	The System will track progress made against implementing the actions specified in the Corrective Action Plan and allow appropriate AR DHS/DWS Staff (e.g., Quality Control Supervisor) to monitor progress	19	Y	C	Phase 3	
FR11.28	The System will track the time taken to implement the Corrective Action Plan	19	Y	C	Phase 3	
FR11.29	The System will allow authorized users to document narrative of the case review to the case file (both if there was no Finding or Findings)	19	Y	C	Phase 3	
FR11.30	The System will add the audit/review to the file to send to the Federal oversight officer	19	Y	C	Phase 3	
FR11.31	The System will flag a case for review if an error is identified by the Federal oversight officer and adjustments are required	19	Y	C	Phase 3	
FR11.32	The System will allow the Quality Control Staff to have access to all case records and information to cases to which they have been assigned	19	Y	C	Phase 3	
FR11.33	The System will not disclose to AR DHS/DWS Staff which cases are being audited/reviewed and will allow Quality Control staff to capture notes which cannot be shared outside the Quality Control organization	19	Y	C	Phase 3	
FR11.34	The System will give the appropriate Federal oversight officer electronic access to the Audit/Review file and report, and to provide comment/feedback	19	Y	C	Phase 3	
FR11.35	The System will flag the audit/review for update and notify the Quality Control Supervisor if an error is identified by the Federal oversight officer and adjustments are required		Y	C	Phase 3	
FR11.36	The System will allow the Quality Control Supervisor to develop and edit the Quality Control Sampling Plan that defines the parameters that will govern the selection of cases for review.	19	Y	C	Phase 3	
FR11.37	The System will support developing the qualified universe that includes positive and negative eligibility cases from multiple programs including, but not limited to, MAGI, non-MAGI, SNAP and CHIP	19	Y	C	Additional Phases	
FR11.38	The System will support creating multiple Quality Control Sampling Plans	19	Y	C	Phase 3	
FR11.39	The System will track the status of the audit/review (e.g., progress made between the time a case is selected to be audit/reviewed and the time the audit/review is closed)	19	Y	C	Phase 3	

Req. #	Requirement Description	Use Case #	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
FR11.40	The System will allow the Quality Control Supervisor to track performance against the Quality Control Sampling Plan (e.g., the Quality Control Administrator will track the number of cases that have been audit/reviewed and the status of outstanding audit/reviews against the targeted number of cases to be audited/reviewed during a year)	19	Y	D	Phase 3	
FR11.41	The System will allow an audit/review to be dropped. If dropped, the System will require the reason for the dropped audit/review to be recorded. Examples of reasons to drop an audit/review include, but are not limited to: a case file could not be located, a case selected to be audit/reviewed is already under investigation.	19	Y	D	Phase 3	
FR11.42	The System will track all historical actions taken against a case. For example, if the sample month is January, and a change has been made in February, the System must recall the file as of January and the specific information provided in January which formed the basis for the determination including the individual who made the changes/decisions.	19	Y	D	Phase 3	
FR11.43	The System will track all documents/notices sent to clients including the source document, aligned with Federal guidelines	19	Y	C	Phase 3	
FR11.44	The System will support third party performing Quality Control rather than the State	19	Y	C	Phase 3	
FR11.45	The System will capture error types and support analyzing Quality Control findings to enable continuous improvements	19	Y	D	Phase 3	
Appeal Tracking						
FR11.46	The System will allow authorized users to record that an appeal has been filed upon notification by the Appeals Staff. The information to be recorded will include, but not be limited to: a. The Client/Applicant submitting the appeal b. The action being appealed c. The Program under which the action occurred d. The date and time of the appeal hearing e. Others, as defined by the State	20	Y	C	Phase 3	
FR11.47	The System will allow authorized users to record that an appeal has been filed with State Court	20	Y	C	Phase 3	
FR11.48	The System will provide the authorized DHS Staff all information/documents relevant to the appeal (based on the checklist available in the System) in order to defend the Appeal	20	Y	D	Phase 3	
FR11.49	The System will allow authorized DHS Staff to enter the ruling into the System, including scanning the ruling and identifying where action is required (e.g., to reinstate, increase benefits, or lower benefits)	20	Y	C	Phase 3	
FR11.50	The System will alert the Eligibility Worker to take the action specified in the decision if the decision is against DHS	20	Y	C	Phase 3	

Req. #	Requirement Description	Use Case #	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
FR11.51	The System will track all actions specified in the decision until completed	20	Y	C	Phase 3	
FR11.53	The System will provide a report of the status of each Appeal	20	Y	D	Phase 3	
FR11.54	The System will track attributes about the Appeal to allow for analysis by authorized users. The attributes to be tracked include but are not be limited to the following: a. Program type b. Reasons for the appeal c. Program office d. Other attributes to be defined by the State	20	Y	C	Phase 3	
FR11.55	The System will support multiple eligibility actions resulting from an Appeal ruling	20	Y	C	Phase 3	
FR11.56	The System will limit access to each Appeal to the only those assigned to the Appeal	20	Y	C	Phase 3	
FR11.57	The System will provide checklists to the DHS Staff of the information/documentation to be gathered and provided to the Office of Appeals, based on Appeal type and Program		Y	D	Phase 3	

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Appointment and Caseload Management

Req. #	Requirement Description	Use Case #	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
Appointments						
FR12.1	The System will allow the Applicant/Client to select the option to schedule an appointment upon log-in	all	Y	D	Phase 3	
FR12.2	The System will display a list of appropriate appointment types, appointment settings, and appointment times that are available to the client, based on business rules (e.g., certain programs do not allow telephone interviews)	21	Y	D	Phase 3	
FR12.3	The System will allow the Applicant/Client to select an appointment type and the language required	21	Y	D	Phase 3	
FR12.4	The System will require the Client to confirm the contact phone number or, if the phone number is not already in the System, the Client enters their phone number if the Client selects a telephone appointment	21	Y	D	Phase 3	
FR12.5	The System will present the available time slots, based on the options chosen for the appointment type and business rules (e.g., expedited SNAP must schedule within 24 hours, all SNAP must be performed by the 20th day)	21	Y	D	Phase 3	
FR12.6	The System will allow the Client to choose an appointment date and time	21	Y	D	Phase 3	
FR12.7	The System will update the availability of resources to reflect when an appointment has been scheduled	21	Y	D	Phase 3	
FR12.8	The System will generate a notification for the Client via their preferred communications method confirming that an appointment has been scheduled	21	Y	D	Phase 3	
FR12.9	The System will track the instances in which a translator is requested	21	Y	D	Phase 3	
FR12.10	The System will allow the Client to reschedule an appointment as long as the rescheduled appointment is within the timeframe allowed by Program policy	21	Y	D	Phase 3	
FR12.11	The System will be able to request the Client reschedule their appointment if AR DHS/DWS resource availability changes	21	Y	D	Phase 3	
FR12.12	The System will alert the Eligibility Worker of “No show” for appointment	21	Y	C	Phase 3	
FR12.13	The System will allow clerical workers to schedule interviews on behalf of the client	21	Y	C	Phase 3	

Req. #	Requirement Description	Use Case #	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
Caseload Management						
FR12.14	The System will allow the needed work effort to be logged into the system, including capturing the type of request	all	Y	C	Phase 3	
FR12.15	The System will support initiating work effort requests through a variety of methods: a. Receptionists at regional offices log information regarding the work required b. Calls are received and are triaged. c. Paper applications/redetermination application (including faxed and emailed applications) and other documents (e.g., Semi-Annual Report, change requests) are received and scanned by processing centers and/or county offices d. Electronic applications/redetermination applications and other documents (e.g., Semi-Annual Report, change requests) are submitted by Clients	22	Y	C	Phase 3	
FR12.16	The System will identify the skills required based on the work effort request and constraints and route the work effort to the correct queue and identify available workers who can perform the work	22	Y	C	Phase 3	
FR12.17	The System will automatically route the work effort to the correct queue, based on a set of predefined rules, and then assign to an appropriate Worker or allow selection by the Worker to complete the entire process if Automatic Routing to Queue is employed	22	Y	C	Phase 3	
FR12.18	The System will automatically route the work effort to the correct Worker based on a set of predefined rules and the Worker is assigned to complete a specific task if Automatic Routing to Worker is employed	22	Y	C	Phase 3	
FR12.19	The System will automatically route all work effort to a central queue where a Worker performs initial triage and manually routes the case to the appropriate queue or Worker if Manual Routing is employed	22	Y	C	Phase 3	
FR12.20	The System will alert the assigned Worker’s supervisor for review and possible reassignment if the current Worker is unable to complete the action within a predetermined timeframe, per State policy	22	Y	C	Phase 3	
FR12.21	The System will support simultaneous updates of Client data	all	Y	L	Phase 3	
FR12.22	The System will have the ability to re-assign work automatically, based on State policy	22	Y	L	Phase 3	
FR12.23	The System will support tracking resource calendars/availability in order for current capacity, by skill set, to be available within the system	22	Y	C	Phase 3	

Req. #	Requirement Description	Use Case #	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
Establishing Calendar						
FR12.24	The System will display a calendar with options for different views (e.g., work week, full week, day, month)	22	Y	C	Phase 3	
FR12.25	The System will provide a structured and standard calendar form that includes but is not limited to: a) Appointment category (e.g., Application Interview, Redetermination Interview, MRT) b) Meeting type (e.g., phone call, in-person) c) Start and end date d) Start and end time	22	Y	C	Phase 3	
FR12.26	The System will allow for multiple attendees to be added to an appointment	22	Y	C	Phase 3	
FR12.27	The System will have access to User's calendar outside of the System (e.g., Microsoft Outlook) and sync appointments	22	Clarification	D	Phase 3	The IBM team would like to clarify that our interpretation of this requirement is the IE-BM Solution will push Cúram appointments to Microsoft Outlook and include only Client and case data the State has defined as allowable based on data and policy regulations.
FR12.28	The System will specify meetings created in the System versus meetings created in User's calendar outside of the System (e.g., Microsoft Outlook)	22	Y	D	Phase 3	
FR12.29	The System will save appointments	22	Y	C	Phase 3	
FR12.30	The System will allow attendees to include a message to State Staff	22	Y	C	Phase 3	
FR12.31	The System will notify appointment creator of scheduled appointment	22	Y	C	Phase 3	
FR12.32	The System will allow appointment creator to cancel an appointment	22	Y	C	Phase 3	
FR12.33	The System will electronically deliver a notification that an appointment has been cancelled to attendees listed	22	Y	C	Phase 3	
FR12.34	The System will delete a cancelled appointment from calendars	22	Y	C	Phase 3	
FR12.35	The System will log the time, date, and user ID of the User who cancelled the appointment	22	Y	C	Phase 3	
FR12.36	The System will allow for appointment creator to grant other User(s) access to modify/cancel appointment details	22	Y	D	Phase 3	

Req. #	Requirement Description	Use Case #	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
FR12.37	The System will allow for appointment creator to grant other User(s) access to modify/cancel appointment details on behalf of creator	22	Y	D	Phase 3	
FR12.38	The System will allow for appointment creator to set appointments as a recurrence, with overall start and end dates	22	Y	C	Phase 3	
FR12.39	The System will allow Applicants/Clients to view scheduled appointments via the portal account	22	Y	D	Phase 3	
FR12.40	The System will allow Applicants/Clients to schedule appointments via their portal account	22	Y	D	Phase 3	
FR12.41	The System will limit “Appointment Type” to those identified by the State		Y	C	Phase 3	

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Reporting and Business Intelligence

Req. #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
Reporting and Business Intelligence Functional Requirements					
FR13.1	The System will support generating static, parameter driven, dashboards, statistical and ad hoc reports (e.g., workload status, Client status, performance factors, outcome measures, etc.)	Y	D	Phase 3	
FR13.2	The System will have the capability for users to specify certain parameters for standard reports, including but not limited to: a. Date range b. DCO County Office c. Program	Y	D	Phase 3	
FR13.3	The System will provide the ability for users to filter data and extract the filtered data (including by Client, User, workflow), manipulate the extracted data, and specify the desired format and media of the output	Y	D	Phase 3	
FR13.4	The System will be capable of creating and saving reports in different file formats (.pdf, .xls, .csv), and formatting reports to be printer-friendly	Y	L	Phase 3	
FR13.5	The System will have the ability to produce charts, graphs, etc. in order to show progress, trends, etc.	Y	L	Phase 3	
FR13.6	The System will display a template for the user to specify report parameters	Y	C	Phase 3	
FR13.7	The System will provide the ability to upload external data sets for integrated reporting	Y	C	Phase 3	
FR13.8	The System will have the capability for a user to select specific metrics and allow drilling down to view more detailed information, where available	Y	D	Phase 3	
FR13.9	The System will display all applicable alerts and notifications, based on preconfigured business rules and policy, as part of the DHS Staff's dashboard	Y	D	Phase 3	
FR13.10	The System will provide multiple options to view data including, but not limited to: a. Bar chart b. Pie chart c. Line chart	Y	L	Phase 3	
FR13.11	The System will provide a process by which reports may be delivered by email in accordance with all appropriate regulations	Y	C	Phase 3	
FR13.12	The System will support reporting against multiple years (e.g. Federal Fiscal Year, State fiscal year, calendar year)	Y	D	Phase 3	

Req. #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
FR13.13	The System will provide the capability for reports to be automatically generated based on a predefined schedule and distributed to subscribed users on a periodic basis. Distribution may be as an electronic attachment or a notification, alerting user that the report is ready to be downloaded.	Y	L	Phase 3	
FR13.14	The System will provide a mechanism to archive and delete reports	Y	L	Phase 3	
FR13.15	The System will allow distribution of reports to authorized users and allow access to reports to be limited to authorized users	Y	D	Phase 3	
FR13.16	The System will create and maintain an auditable list of all users that accessed reports and which report(s) were accessed	Y	D	Phase 3	
FR13.17	The System will allow queuing of reports, upon notification of the user, to limit interruption of other System processes	Y	L	Phase 3	
FR13.18	The System will provide the ability to track and store detailed information regarding all reporting requests including, but not limited to: a. User requesting the information b. Date c. Time d. What the report included e. Report storage upon completion	Y	D	Phase 3	
FR13.19	The System will allow saving and attaching reports to a Client's record when data sharing rules allow	Y	D	Phase 3	
FR13.20	The System will provide the ability to generate a listing of all standard on-line reports available, the description of each report, and provide a link to the most recent generation of the report	Y	D	Phase 3	
FR13.21	The System will allow the DHS Staff to set a predefined report to rerun on a defined timeframe	Y	C	Phase 3	
FR13.22	The System will allow DHS Staff to customize and save views/reports for easy access and future use	Y	L	Phase 3	
FR13.23	The System will allow DHS Staff to share their customized views/reports with other DHS Staff	Y	L	Phase 3	
FR13.24	The System will allow reports to be assigned to and viewed by an individual user, a user type, an organizational unit or to all units	Y	D	Phase 3	
FR13.25	The System will be capable of running dashboards, summary reports and detailed reports with the capability to drill down/roll-up between the reports	Y	D	Phase 3	

Req. #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
FR13.26	The System will be able to track and report on data elements including, but not limited to: a. Client/Application/Case b. Program c. Time of action d. Case status e. Payments f. Overpayments g. Office Location/Individual h. Start and End date i. Eligibility period j. Address k. LEP/choice of language	Y	D	Phase 3	
FR13.27	The System will provide the capability to run historical reports to highlight trends, by program, including, but not limited to: a. Number of Clients b. Application processing statistics c. Total payments made to Clients by program (including all programs administered by DHS)	Y	D	Phase 3	
FR13.28	The System will provide comparison reports (e.g., year-over-year, month-over-month, etc.) to capture and analyze program changes/improvements including, but not limited to: a. Caseload - Number of cases/Clients b. Processing metrics c. Payments d. By location/DCO County Office	Y	D	Phase 3	
FR13.29	The System will have the capability to produce a report capturing all of a Client's information ensuring the appropriate privacy and security rules are followed	Y	D	Phase 3	
FR13.30	The System will be capable of projecting future case actions and requirements including, but not limited to: a. Upcoming determinations b. Scheduled interviews c. Projected, approved benefits/payments	Y	D	Phase 3	

Req. #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
FR13.31	The System will provide application processing reporting and analysis capabilities in real-time including, but not limited to: a. Volume of applications waiting for action to be taken b. Time spent processing application c. Application status/priority/type d. Interviews scheduled e. Available capacity f. Historical performance metrics g. Filter by office/Eligibility Worker h. By status/state (e.g., waiting for documentation)	Y	D	Phase 3	
FR13.32	The System will provide the ability to report and analyze performance metrics to identify opportunities to improve operational processing including, but not limited to: a. Time to perform an interview b. Average time to process an application c. Overtime d. By office location/DHS Staff Worker e. By type of application f. By program g. Time spent processing by type such as applications, ER, Semi-Annual Report, etc. h. By type of task	Y	D	Phase 3	
FR13.33	The System will provide different dashboards and reports by user type (e.g., supervisor vs. Eligibility Worker) and allow them to drill down to the details and roll-up to the summary level	Y	D	Phase 3	
FR13.34	The System will be able to collect, track, and report on individual staff performance	Y	D	Phase 3	
FR13.35	The System will support ad-hoc queries to try and identify causal relationships between inputs and operational performance	Y	D	Phase 3	
FR13.36	The System will have the ability to generate Federally/State required reports for the State of Arkansas in either paper or electronic formats	Y	D	Phase 3	
FR13.37	The System will generate all standard reports that need to be provided to Clients in either paper or electronic formats	Y	D	Phase 3	

Req. #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
FR13.38	The System will have the ability to track, report, and support different types of analyses, including but not limited to: a. Cross Program Analysis: 1. Analyze services provided to the population and identify opportunities to improve how services are delivered to improve outcomes 2. Typically this analysis is performed using powerful analytical tools (or statistical tools) on a specific data set b. Performance Analytics – Leveraging Operational and Program Reporting and Cross Program Analysis to: 1. Identify evidence based models of practice 2. Define opportunities for partnerships and coordinated efforts to enhance performance 3. Identify previously unknown pre-conditions impacting performance c. Predictive Analytics – Leveraging Operational and Program Reporting, Cross Program Analysis and Performance Analytics to: 1. Identify impact of proposed policy, practice or resource allocation changes ("What If" Scenarios) 2. Support anticipatory management and investment decisions 3. Prevent unintended consequences	Y	D	Phase 3	
FR13.39	The System will be able to produce outreach reports (hot spotters by geography)	Y	D	Phase 3	
FR13.40	The System will be able to produce action history (not just changes) reports and immediately display the results. These can be based on: a. Inquiries b. Case/Client c. Client d. Other variables to be defined by DHS	Y	D	Phase 3	
Mobile Reporting					
FR13.41	The System will make real-time dashboards available to DHS Executives via mobile devices including, but not limited to, the following data elements: a. Throughput b. Backlog c. Location d. Volume e. Wait time f. Time per application	Y	D	Phase 3	
FR13.42	The System will provide the capability to drill-down into the details supporting the dashboard	Y	D	Phase 3	
FR13.43	The System will allow users to filter the data provided by predefined data elements	Y	D	Phase 3	

Req. #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
FR13.44	The System will allow users to sort the data provided	Y	D	Phase 3	
FR13.45	The System will support displaying the results graphically	Y	D	Phase 3	
FR13.46	The System will support providing time series reporting based on user defined time intervals	Y	D	Phase 3	
FR13.47	The System will generate pre-populated forms and notices (e.g., eligibility redetermination forms, Semi-Annual Reports, medical re-evaluation reminders) in support of the entire life of the case	Y	D	Phase 3	
FR13.48	The System will support generating notices based on a generic template (e.g., denial) and provide the capability to automatically populate based on predefined parameters (e.g., the specific rule)	Y	D	Phase 3	
Statutory Reports and Notices					
FR13.49	The System will provide all notices (or provide instructions to receive assistance) in the following languages: a. English b. Spanish c. Marshallese	Y	D	Phase 3	
FR13.50	The System will produce financial reports required to meet the needs of DHS and other agencies	Y	D	Phase 3	
FR13.51	The System will produce reports required to comply with State and Federal agencies overseeing the program	Y	D	Phase 3	
FR13.52	The System will produce SNAP reports including, but not limited to: a. SNAP Office Reports b. SNAP-D 292 Disaster Issuance c. FNS-101 Participation in SNAP By Race d. FNS-366B Program and Budget Summary Statement: Program Activity Statement e. FNS-388, FNS-388A, State Issuance and Participation Estimates f. SNAP Ed FNS-759 Education and Administrative Reporting System g. FNS-583 Employment and Training h. FNS-834 School Lunch Program Direct Certification	Y	D	Phase 3	
FR13.53	The System will produce fiscal reports including, but not limited to: a. SF 425 Federal Financial Report b. SF 425 (FNS-778/778A) Federal Financial Report (SNAP Worksheet for the SF-425) c. FNS-366A Program and Budget Summary Statement d. FNS-46 Issuance Reconciliation Report e. FNS-209 Status of Claims Against Households	Y	D	Phase 3	
FR13.54	The System will generate completed IRS Form 1095-B at a time to be determined by the State for all Clients who have approved health insurance coverage for any time during the prior calendar year	Y	C	Phase 3	

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Use Case List

#	Use Case Name	Description
1	Complete Self-Service Anonymous Pre-Screening	The Applicant answers a set of questions online to evaluate whether they may be eligible for benefits.
2	Apply for Benefits Online	The Applicant logs into the System, submits an application, and schedules an interview.
3	Apply for Benefits in Person	The Intake Worker meets with the Applicant, completes the application and submits it
4	Apply for Benefits with a Paper Application	The Intake Worker processes paper applications submitted by Applicants by entering the information from the paper application into the System and attaching any documents to the case record.
5	Conduct Eligibility Interview	The Eligibility Worker meets with the Applicant and performs the interview in person or via the phone (the Applicant has already been completed the application).
6	Submit Additional Electronic Documentation	The Client logs onto the System and submits documentation of any sort. The System then assesses the Client’s case to identify the next actions.
7	Process Documentation Received in Hard Copy	The Documentation Processing Staff Worker scans paper documents, adds the documents to the electronic case file and the cases are flagged for appropriate action.
8	Process Eligibility Determination or Redetermination	Upon submitting an application or redetermination application and, if required, upon completion of the eligibility interview, the System will identify and prioritize for the Eligibility Worker all cases requiring worker review. The Eligibility Worker will review all information required and determine the application or redetermination disposition and complete any benefit amount calculation.
9	Determine Spend-Down and Submit Expenses	The System determines the spend-down amount and applies eligible expenses to offset the spend-down amount.
10	Send Authorized Benefits Information to EBT Vendor	The System identifies all payments made to Clients and Vendors and transmits financial transactions to the State Accounting System.
11	Complete the Redetermination Application/Semi-Annual Report online	The Client logs into the System and completes their redetermination application (Eligibility Review or Semi-Annual Report).
12	Complete the Redetermination Application/Semi-Annual Report with an Intake Worker	The Intake Worker assists Applicant to complete the redetermination application or Semi-Annual Report
13	Process the Semi-Annual Report (SAR) or Annual Review	The Eligibility Worker reviews and processes Semi-Annual Report or Annual Review
14	Complete the Redetermination Interview	The Eligibility Worker meets with the Applicant and performs the redetermination interview (the Applicant has already completed the redetermination application).
15	Submit a Client Change Online	The Client logs onto the System (or a paper Change Form has been processed) and submits a change.

#	Use Case Name	Description
16	Process Client Change	The Eligibility Worker processes a change (Client submitted or identified by the System), re-determines program specific eligibility and calculates new benefit amounts.
17	Medical Review Team	This Use Case will document the information necessary for the Medical Review Team (MRT) to establish disability for an Applicant where disability is an eligibility requirement.
18	Establish Overpayment Information	In this Use Case the System notifies the Overpayments Staff of a potential overpayment and the Collection Officer defines the overpayment collection method and total amount due.
19	Conduct Quality Control Audit/Review	The Quality Controls team audits eligibility determinations. This includes auditing all documentation, performing interviews, communicating audit results to business units that rendered the determinations, and providing documents to the Federal Government.
20	Track an appeal of an Eligibility Determination/Redetermination	Appellants may appeal these eligibility determination decisions. Upon receiving the Appeal, DHS commences the Use Case in which the required information is collected and the Appeal status is tracked through to resolution of the appeal.
21	Schedule an Appointment (Self-Service)	The Client schedules an appointment using the self-service portal.
22	Manage Caseload	In this Use Case, caseload management is the assignment of work to the appropriate resources for completion. Case is defined as a various stage of client record such as application, referral, and inquiry going through integrated eligibility process.

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Process Flow List

#	Process Flow Name	Description
1	Access/Intake	This diagram represents the flow of activities for the citizen to conduct anonymous pre-screening and to complete and submit an application for benefits.
2	Eligibility Determination	This diagram depicts the processes required to determine eligibility and interface with various systems to ensure the information collected during the application process is shared to limit redundancy of effort by Applicant and staff.
3	Eligibility Review	This diagram depicts the processes required to review eligibility and process changes
4	Program Management	This diagram depicts the processes required to re-determine eligibility, process changes that may affect a Client's eligibility or their benefit amount, and ultimately for a Client to be dis-enrolled from the identified programs.

Template T- 7

Functional Requirements Approach

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Template T-7

Functional Requirements Approach

Response Template

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Functional Requirements Approach

The Vendor should provide a narrative overview of how the System will meet the Integrated Eligibility and Benefit Management Engagement (IE-BM) RFP Functional requirements. The following questions pertaining to Functional Requirements are a required portion of the RFP response and will be evaluated by Arkansas DHS.

While responding, the Vendor should reference the IE-BM RFP as well as all other documentation provided as part of the Procurement Library, to gain an overall understanding of the required scope and functionality, as well as the future DHS vision.

Please use these response sections to provide specific details of the proposed approach to meeting DHS requirements in each area. Responses should, when necessary, reference requirements using the appropriate RFP Requirement Numbers from Template T-6 – Functional Requirements Traceability Matrix. Please refer to the Business Process Analysis Document in the Procurement Library for workflows, Use Cases and additional details on the selected functional areas.

Responses for the Functional Requirements Approach are strongly preferred to be highly focused on the specific requirements and should not simply provide generic or marketing descriptions of technology or product capabilities. Vendors should indicate how their proposed phased implementation may or may not impact functionality. Additionally, the Vendor should indicate exception handling processes where appropriate and any dependencies on existing systems or components of the new System to provide the specified functionality.

1.0 Functional Requirements Approach

1.1 Approach to Addressing Arkansas's Vision for IE-BM

Arkansas DHS has established a clear vision for the future IE-BM System. This includes new approaches to technology and moving from stand-alone silos to shared technology components and services. This Vision provides Arkansas with key benefits:

- Leverages IT Best Practices and National HIT standards/initiatives and technology trends including:
  - Service-Oriented Architecture (SOA)
  - Modularity
  - Reusability (Build Once Use Many Times)
  - Multi-channel Access
  - Cloud and Software-defined Infrastructure
  - Social Networking and Collaboration
- Leverages the capacity of current transactional applications and minimizes need to replace all legacy applications at one time
- Improves both the organization user, consumer and trading partners' experience
- Provides for improved data quality, standards and stewardship

- Strengthens Master Data Management — Identity Access Management, Master Index Capabilities (Providers and Consumers), Consent Management, etc.
- Enhances Enterprise Content Management, Logical Data Warehouse, Business Intelligence and Shared Analytics (Performance and Predictive)

Instructions: Discuss how this System will provide the functionality required to deliver the business benefits outlined in the RFP, including:

- **Application and Enrollment/Redetermination:** Web-based, real-time eligibility determination through an integrated application that supports multiple programs (when possible)
- **Intake and Admission:** Collection, verification and processing of additional information needed prior to benefits issuance
- **Interviews/Assessments and Scheduling:** Scheduling appointments for interviews and making recommendation based upon information collected during an interview
- **Benefits Issuance, Redemption and Management for programs other than Medicaid:** Issuance of the correct benefits along with the creation and delivery of a welcome package describing pertinent details. Tracking benefits usages and investigating as well as rectifying potential discrepancies in benefits issued
- **Client Changes:** Managing changes or events affecting a client's eligibility to receive benefits that may result in immediate suspension, termination of benefits or require the client to go through the redetermination process
- **Client Look-Up and Query:** The "White Pages" for Clients (Master Person Index) summarizing a listing of unique Clients and demographic information; identification of program enrollment and current services for Clients as well as a Consent Registry that controls, based upon privacy and confidentiality rules, what information can be shared, when and with whom
- **Reporting and Business Intelligence:** A combination of standard, parameter-driven and ad hoc reports as well as complex analytic tools supporting what if analysis, alerts/notifications and other capabilities

This is a dynamic time for State Health and Human Services (HHS) agencies. The industry is embracing new service delivery models, exploring new organizational models, emphasizing outcomes over transactions, and with a new Federal administration, states are likely to see an increase in legislative and policy changes. Navigating the potential challenges requires a solution that provides the Department of Human Services (DHS) a high level of flexibility and autonomy. For this reason, the IBM team is pleased to propose an approach that will expand upon your current investments and allow you to support a person-centered approach that can continue to evolve with your agency's needs over time.

The IBM team's proposed IE-BM Solution will support a person-centered model in the form of a 'No Wrong Door' for Clients. The figure below provides a graphical interpretation of our proposed IE-BM Solution. It highlights an assortment of components that we believe will meet DHS' requirements and vision:

- Multi-channel access and presentation portals to support increased access to Clients, Workers, Management, Providers, and Employers;
- Robust security and monitoring components to provide secure access to Client and program information;
- Reports and analytics to provide DHS staff a holistic view of the Client and support a person-centric approach; and
- Processes that will build on the workflow within each phase of the project to integrate the full cross-program functionality; Intake, Assessment, Service Delivery, Case Management, Business Analytics, and Audits. Aligning processes across programs will allow DHS the flexibility to support multiple organizations and the operational needs of organizational models which may vary from having a single worker covering multiple programs to offices where workers may focus on a single program.

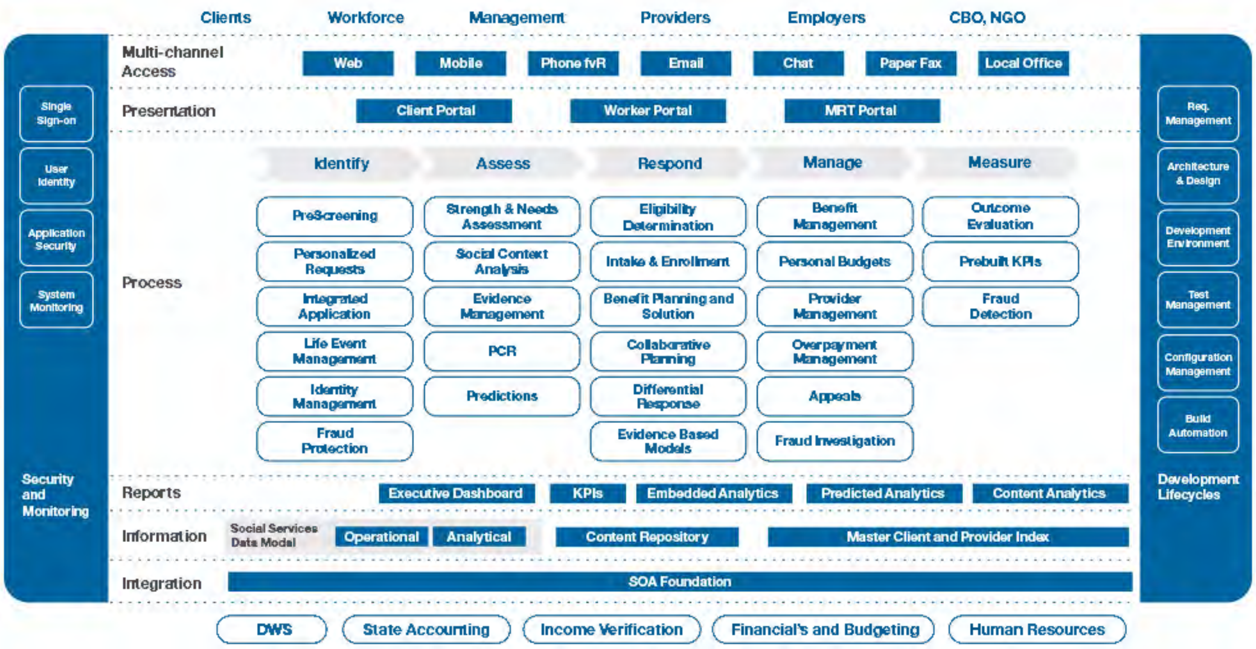


Figure 1: Our proposed Solution augments the value of DHS investments while delivering industry leading functionality.:

Our proposed Solution includes a range of leading COTS products that were selected based on their successful use in previous implementations to meet similar needs of other government organizations including:

- IBM Cúram
- IBM InfoSphere Master Data Management (MDM)
- IBM Cognos Business Intelligence and Analytics
- Xerox DocuShare, the State's Document Management Solution.

For example, North Carolina Families Accessing Services through Technology (NC FAST), a solution similar in size and scope to the IE-BM Solution, is a successful Cúram-based solution implemented in phases. Our proposed Solution delivers the flexibility of modular components and supports industry recognized practices through pre-built functionality. Complying with Center for Medicare and Medicaid Services "Seven Conditions and Standards" and State directives, our proposed Solution is open, flexible, scalable, and adaptable. A significant percentage of the business rules and workflows are delivered, out-of-the-box for Medicaid, SNAP, and TANF/TEA using IBM Cúram, a large component of our IE-BM Solution. The IBM team will work with DHS to identify, define, and develop the functionality required to support the State of Arkansas' programs requirements specified in this RFP. Our IE-BM Solution's COTS component-based architecture and open interface constructs will allow us to quickly and more easily modify and upgrade components, as DHS business needs change. Our proposed Solution is designed to allow business administrators, in the future, to manage a large percentage of updates to business rules, thereby helping to decrease the time required to implement changes and helping to lower expenses through reduced reliance on IT staff to design and develop modifications.

SECTION HIGHLIGHT

Cúram is SOA Certified by IBM since 2007.

Realizing that one size does not fit all, CMS developed the Seven Conditions and Standards to establish Medicaid infrastructure and information systems projects meet statutory and regulatory requirements as criteria for enhanced Federal Financial Participation (FFP) funding. The proposed IE-BM Solution addresses the Seven Conditions and Standards and ***leverages IT Best Practices and National HIT standards, initiatives, and technology trends*** including:

Table 1: Leverages IT Best Practices and National HIT standards and initiatives as well as technology trends

Technical Service Classification	Technical Capability Descriptions
Service-Oriented Architecture (SOA)	Our proposed Solution will enable DHS to implement a scalable, robust software solution that is feature rich, user friendly, and highly flexible. Built on Java/JEE architecture, the Solution is Service-Oriented Architecture (SOA) compliant.
Modularity	The IE-BM Solution is comprised of multiple modules of specific functionality knitted together seamlessly through a service-oriented architecture. Although IBM Cúram is a COTS product it is comprised of functional modules; such as Provider Management, Income Support, and Universal Access; that enable DHS to expand the scope at a future date to address new operational requirements.
Reusability (Build Once Use Many Times)	The IE-BM Solution exemplifies reusability by incorporating DHS' current technology investments. The Solution is built on the same foundation that is currently supporting MAGI. It relies on DHS' existing Document Management Solution which will be tightly integrated to the new Case Management Modules, as well as the existing Reporting and Data Warehouse solutions.
Multi-channel Access	Multi-channel access is an essential component of a person-centered approach. Clients and Workers should have access that fits their needs. Clients can access services by phone, in-person, or through a portal either on a computer or mobile device. This

Technical Service Classification	Technical Capability Descriptions
	allows them to select the mode of their choice to engage with DHS. Workers and staff will have access via computer or mobile device to reporting dashboards as well as system functionality.
Social Networking and Collaboration	The IE-BM Solution supports the need for Workers and other users to engage across their teams in real time. Chat functionality will enable users to converse online using the functionality they are accustomed to using in many social networking applications. Additionally, DHS may decide to include hyperlinks within the IE-BM Solution for external sites that will be helpful to users. The Web Content Management capability is explained in detail in T-9 Technical Requirements Approach, Section 2.1 Usability.

Core to our proposed Solution is the existing IBM Cúram Social Program Management Platform currently used for MAGI Medicaid, Cognos for Reporting, and DHS' Document Management Solution. We understand the financial constraints facing agencies today and the need to expand investments to the agency's benefit. Our proposed phased implementation approach will help to reduce the risk and issues resulting in a total replacement of legacy systems at once. Our approach is discussed in greater detail in T-11 Implementation Requirements. In doing so, the IBM team will help ***improve the experience for both the organization user, consumer, and the trading partners***. The Client experience will be greatly improved with the inclusion of the 'No Wrong Door' approach providing Clients a single point of application to multiple programs; MAGI, Medicaid, CHIP, SNAP, TANF/TEA, WIC, Child Support, Child Care, LIHEAP, and Veteran Benefits. Whether a Client is seeking to apply for one or many programs, they will log in to the Client Portal and complete a single integrated application, which is smart enough to ask the questions necessary based on the Client's needs and motivations. The IE-BM will pass data to external applications, as needed to determine eligibility for benefits administered outside of the IE-BM Solution.

Additionally, Clients will have access to functionality which will help to promote self-service and accountability:

- Pre-screening to identify the programs for which they may be eligible;
- Secure personal account to manage applications, notifications, and verifications;
- Personalized views of available supported services in their area; and
- Abilities to report changes in their circumstances online.

Providing Clients with centralized access to self-service options will result in a much more person-centered experience for your Clients. Our experiences in similar implementations for other states has shown that this leads to greater client satisfaction.

How We Will Help You Achieve Your Vision

Information drives the organization and the ability to understand your Client, the services delivered, and the outcomes achieved which provides the foundation necessary for data driven decisions. Analytics are now an essential aspect of human service programs. Over the past several years we have seen a trend toward using data to drive accountability of Clients, staff, and providers. The emphasis on data requires a high level of trust within and outside the agency as to the accuracy and timeliness of the data.

Master Data Management is an important component in an integrated eligibility solution to resolve identity across systems and support incremental development. The IE-BM Solution ***strengthens the value of Master Data Management*** through an architecture that places it at the front door. Identity is not resolved after the fact, it is resolved at the point of system access for providers and consumers. The Master Data Management component will also improve Identity Access Management though enhanced authentication process leveraging PARIS (Public Assistance Identification Registry System). This will verify not just that the individual has the correct user name and password, but that they actually are the entity associated with the user name and password which is of increasing importance in an age of growing data security concerns. Through user verification, the Solution also enhances enterprise content management.

IBM's ***consent management component*** will be a fully integrated process within the IE-BM Solution. Privacy and Consent will be layered on top of the Cúram Role-Based Access Control and is seamless to the IE-BM Solution user. Layering privacy controls supports a more fine-grained approach required for cross-program collaboration while complying with HIPAA, CFR 42 Part 2, and other policy directives. The Solution provides the capability for the layers can be updated as roles, policies, and legislation change, enabling your organization to provide appropriate and current user access information. Consent is an added component that enables the constraints supported through the privacy and role based controls. The Consent registry resides in Cúram but the Consent service can also be used by an array of applications. Access can be controlled at multiple levels, including page or record level in Cúram and Cognos. We have also included break-the-glass function to override Consent for emergency data access. Email and SMS alerts will be generated when such overrides occur to provide complete transparency.

SECTION HIGHLIGHT

One of IBM's successful implementations of consent management is for the County of San Diego. We are proposing to leverage the robust consent management component implemented for the County for the State of Arkansas as well. The IBM team will be able to reduce customization and implementation time for the IE-BM Project by re-using this asset as a foundation for your consent requirements.

Improving data integrity on the front end, from the point of intake through the complete lifecycle, enhances data on the back end in the form of Reporting, ***Business Intelligence and Shared Analytics***. Teaming with the Northrop Grumman Corporation (NGC), who brings intimate knowledge of the Enterprise Data Warehouse, the IBM team will expand and enhance the enterprise data model to support your current and future information needs. Using Business Intelligence and Predictive Analytics capabilities supported by Cognos, our proposed Solution will help DHS gain a better understanding of your Clients and the challenges they face, and identify the optimal approach to realize positive outcomes. This is important not only for the development of evidence-based protocols, but also for resource planning and management.

In the subsequent sections, we provide greater detail on how the IE-BM proposed Solution will ***provide the functionality required to deliver the business benefits outlined in the RFP.*** Briefly, our proposed Solution includes the following functional areas:

- Clients will have the ability to apply over the web, mobile, telephone, and by paper for programs offered by the DHS and other organizations specified in the RFP using a single integrated application. With each subsequent project phase, additional functionality will be added, supporting real-time eligibility determination as each program is rolled out and with the final phase providing ***web-based, real-time eligibility determination through an integrated application that supports multiple programs***.
- Our proposed Solution is designed to guide the Client, Intake Worker, and Eligibility Worker through each process and task associated with the client registration and intake processes. The Solution will request data and present screens in a logical, organized fashion based on information provided by the Client, so that only the necessary questions are asked. Required evidence will be identified, ***collected, verified, and processed along with additional information needed prior to benefit issuance***. This will reduce the processing time and decrease the effort required by the Eligibility Worker by increasing the level of automation.
- Our IE-BM Solution provides extensive calendaring functionality allowing DHS staff to record and keep track of appointments, activities, events and meetings. At the point of ***Intake, Interviews will be scheduled where necessary***. During the interviews, the Solution will facilitate a guided evidence capture process to support the Intake and Eligibility Workers. The guided evidence capture will improve the quality and consistency of information across DHS Clients and programs
- The Eligibility and Benefit Management functionality provides a consistent, efficient, flexible, and automated mechanism to address cross-program eligibility determination, ***benefit issuance, redemption and management for programs other than Medicaid***. It does so by determining Applicant eligibility based on the program rules and determines the specific level of benefit (payment or service) that an Applicant is entitled to receive. Once eligibility is confirmed, the Client will receive a welcome package describing the pertinent details of their benefits and contact points in case additional information is needed. In cases where program financial management is administered in our proposed Solution, as benefits are delivered, they will be tracked in the financial management component of the case, enabling DHS to resolve discrepancies that arise from retroactive legislation or change in Client circumstances.
- Clients will have the ability to **submit Client changes** and updates online for programs within the IE-BM Solution's case management scope. This will help to facilitate more timely receipt of information and lessen the likelihood of retroactive changes resulting in over and underpayments. When changes are reported and data is updated in the Client's case, the action will trigger the redetermination of eligibility, automatic recalculation of benefits, and update the financial component to reflect the difference. In some cases, a liability, resulting from calculation of an overpayment, will be generated and trigger processes to handle recovery through benefit deductions. Other updates reported by Clients, or through automated interfaces, or provider reporting may result in redeterminations that may result in benefit sanctions, suspended or terminated case processing.
- Authorized users will have the ability to conduct a cross-program ***client look-up and query***. The search will return results based on the completeness of the information

entered. A probabilistic search will return the highest ranking results from which the Worker can select the correct result after reviewing the additional demographic information.

- Throughout our IE-BM Solution, DHS will have robust ***Reporting and Business Intelligence*** capabilities. Cognos will provide DHS a combination of standard, parameter-driven and ad-hoc reports as well as the functionality to support advanced analytics. The IBM team will work with DHS to develop reports with each phase as the programs are subsumed into the enterprise solution. Additionally, the IE-BM Solution supports real-time alerts or notifications which can be used to inform and direct Workers and other systems users. This will help to improve their ability to deliver necessary services and benefits to your Clients.

Our IE-BM Solution provides DHS an optimal fit, which leverages your current investments, as mentioned above, while bringing you industry leading capabilities in human services program management, master data management, and business intelligence. The underpinning COTS-based solution also provides the advantage of a proven product, currently in use by other state agencies to deliver the same programs and meet similar business needs. This will allow the State to benefit from a shared client community of peer governments, with similar need and interests, who work together to influence future product enhancements and develop shared assets. In this way, our IE-BM Solution continues to adapt and support the evolving needs of governments beyond product improvements and advances. You may choose to participate in user collaboration communities to share practices, address shared challenges, and collaborate on new innovations. We encourage such outreach and will support you as part of our user community.

As you read through the subsequent sections, we hope you gain an appreciation for how well our proposed Solution provides a person-centered experience for Arkansas Clients, and the DHS Workers alike.

1.2 Approach to General Requirements

The Vendor should ensure that the responses to this section are in alignment with the requirements set forth in Template T-6 – Functional Requirements Traceability Matrix, Tab FR1 – General Requirements.

1.2.1 General Requirements

Significant System capabilities in this area include: ■ Providing capabilities to cleanse/manage master data/client information ■ Providing multi-lingual capabilities ■ Tracking all Case actions **Instructions:** The Vendor should describe its approach to addressing General requirements.

This section will focus on the requirements listed within Template T-6 – Functional Requirements Traceability Matrix, Tab FR1 – General Requirements. As these requirements, specifically FR1.1 through FR1.26, cover a variety of topics discussed in greater detail as applicable throughout this document, discussions here will be at a very high level. Requirement FR1.27 is discussed in section 1.2.3. User Account Management.

Topics discussed in this section focus on five (5) main capabilities:

- Access via the Client Portal;
- Self Service Features;
- Intake Processing;
- Ongoing Case Management; and
- Monitoring and Tracking Capabilities.

Access via the Client Portal

The IE-BM Solution provides an end-to-end integrated application intake process that monitors status and processing timeframes for programs selected on the application, identifies verifications required to process the integrated application, and tracks the receipt of the verifications. The IE-BM Solution's Client Portal will provide Clients and Authorized Representatives online access to the system from desktop and mobile browsers. The IE-BM Solution will provide online access supporting the pre-screening and application processes, as well as secure, restricted access to Client and case information. Client communications will be available within the required languages specified by DHS. Configuring languages and locale text is a core configuration feature of the system that has been successfully used for New York City and many other Cúram clients around the world. Language text is configured separately from the screens, notices and other displays to ***easily allow for standard multi-lingual configurations***. **[FR1.8]**

Given the sensitive, confidential nature of information housed in the Solution, access to Client and case information requires log-in credentials. Log-in credentials - a user name and password - grant access to the IE-BM Solution and determine what information the user can access and the tasks and activities that they can perform. For example, a Client accesses the IE-BM Solution through the Client Portal. Their credentials allow them to access their personal and case information for cases for which they are a member. And, through their landing page, they will have the ability to complete multiple transactions including:

- View communications issued by DHS as they relate to their case(s)
- Initiate a communication to their assigned Worker,
- Report a change,

- Submitting Renewal forms,
- Check the status of an application or benefits, and
- Upload verifications needed to determine eligibility or maintain existing benefits.

Our proposed Solution provides role-based portals for both Clients and Authorized Representatives, internal Workers, and Navigators. Authorized Representative, when accessing the IE-BM Solution through the Client Portal, will have access to the cases and functions related to the Clients they represent, but with greater limits in functionality than the Client themselves. Representatives of other agencies, such as navigators will have limitations on the data they can access and the tasks they can perform are also governed by their credentials and the sensitivity level of Client data. For example, some external users may have read only access to a specific set of data limited to Clients receiving benefits from their agency while DHS Intake and Eligibility Workers will have access to Client and case information such as Client demographics, eligibility information including eligibility periods and benefits issued. **[FR1.11, FR1.13, FR1.15]**

SECTION HIGHLIGHT

One of IBM's successful implementations of user interface requirements is the work we did for the State of Missouri. IBM utilized its in-depth knowledge of the Cúram product to work with Missouri to develop a user interface that focused on limiting customizations and leveraging out-of-the-box capabilities to meet Missouri's needs. We propose using a similar collaborative approach to provide the State of Arkansas a quick delivery of user interface requirements.

The IBM team has successfully implemented user interface and portal requirements for multiple similarly-sized State agencies, including North Carolina and Missouri. The IBM team worked closely with the State of North Carolina to develop a Client Portal that included wording, sentence structure, and grammar to target a specific grade level understanding of English for its Clients. As a result of the readability requirements, North Carolina citizens have been able to easily navigate the State's Client Portal.

In Missouri, the IBM team worked collaboratively with the State to conduct requirement elaboration and clarification sessions. The IBM and State team compared out-of-the-box functionality to the functional requirements required by the State, an approach that allowed the State to take advantage of the out-of-the-box functionality. We will utilize a similar technique for the State by identifying process changes that do not impact delivery based on established policies and procedures, and document and validate changes needed to address gaps within RFP scope during Design sessions.

The IE-BM Solution provides a user interface (UI) that is and has been employed by social enterprise organizations worldwide. The UI available through the V7 release is crisp, clean, and intuitive. The IE-BM Solution's V7 browser based user interface is designed specifically to support persons with disabilities. The Solution conforms to both the US Federal Section 508 requirements for accessibility for persons with disabilities and the Americans with Disabilities Act (ADA). The figure below is a representative view available with the release of IBM Cúram V7. Functions available on the representative view can be incorporated into the existing State portals and public facing pages to grant broader access to features and support 'No Wrong Door' **[FR1.23]**

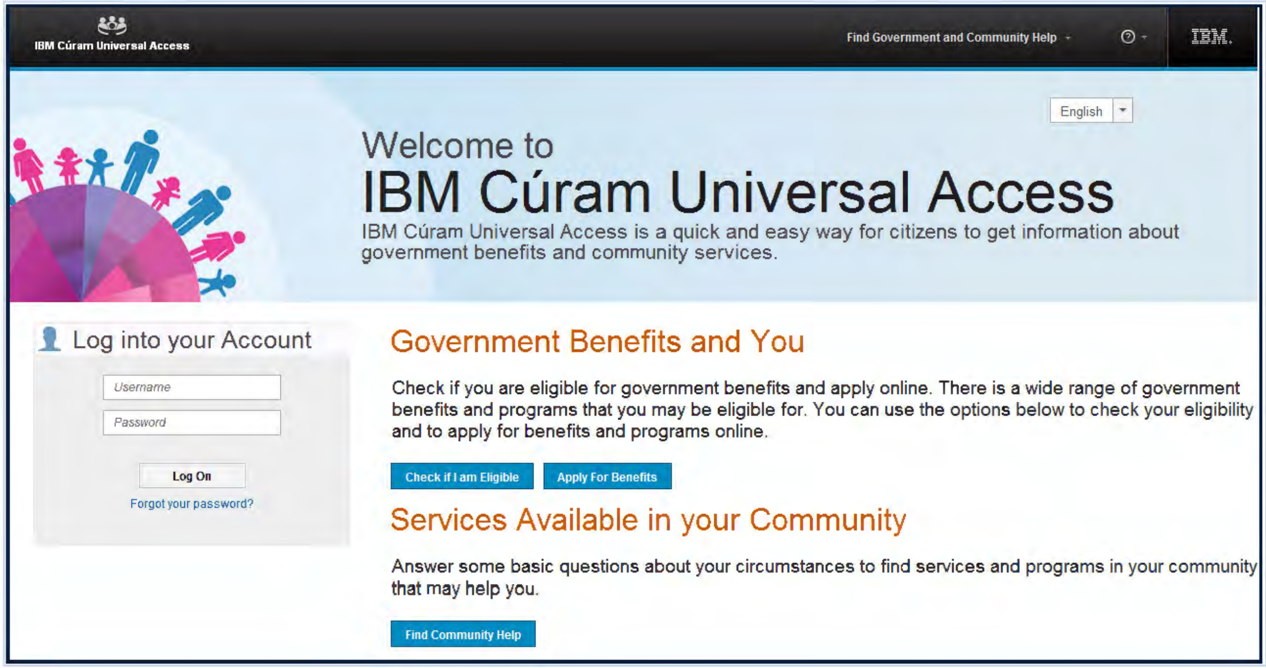


Figure 2: The Client can access the IE-BM Solution via the Client Portal. Additionally, those seeking information concerning benefits and services can access that information directly, no log-in credentials required.

Self-Service Features

The IE-BM Solution's Client Portal will provide online access to individuals seeking information about the programs available through DHS and other specified agencies and allows them to check potential eligibility for one or multiple programs. The pre-screening process can be anonymous in that it does not require that the individual create an account. This process will, based on the program or programs selected, gather general information such as demographics, employment, shelter, and resource information for individuals listed. This process does not require that information provided be validated; however, it does compare the information provided against general rules for each of the programs selected. Pre-screening results reflect potential eligibility and does not indicate actual eligibility. If pre-screening results indicate potential eligibility, the person providing the data can opt to create an account. By creating this account, certain data elements provided will pre-populate fields on an application subsequently filed.

Completing an application requires that the Applicant provide data. The integrated online application supports the Applicant's ability to apply for multiple programs, for example SNAP, TANF/TEA, WIC, and Child Care. The IE-BM Solution will, based on the programs selected, collect the necessary data needed to determine eligibility for each program, minimizing the time spent by the client on the application entry. Questions posed to the client will be based on answers that they provide. For example, if a member of a household is employed, the IE-BM will request and collect employer, wage, and possibly insurance information. The IE-BM Solution will leverage information available for Individuals known to the system or those receiving benefits or services from specified agencies, such as Medicaid, LIHEAP, or WIC recipients, by pre-populating fields on screens as they are presented to the Applicant where security and policy permits. For example, the IE-BM Solution will bring in existing data available for an existing Medicaid recipient applying for SNAP through their secure online account. The applicant will have the ability to review and modify pre-populated information and answer the additional necessary questions required to determine eligibility for SNAP. The Applicant must sign the application in order for the process to move forward. In this instance, the IE-BM Solution will accept an electronic signature, signifying the Applicant's acknowledgement that data provided is accurate. **[FR1.1, FR1.2, FR1.12]**

Prior to the scheduled interview or a determination of eligibility, the Applicant's circumstances may have changed or they may decide to withdraw their application. The screen in the figure below depicts the type of information an Applicant will see when viewing submitted applications. You can see on the far right, the Applicant has a hyperlink available to them to withdraw the application, if they so choose. Since our IE-BM Solution schedules, screens, and requests data based on the user's responses to questions, the Applicant will be required to select the program(s) for which they are withdrawing their application, indicate the reason for the withdrawal, and electronically sign the application. Our IE-BM Solution will cancel previously scheduled appointments that are associated with the request and the date and time are among the transaction details that will be recorded and added to the case activity log. The Solution will auto-generate a notification of the withdrawal, detailing the programs impacted and the reason indicated and send the notification to the Applicant via their preferred method of communication such as mail, text, or email. **[FR1.6, FR1.7, FR1.21]**

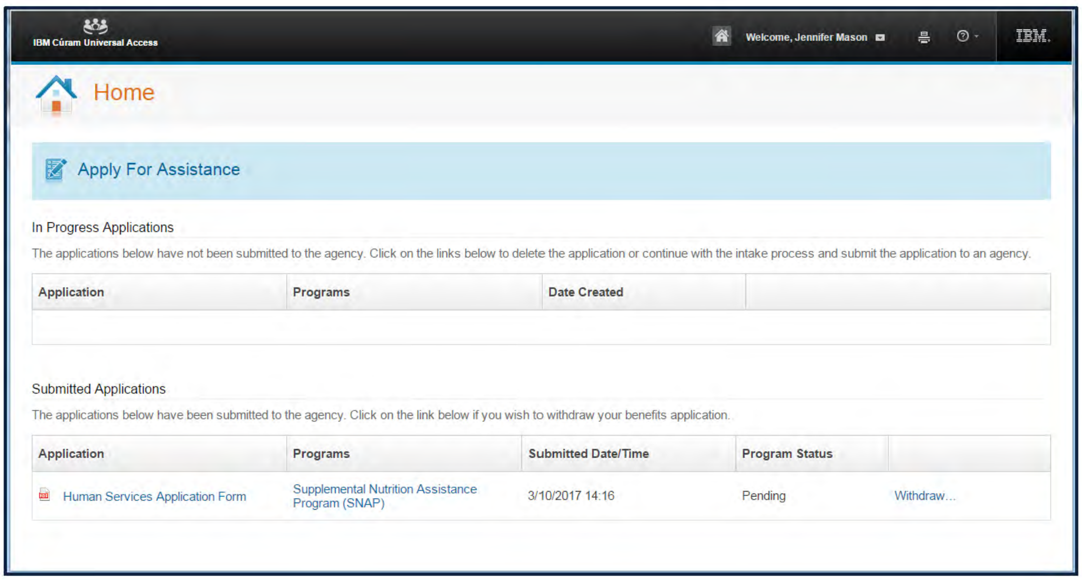


Figure 3: The Applicant can withdraw an application using the self-service option.

Once completed, the Applicant will electronically sign and submit the application. The Solution will then guide the Applicant through the process of scheduling a face-to-face interview with DHS staff, as required by each program. From that point forward the DHS Workers will review and validate data as required by policy to pursue the determination of eligibility for the applied programs.   **[FR1.14]**

Once the application is signed the Solution will, based on DHS predetermined rules, electronically route it to the assigned unit or Worker. Using the date the application was filed, the Solution will track processing days by program. For example, an integrated application may include requests for TANF/TEA, SNAP, and LIHEAP benefits. The IE-BM Solution will notify the Eligibility Worker prior to the processing date for SNAP that the processing deadline is approach, and do so again when the TANF/TEA processing date nears, and again for the LIHEAP program. The timing of the Eligibility Worker's notification and the number of reminders is configurable to meet the instructions given by DHS. For example, the Eligibility Worker may be notified ten days prior to the SNAP processing deadline and again five days prior to the deadline. Once the reminder appears on the Eligibility Worker's landing page it will remain on the task list until processed, transferred to another Worker, or escalated to a Supervisor.

Our IE-BM Solution's self-service feature provides Clients and Authorized Representatives with a means to securely access their case and personal data. Role-based log-in credentials control Client access to cases for which they are an active member and limits the actions they can perform via the Client Portal. The Client experience is also driven by the status of the Client's applications or cases. A Client without active cases has a different experience than a Client with active cases, as there are different levels of information required by each. Potential Clients without active cases have the capability to monitor their application status as in the screen above. Clients with active cases can check on the status of a pending applications that may exist, the issue date and amount of benefits, the balance and repayment period for overpayments tied to their case, communications issued by DHS, and, using the Solution's calendar feature confirm scheduled appointments with DHS staff or request a meeting with their assigned Worker. **[FR1.9]**

Intake Processing

If the Applicant has requested the assistance of an Intake Worker, the system will assign the application as instructed by DHS and generate a notification to the Intake Worker of the newly assigned case. As is the case for an online application completed by the Applicant, when Intake Worker assistance is requested IE-BM Solution will guide the Intake Worker through a series of screens based on the data entered. This process will continue until required data is captured and the worker has submitted the application. The Worker entering application data will conduct a search on individuals listed on the application. If the Applicant is known to the IE-BM Solution, data available will be pre-populated on applicable screens as shown in the figure below. For example, Jennifer Nelson received SNAP benefits four months ago. Jennifer Nelson's name appears on the search results and is selected by the Intake Worker. The data available for Jennifer, including date of birth and social security number, will pre-populate screens as the Intake Worker progresses through the process. In other words, the IE-BM Solution will leverage available data from trusted sources to alleviate the need to re-enter data. The figure below provides a sample of information populated based on Jennifer's prior involvement with DHS or one of the agencies utilizing the IE-BM Solution's integrated application capabilities. [**FR1.2, FR1.21]**

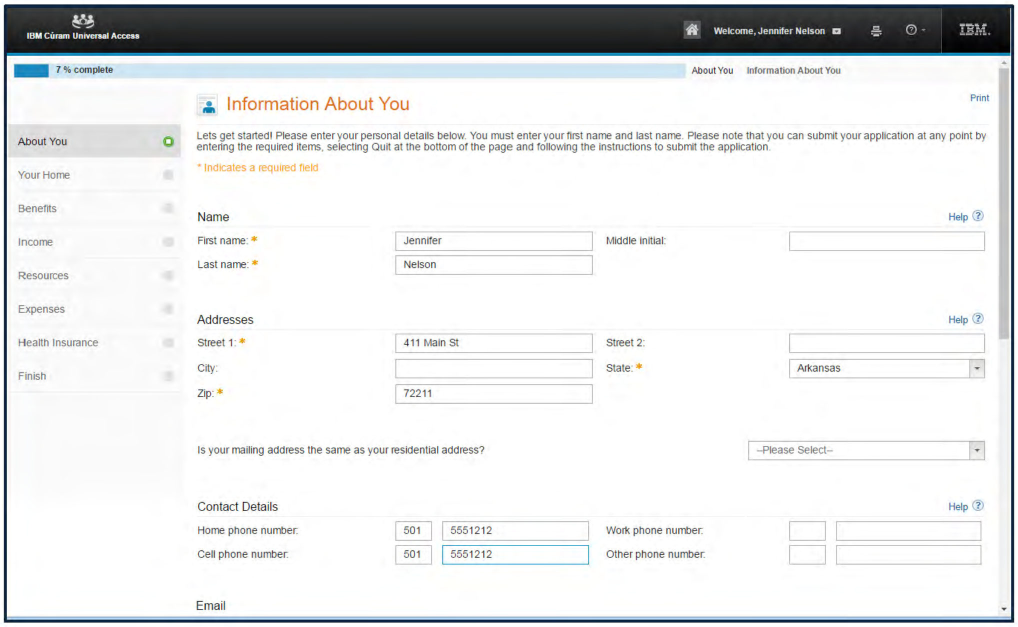


Figure 4: The IE-BM will pre-populate fields by leveraging data available in the IE-BM Solution databased and approved external sources.

Upon submission by the client, our IE-BM Solution will monitor processing timeframes by recording the date of the application and creating required timers for the programs selected. Since programs have different processing timeframes, for example SNAP must be processed in 30 calendar days, TANF/TEA in 45 calendar days, the system will track the days against the program and generate reminders to the Eligibility Worker and/or their supervisor as the processing deadline approaches. This will help the Worker manage their time, promote timely application processing, and benefit the Client through timely receipt of benefits. **[FR1.3]**

The IE-BM Solution will apply verified data against program-specific rules to determine eligibility for the individuals on an application, for the programs selected. Eligibility determination results may indicate that the Client or Client household is eligible for emergency benefits. Processing timeframes may be shortened and the benefits calculated in these cases are typically pro-rated. For example, a SNAP application with potential eligibility for Emergency SNAP benefits must be processed within ten (10) calendar days whereas in a non-emergency, the application must be processed in 30 calendar days. Additionally, the Emergency SNAP benefits will be pro-rated taking into account the date of the application and issuing benefits for the balance of the application month.

Subsequent SNAP benefits, if eligible, will be full month allotments. The eligibility determination results will update the program status for household members. For example, if the application for SNAP benefits includes four household members, at application, the participation status for each member will be Pending. Once the application is processed and the IE-BM Solution determines that the four (4) members are eligible, the status for each of the four (4) members is automatically changed to Open or Active. The Eligibility Worker is not required to manually change each members program status. **[FR1.10, FR1.22]**

Ongoing Case Management

Authorized Workers will have the ability to easily search and maintain Client information. As shown in the figure below a Worker can open a Client or Applicant record and directly edit information on the screen, if authorized to do so, and if the information has been verified. Users can schedule interviews and other activities in the Client calendar. This interaction can be manually or automatically recorded within the Communication records for each participant in the system. **[FR1.19]**

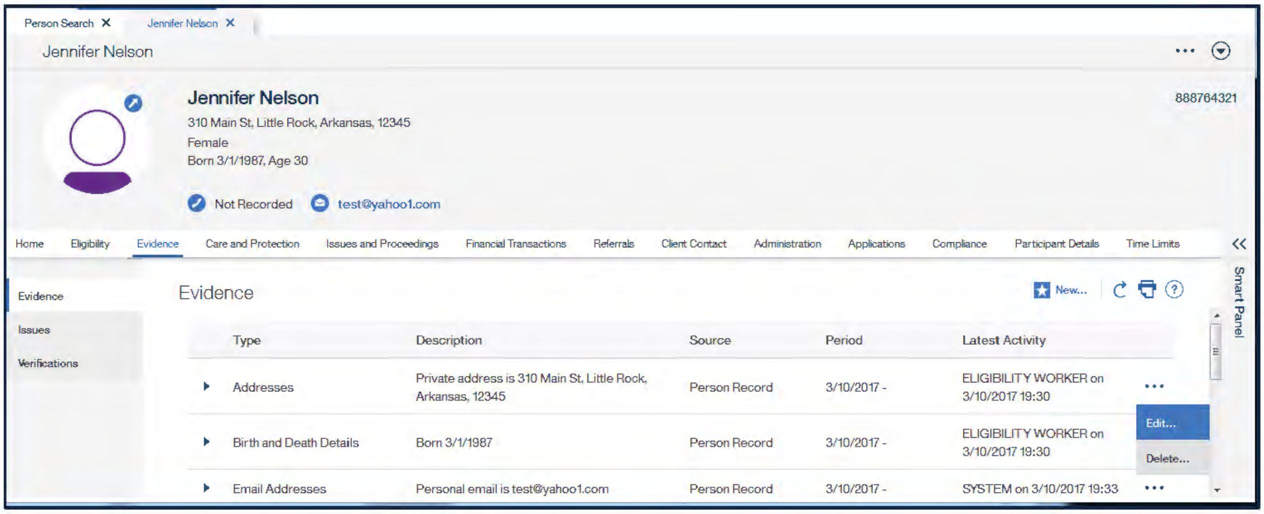


Figure 5: Authorized users can view and edit Client data as needed.

The Solution will maintain detailed history of Client eligibility periods, case transactions, and details of who accessed the case and the actions taken on the case. Authorized individuals will have access to case and personal information. For example, authorized staff may access the history of Client benefits, application status, and history of eligibility determinations and results. **[FR1.26]**

As part of the eligibility process the IE-BM Solution will review the status of each Client to determine the presence of sanctionable activity. Programs such as TANF/TEA and SNAP will sanction Clients for certain behaviors that contradict program eligibility requirements. Program rules governing processing timeframes and eligibility period are often measured in calendar days. The IE-BM Solution will factor in the number of days in each month, including 29 days in February in leap years. Daylight saving time start and end dates will also be taken into consideration as part of the IE-BM Solution. **[FR1.20]**

Client action or inaction may result in sanctions levied against the individual. For example, based on program rules and regulations, Clients receiving SNAP benefits who fail to comply fully with work requirements may be sanctioned based on DHS policy. The Eligibility Worker can manually initiate a sanction or the Solution can automatically apply sanctions in accordance with SNAP policy once the Eligibility Worker or other authorized staff enter the Client's refusal to comply with the work program participation requirements. The IE-BM Solution supports sanctioning as shown in the figure below, where users can view sanctions and associated details. Sanctions can be time-based, as shown by the start and end date in the example below. Sanctions are applied based on program regulations. For example, if an individual's action or inaction results in a sanction in both SNAP and TANF/TEA, the IE-BM Solution will track the individual and duration of the applicable sanction by program. Sanction periods and applicable details will be recorded as part of the individual's history. The IE-BM Solution can apply the balance of a sanction period at a future time based on program policy. If the case closes and a member of that household's sanction period has not expired, the balance of that sanction can be applied to that individual's eligibility at reapplication for that program in the future.   **[FR1.24, FR1.25]**

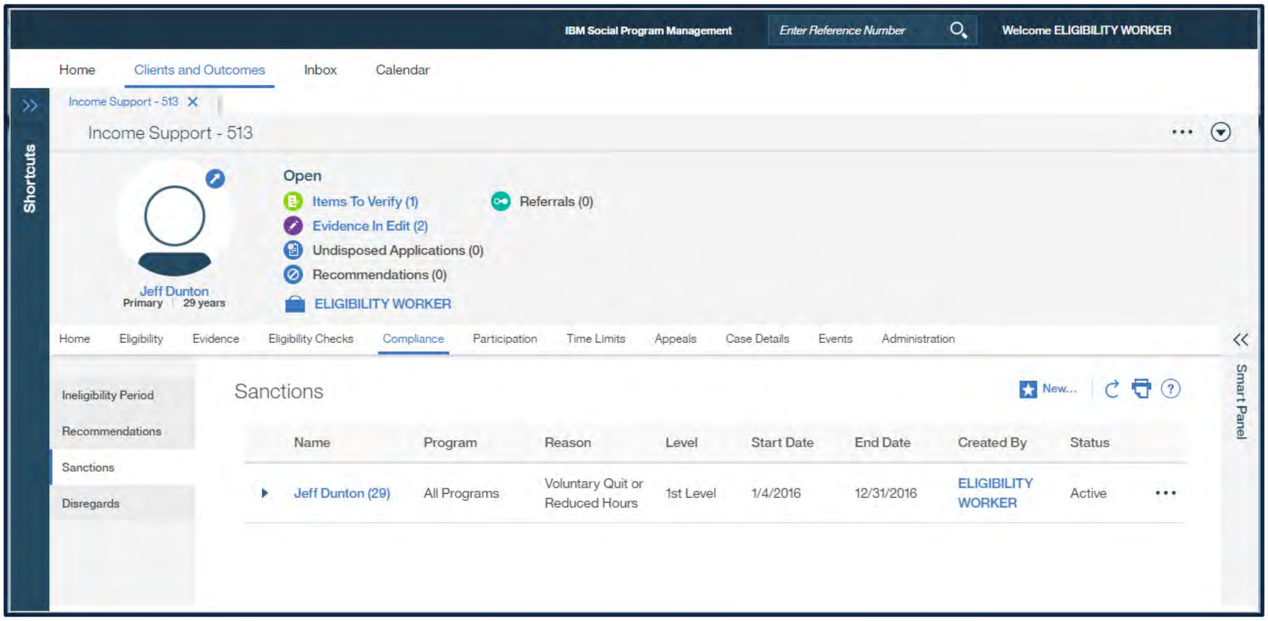


Figure 6: The IE-BM Solution will provide details for imposed sanctions by Client, by program.

Monitoring and Tracking Capabilities

The system will ***track Case actions*** including maintaining a record of those accessing a case and the tasks performed. For example, if a Client performs a task such as initiating a change via the Client Portal, the IE-BM Solution will track the action, date, time, person taking the action, and the method (Client Portal self-service), which can be reviewed in real-time by accessing the case activity log. The Solution will also track events or activities within the case's lifecycle – from opening and activation or payment of benefits through to reviews, renewals, suspension, or closure actions. Some programs require a case review while others may not; periodic programming occurs however the frequency differs.

The Solution monitors workflow and tasks by program. The Solution's alert feature, configured to support your program-specific, task-specific requirements lessens the pressure on your Workers with reminders and, when necessary escalations to Supervisors   Transaction tracking can be used for audit purposes and can also be analyzed to provide Program Administrators insight into the features Clients access. For instance, DHS staff can access clients who have taken action via the Client Portal self-service and those who complete the same action via paper form to identify trends between the two populations and if needed create outreach efforts where their aim is to increase online usage. **[FR1.3, FR1.4, FR1.5, FR1.11, FR1.15, FR1.16, FR1.17, FR1.18]**

As discussed in this section, our IE-BM Solution provides secure access facilitating Client access to self-service options including researching available programs and services, testing for potential eligibility for one or more services, application filing, and accessing case information to check the status of an application and benefit details. Self-service options increase Client independence and responsibility. Access to the IE-BM Solution at their convenience allows Clients to report changes and schedule appointments with DHS Workers that meet the Client's availability and schedule. The IE-BM Solutions tracking feature collects details concerning access to the system, who accessed what case and which data, the actions or tasks performed and the date and time performed. The tracking feature supports audit requirements but also sets the timer and Worker notification cycles for time-sensitive events. The Solution's ability to leverage available data across previously identified systems coupled with the exchange of current, verified data across those systems will help to eliminate redundancy of data entry, promote the ability to check and update known data, and can prove helpful in the detection of fraud.

1.2.2 User Interface Requirements

Significant System capabilities in this area include:

- Providing a user interface which allows for DHS workers to perform their tasks efficiently
- Providing Clients and Applicants access to all self-service functionality in multiple languages
- Providing context sensitive help information and decision-support tools
- Providing Clients with access to a mapping tool with directions to DCO County offices
- Conforming to State and industry-recognized user interface standards for all System screens, windows, and reports
- Making all applicable forms available for users to download, pre-populated with the Client's information previously provided to any Program
- Supporting Client access through multiple on-line channels including computers and mobile devices (e.g. tablets and smart phones)

Instructions: The Vendor should describe its approach to addressing User Interface requirements. The Vendor's response should include a discussion regarding access through multiple on-line channels (i.e. State workers should be able to access the system from PCs and tablets and the citizen's portal should be able to access the system from PCs Tablets and Mobile Phones)

Our IE-BM Solution leverages the IBM Cúram Social Program Management Platform (SPMP) which provides a crisp, clean, uncluttered user interface incorporating the following improvements:

- **Font** – Easy to understand page content with easy to read fonts;
- **Spacing** - Increased spacing allowing Workers greater accuracy in selecting and activating screen components;
- **Contrast** - Higher contrast setting as its default, text and icons visually sharp;
- **Hover** - Hover feature and selected states are visual indications of user mouse location;
- **Color Palette** - Uniformity and consistency across screens while providing crispness.

User interface capabilities also apply to tablet usability supporting user navigation. Both your Clients and authorized IE-BM users will find straightforward interactions that make it easier to process their tasks. Navigation features and screen layouts combine to facilitate intuitive easy access to case and Client information. Access to current information and intuitive system navigation helps authorized IE-BM users complete tasks and perform their assigned responsibilities efficiently.

In the remainder of this section, we will describe how our proposed Solution addresses the User Interface requirements across five (5) experience areas:

- Access and Navigation,

- Role-based Worker Experiences,
- Client and Authorized Representative (AR) Experiences,
- Forms, and
- Online Help.

Access and Navigation

Access and navigation are a key driver in user satisfaction across our implementations, where we have delivered improved organizational and user experiences to Clients, external users and agency staff across multiple Integrated Eligibility implementations. Our North Carolina Families Accessing Services through Technology (NC FAST) project, a Cúram-based integrated eligibility and case management solution, is an example of this and currently supports multiple agencies and a wide array of Clients including recipients of:

- TANF/TEA, SNAP, Medicaid, LIHEAP, and other eligibility-based programs;
- Aging and Adult Services; and
- ACA related health exchange programs.

This implementation was approached as an incremental modernization, where programs have been added to the solution over time. Further expansion is planned to encompass Child Services programs.

SECTION HIGHLIGHT

One of IBM's successful implementations of external portals is the State of North Carolina. IBM worked with North Carolina to configure the IBM Cúram-based portals to deliver easy to navigate portals for both Clients and Providers. These portals are in Production today. The Client Portal can be accessed by the public at https://epass.nc.gov/CitizenPortal/application.do

Similarities between the IE-BM Solution and NC FAST include:

- **User profiles** – configured to meet Agency requirements and used to regulate system access and determine the screens and information the user can view and the tasks and activities they can perform
- **Navigation** – use of shortcuts, tabs, links and dropdown menus. Easy, intuitive navigation and Worker ability to bypass a multi-step workflow and navigate directly to a desired screen or location within the Solution.
- **Real-time access** – authorized users have real-time access to case information and transaction histories based on their log-in credentials and their role and involvement in the case.
- **Real-time updates** –Clients, Authorized Representatives, DHS Workers, and others authorized to access and update information can review and update as needed. Validated data can be used immediately when determining eligibility and case notes inform those working with the Client of newly reported or discovered information.
- **Online Help** – provides information concerning processes, policies, and screen-related data.

The IE-BM Solution will incorporate benefits from the lessons learned and enhancements made to increase Worker productivity and enhance Client and Worker experiences across our implementations.

Role-based Worker Experiences

From their home pages, DHS and other authorized staff, based on their log-in credentials, will have secure access to clients, cases and the ability to manage their tasks and activities. The Worker's landing page organizes and prioritizes tasks and responsibilities, displays upcoming events, and provides alerts and reminders of time sensitive events. As seen in the middle portion of the figure below, a list of available pods, based on the user's role, allows the Worker to select the pods they wish appear on their landing page. Once selected, the Worker can arrange the landscape of the landing page by positioning the pods based on their preference promoting easy access to information and increasing efficiency. In the figure below the Worker appears to be relocating the My Appointments pod to the top center of their landing page. While navigation functionality is further discussed in the following paragraph however, the forward and back navigation links can be seen in the top right corner of the page. **[FR1.29, FR1.30, FR1.39]**

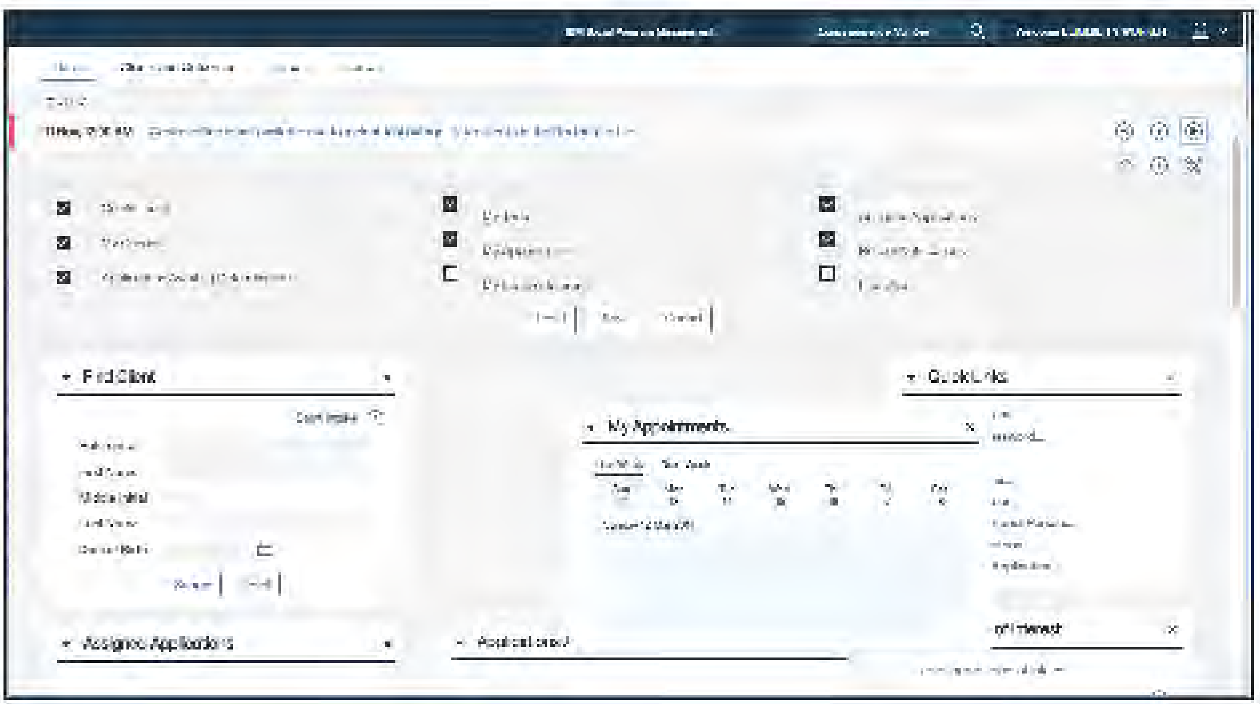


Figure 7: Users can select and position pods on their landing page to suit their personal work style.

The IE-BM Solution as shown in the figure below, our UI follows industry standards for user interfaces and will incorporate State standards for Client and Worker screens The security roles and profiles defined for Workers and Clients will provide the specific functional views for each user type. Throughout the Solution, language is in line with the educational level as specified within the RFP. **[FR1.33, FR1.47]**

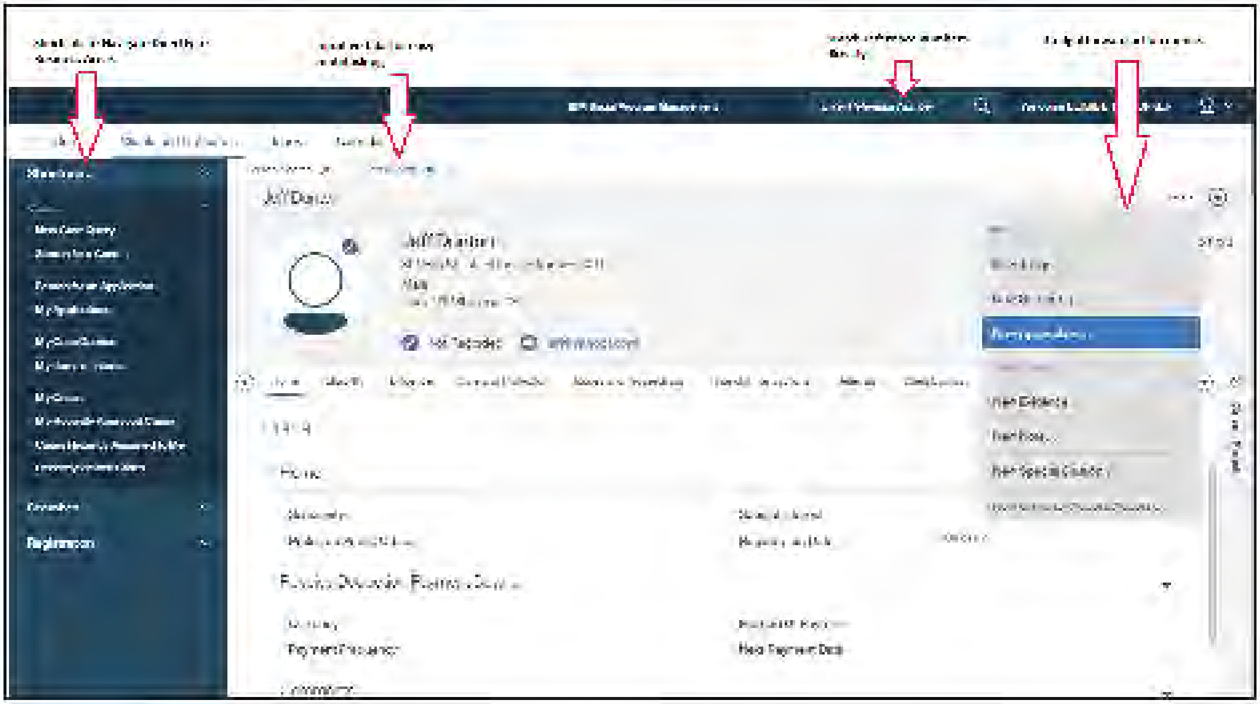


Figure 8: Navigation options allow the user to use shortcuts, select tabs and dropdowns, and access the Search feature.

As seen in the figure above, navigation features such as hyperlinks, tabs, dropdowns, and shortcuts provide options for movement. For example, Workers and other authorized users can complete tasks as guided by the Solution or, they can go directly to a specific screen or location by choosing a shortcut (left side of scree), a tab (middle of screen), or begin a new task by selecting an activity from a dropdown (right side of screen). By offering these options the IE-BM Solution accounts for the user's system knowledge and experience level and increases the efficiency of Worker activity by allowing direct access to a screen or activity. The use of the dropdown feature, in addition to providing access to activities as seen above, expedites and standardizes data entry by providing the user with data options for a specific field. **[FR1.28, FR1.31, FR1.32, FR1.46]**

User roles define the views that the IE-BM Solution will present to the user. For example, views presented to the Eligibility Worker differ from those presented to a Supervisor. The user's role also determines the information they can access, the level of detail available, and the tasks they can perform. DHS Workers assigned to a case will have access to current and historical case information. The figure below provides a list of previous Client applications. The Intake and Eligibility Workers, for example, can access information on these prior applications based on their role. This information can be compared to data on the Client's current application and can be used to structure interview questions as well. The Worker will also have access to communications issued to the Client. If the Client's communication was issued in another language, the version viewable to the Worker will be set to English. **[FR1.37, FR1.48]**

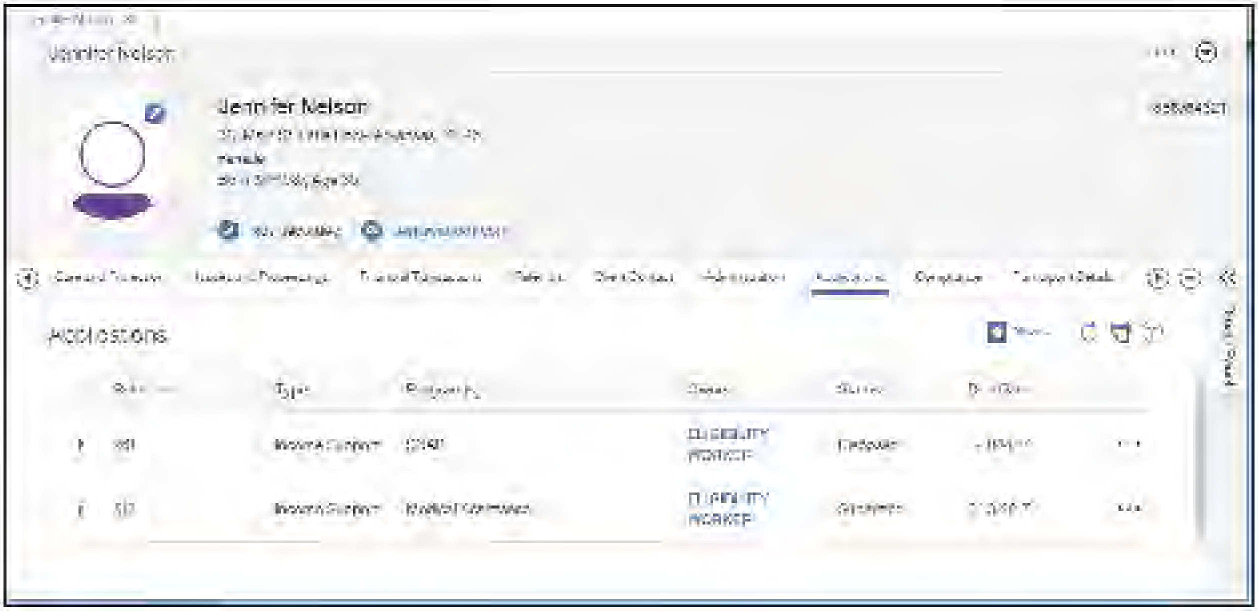


Figure 9: The Application list chronologically displays high-level details of prior applications.

Client and Authorized Representative (AR) Experiences

Clients and ARs accessing the secure self-service option can do so via the Client Portal. The user role will determine the screens they can access, the information and the level of details they can view and the tasks and activities they can perform on cases with which they are affiliated.

The IE-BM Solution's Client Portal provides Clients with secure access to their case. They can, in real-time, view benefit details including eligibility periods and benefit issuances, access communications, and initiate changes. Through our IE-BM Solution Clients and Authorized Representatives are offered opportunities to research available programs and services through non-secure public facing tools or through their secure accounts. As discussed previously, features are also provided to apply for new programs or services through guided experiences that deliver necessary detailed instructions to help the users understand and provide necessary data. Online help, discussed in greater detail below, is provided to address potential user questions and accessible throughout the process. **[FR1.40, FR1.49, FR1.50]**

Communication with a Client is crucial to obtaining accurate information and to inform the Client of their role and responsibilities as it affects their eligibility and entitlements for benefits and services. Not to mention the critical role it plays in their satisfaction with their interactions with DHS. The IE-BM Solution will capture and maintain the Client's and the Authorized Representative's preferred language. Using this information, the Solution will present portal views and generate communications. Languages to be offered include English, Spanish, and Marshallese. The Client and AR can also indicate the need for an interpreter at the time they enter their preferred language. The figure below provides a representative view of how preferred language information is gathered and tracked. As you can see, the Solution captures details concerning changes to this information.   **[FR1.34, FR1.35, FR1.36]**

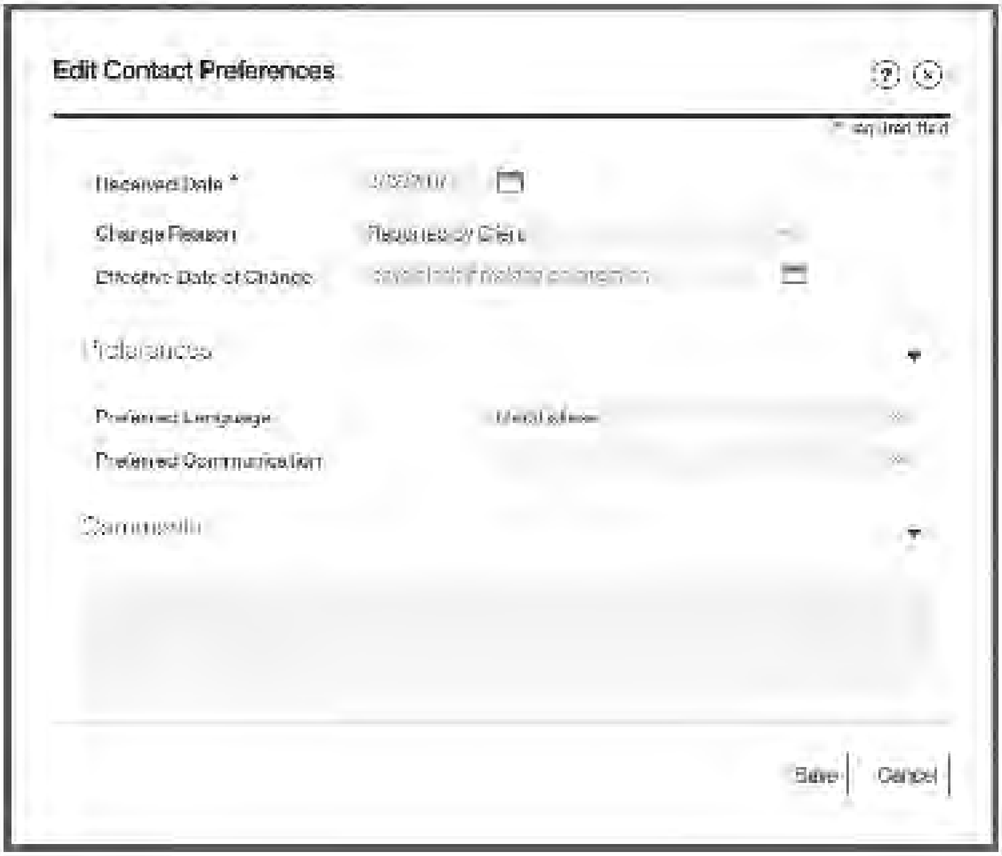


Figure 10: Clients stipulate their preferred language and method of communication.

Applicants, and Clients wishing to visit a DCO office for the purposes of submitting applications or required documents, meeting with their Eligibility or Intake Workers, or participating in interviews or other activities required by their programs can use the solution to find contact and location information. The Solution also provides guidance to those needing directions to the office through integration with Google Maps. The figure below provides a representative view of how the user can request directions from a specified location to a DCO County office – a concept familiar to those requesting directions via a service such as MapQuest.com or AAA.com. **[FR1.45]**

Figure 11: Clients can access driving and walking directions to a select local office.

Forms

Communications, such as an email or SMS message, will inform the Client that they have new information available and accessible via the Client Portal. When accessing their personal account, an informational message will describe the action(s) that they must complete. For example, at the time of renewal, the Client will receive an email informing them that they must access the renewal form via their Client Account. Once they access their account via the Client Portal, an informational message will inform them of the steps required to initiate the renewal process. The message will provide the option of completing the process online or downloading a form and submitting the completed paper copy to DHS. By accessing the link and choosing the option to provide the required information online, the Client will be guided through the process of entering data into required fields, saving, and submitting the data. The Solution will confirm that the data entry step in the process is complete.

The Client may prefer not to complete the process online and opt to download and print the renewal form. The Solution will pre-populate DHS-approved fields on the printed form and asterisk (*) the fields the Client must complete. Mandatory fields are based on program-specific requirements. The Client will be responsible for completing and signing required forms and submitting the paper form directly to DHS as indicated by the form's instructions. Redeterminations and Recertifications of eligibility are time-sensitive activities with impact to continued eligibility if the activity, regardless of method chosen, are not submitted timely. The initial communication and the system generated informational message will relay details concerning the time-sensitive nature of the activity and the limited availability of the forms based on the timeframes established by DHS and in compliance with program-specific policy. **[FR1.51, FR1.52, FR1.90]**

Online Help

The Online Help feature within the IE-BM Solution provides Workers and other users information and guidance necessary to perform system activities. It can be provided at the screen, task, and field level based on needs defined with DHS during design. It can also provide references or access to program policy documentation where applicable. Each screen has an available help section listing informational details or embedded instructions describing each section. The figure below provides an example of content Workers will see when accessing Online Help. Help content reflects the applicable business information, such as process or policy, or descriptions when requesting information at the field level. By selecting the topic, the Worker can access information concerning the steps required to complete a task. DHS will determine the format to be used when developing Online Help content for Clients and other users. For example, in addition to accessing online help as users are completing a task, users can access additional help by choosing the PDF version of content or, and through the use of Drupal, a multi-media format. The IE-BM Solution Portal and Online Help options are further discussed in T-9 Technical Requirements, Section 3.1.1. Presentation Layer – Portal. **[FR1.41, FR1.42, FR1.43, FR1.44]**

The availability of Online Help assists the user by providing real-time answers to their questions. Field definitions and descriptions explain what is needed; the ability to review a process gives a broader view of the steps and purpose of each step needed to complete a task; and access to program policy educates the user. For example, access to program policy can provide an explanation of what is factored into and eligibility determination, application and change processing timeframes, by program, and the acceptable verifications, by program, for information needed to determine eligibility. Access to this information informs the Client, and helps decrease the number of Client contacts with the Intake and Eligibility Workers so that case processing is expedited.

1.2.3 User Account Management Requirements

Significant System capabilities in this area include:

- Supporting one Client account for all programs on the IE-BM Platform
- Granting and limiting access to Clients, State staff, and authorized representatives to view/update information, based on user role, access rights and program rule
- Allowing users to update their username and password
- Capturing the Client's preferred method of contact
- Supporting Authorized Representative(s) for each user account

Instructions: The Vendor should describe its approach to addressing User Account Management requirements.

In this section we will discuss User Account Management requirements by grouping requirements using these topics:

- General Account Management
- Internal User Accounts

- External User Accounts
- DHS Account Administration

General Account Management

General account management refers to topics or system activity that apply to the entire user population, for example, password resets and system time-out due to inactivity.

Access to the IE-BM Solution requires a user name and password, regardless of the type of user. The System Administrator will assign a user name and temporary password to an internal user, for example an Eligibility Worker, a Supervisor, or support staff that will be accessing the Solution. Once the password is created and the account is provisioned, the pre-configured role of Eligibility Worker, Supervisor, and support staff will automatically provide access rights to the person logging in with that role. A Client creating a new account will also be required to create a user name and password. **[FR1.61]**

At times a user, internal or external, will forget their password or may decide to change their password. Both types of users, internal and external, will have the ability to update their passwords. For external users, the Solution will check to confirm that the account has not been flagged or locked in some way that does not allow a password change or reset due to the fact System Administrators have the ability to lock both internal and external user accounts. Other DHS authorized users will also have the ability to disable the login of external users, for specific situations – such as in respsponse to the detection of potential or proven fraud In cases where a Client has forgotten their password and their account has not been locked, they can reset it by providing answers to questions or specific hints. The figure below shows a sample password reset screen. [**FR1.64, FR1.65, FR1.75]**

Figure 12: By correctly answering Password Hint questions, Clients can reset their password.

Individuals working in the IE-BM Solution may need to step away from the system while in the middle of an activity. For example, a Worker may take a phone call or work directly with a Client or an Applicant may step away while in the process of completing an online application. The IE-BM Solution will automatically log a user out of the system if an extended period of inactivity occurs. This period will be configured based on DHS requirements, for example, if no activity occurs for twenty (20) minutes, the Solution will automatically log the user off after that specfied period of inactivity. This action will be initiated by rules and based on the Solution's tracking of the user's inactivity. Work will be saved and available to the point the user last saved thier fully completed field entry and will be returned to that screen once they resume the session by logging back in. For example, an Applicant is in the process of completing an online appication for TANF/TEA and SNAP for her household of four. Demographic data for household members one, two, and three has been saved. However, the Applicant only enters the child's name and month and day of the child's date of birth and saves the entry before the Applicant is distracted and leaves the site. When the Applicant returns to complete the application, the IE-BM Solution will return the Applicant to the demographic screen for household member four but only the child's name will appear as the DOB field was not saved since the Applicant had not entered the year the child was born, making it an incomplete field. **[FR1.76]**

The IE-BM Solution supports setting security to the field level. The sensitivity level determines who will have access to that data. For example, a case may be designated as highly sensitive and accessible by a limited number of staff, perhaps only Supervisors assigned to a specific office or region. Since a sensitivity level can be assigned to the data element level, highly sensitive Client data may be restricted and not accessible to an AR or a Eligibility Worker even if they have access to the case. **[FR1.61, FR1.83]**

Internal User Accounts [FR1.54, FR1.55, FR1.56, FR1FR1.79, FR1.82, GR1.83]

Internal user accounts are associated with DHS Staff and those defined by DHS as internal users. An internal user account is role-based. The user's log-in credentials allow the user to access the IE-BM Solution and regulates, to the field level, what the user can access and the tasks and activities they can perform. This discussion is focused on the Intake or Eligibility Worker's role in assisting an Applicant to create a new account which will allow them access to the IE-BM Solution.

DHS Workers may receive requests for assistance from Applicants and Clients navigating the IE-BM Solution and performing tasks. For example, an Applicant experiencing difficulty completing an online application can request the assistance of an Intake Worker during the online application process. That request will be routed to an Intake Worker, a Supervisor, or an Intake Unit based on the process put in place by DHS. The assigned Intake Worker will contact the Applicant and assist them through the process, including the creation of a Client Account. Worker assistance may also be requested if a Client wishes to add or discontinue the services of an Authorized Representative. If, during an in-person interview a Client indicates to the Eligibility Worker that they wish to authorize a person or agency to act on their behalf, the Eligibility Worker will initiate the process authorizing that person as the AR to the Client. To link the Authorized Representative to a Client the Worker will perform a search to see if the Authorized Representative is known in the IE-BM Solution. If yes, the AR is selected and the Worker will link the AR to the Client and establish a relationship of AR. If not known to the system, the Worker will register the AR and complete the steps linking the AR to the Client. Should a Client wish to discontinue working with the AR, the Eligibility Worker will, upon receipt of the request of the Client, de-authorize the Authorized Representative. This action will remove authorization of that representative to access Client information. If the AR represents multiple

Clients, this action will apply only to the Client requesting the de-authorization. The action will be recorded on the Client's activity log and the Eligibility Worker can document the action in the case notes. **[FR1.54, FR1.79, FR1.82]**

If a duplicate record is identified by a Worker, they will be able to tag the duplicates and alert administrators. Merge capabilities available within the Solution support the process of selecting correct data and merging the data into a single case. The Worker will review the data available in the Client's duplicate records in order to determine which data to include as part of the Client's merged record. The IE-BM Solution will maintain a history of the sources for data elements as well as changes to the data for audit purposes. The below figure shows an example of a representative screen that your staff will use in order to view, compare, and identify duplicates. In this example, the screens guide the user through a comparison of datasets including addresses, identifications, and names and show the source and date and time the data was received allowing users to make educated decisions. **[FR1.27, FR1.56]**

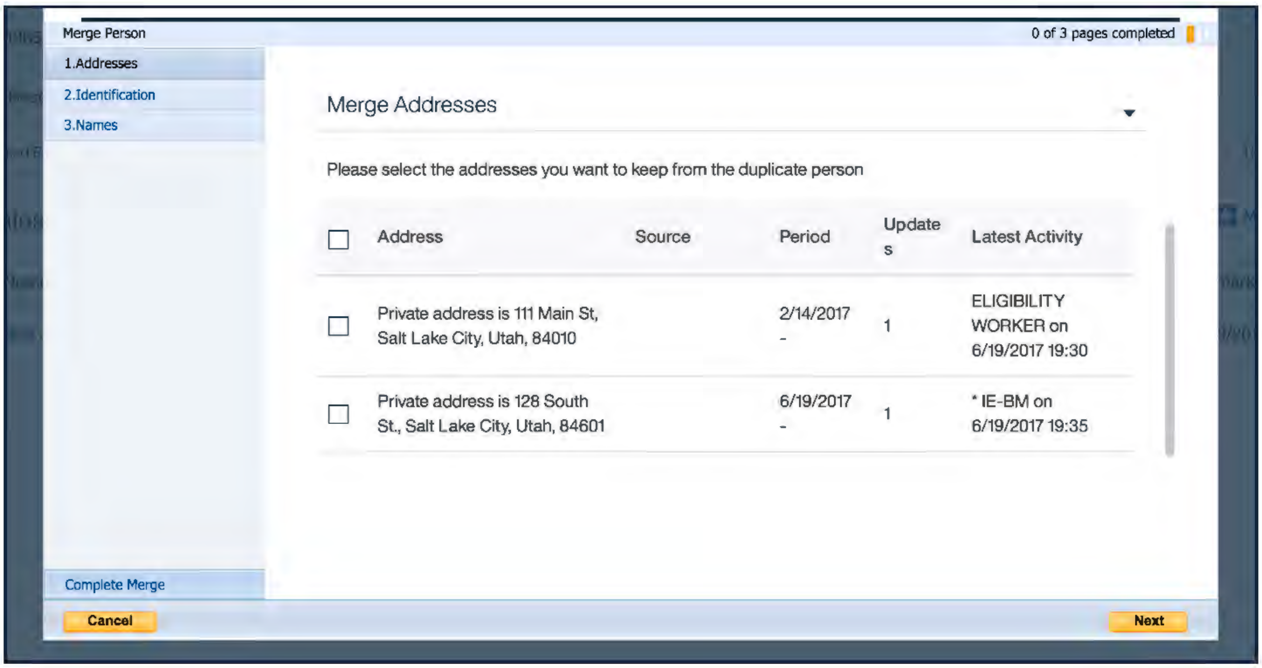


Figure 13: The IE-BM Solution will identify potential duplicate Client records helping to avoid dupcliate records and eliminate the need to re-enter available date.

External User Accounts

External user accounts refer to Client Accounts and Authorized Representative accounts, and other authorized representatives such as Navigator/Assister accounts.

SECTION HIGHLIGHT
The IE-BM Solution includes a multi-functional Client Portal that will allow Clients to provide more timely information, and access information directly about their cases which will help save time and help reduce errors.

Client

Clients will create a single account that ***will grant and limit access to case and Client information and regulate the activities that can be performed*** on these cases. A single account will grant the Client with access ***across programs within the IE-BM Platform.*** For example, Ms. Alexander receives TANF/TEA, SNAP, Medicaid, and Child Care benefits. By logging into her account, Ms. Alexander is able access her integrated case, apply or prescreen for additional benefits, check the status of benefits, review communications issued by the Agency, initiate changes to her case, and upload required verifications. NC FAST and New York City Access HRA, with the help of IBM, have successfully implemented Client Portal functionality similar to that required by DHS. Availability of these accounts and the Client's ability to independently perform tasks and initiate changes will increase the time available to Workers to perform other tasks to process cases requiring their skill and knowledge, rather than perform data entry and respond to basic account inquiries. Client access via the Client Portal will be limited to their case(s). **[FR1.53]**

The Applicant is not required to create an account to start an application; however, in order to file the application and subsequently check on the status of the application, initiate updates to personal or case data, or to upload verification documents the Solution will require, the Applicant must create a Client account. Client accounts will be created by the Intake Worker for Applicants submitting paper applications to DHS by mail, fax, or in-person drop off. **[FR1.63]**

The figure below presents a sample screen for the initial step creating a Client account. The Solution will only allow one account per Client. The Solution will confirm that an account does not currently exist for this individual before creating a new account for the Client. In the event that an account does exist, the Solution will determine if the account belongs to the individual attempting to create the new account. If a new account is required, the Client will be allowed to create the account. If the Client indicates that the existing account is in fact theirs, the Client will be guided through the retrieve password process. **[FR1.54, FR1.55]**

Figure 14: The IE-BM Solution will guide the user through the process of creating their personal account.

As seen in the screen above, the Client will be asked to enter a user name and password. The IE-BM Solution will support a name structure that includes special characters and symbols authorized by DHS. Password hints will be used to assist the Client in retrieving or resetting their password should the need arise. Based on previous implementations we recommend allowing users to create their own password that matches to your standards instead of issuing a password for them. The IE-BM Solution can be configured to generate a temporary password and workflow can be designed to guide the Client through the account creation process.

The usernames and password requirements will be contfigured to support DHS standards. Additional details including Emergency Contact, Preferred Method of Communication, and Contact Information will be collected during the Client Registration Process. Should the Client wish to update this information, they can do so via the Client Portal once their Account is estabablished. Changes made via the portal are date stamped, tracked, and recorded as part of the case activity log. **[FR1.59, FR1.60, FR1.62, FR1.72, FR1.84]**

From the user's account profile, our IE-BM solution will allow users to manage various aspects of their profile features which are used for system administration such as password resets. External users will also have the option to manage additional user information related to system administration. For example, the external user's contact information, preferred method(s) of communcation, preferred language, and other system preferences will be available for the review and update as needed. Other features, such as change in circumstance processing, can be used on the portal to report client changes for information which may impact eligiblity and entitlement to programs, such as address, income, and household composition. **[FR1.69, FR1.73, FR1.74]**

Client accounts support the State's goal toward increased automation. The Client's ability to access their case and perform activities such as submitting applications, initiating changes, and submitting verifications electronically via the secure Client Portal will save Staff time, improve data accuracy, and decrease the amount of paper and manual processing required to process and maintain eligibility cases.

Authorized Representatives The IE-BM Solution has the ***ability to support an Authorized Representative for each user account.*** Clients have the option of identifying an Authorized Representative to act on their behalf or to assist them with their applications, interviews, and interactions with DHS and other agencies. The Client can appoint or disengage the Authorized Representative at will. In each case the AR's involvement will be documented in the case record and the AR linked to the case or their access rights to the case removed depending on the status of their involvement.

The system will allow Authorized Representatives to be linked to one or multiple Clients. Once the link to a Client is established, the AR's log-in credentials will determine the Client information they can access, the level of access, and the tasks and activities they can perform on behalf of each Client. Also, once linked to the Client, the IE-BM Solution will issue notifications and communications concerning their Clients in the form and language identified in their preferences. **[FR1.57, FR1.77, FR1.80, FR1.81]**

Prior to registering an Authorized Representative (AR), the Eligibility Worker will meet with the Client in a face-to-face interview to confirm the Client understands the role the AR and approves the AR as their representative. When informed that the Client has identified an Authorized Representative, the Eligibility Worker will enter required data, including demographics and contact information, and the Authorized Representative's preferred method of communication. Clients can opt to discontinue working with an Authorized Representative or change who they want acting as their Authorized Representative. The Client will notify the Eligibility Worker of the change. The Eligibility Worker will then de-authorize the Authorized Representative's link and access to that the Client and case information. The IE-BM Solution will auto-generate notifications to the parties impacted including the Client and the Authorized Representative. Communications will be issued in the recipient's preferred method and the action tracked as a case transaction. **[FR1.78]**

The IE-BM Solution facilitates linking Authorized Representatives to Clients for which the Client has requested their involvement. Transactions are tracked and key information concerning the AR's involvement becomes part of the Client case file. There is no longer a need to maintain this information manually or on a separate system.

Those acting in the capacity of a Navigator/Assistor are also external users authorized to assist multiple clients. These external users are assigned log-in credentials, access the IE-BM solution via a separate, custom portal and can perform a discrete set of tasks for a specific set of Clients receiving their services.

The IE-BM Solution provides full auditability of system changes, with additional solution functions that track the management of evidence – the data used in determinations of eligiblity and entitlements. Regardless of whether updates are made by internal, external users or by the system itself, changes are tracked through the Solution's Evidence and Case Management features. Effective dates, change dates, and user records are used to track who, what, and when changes were made to client records that impact determinations. Where necessary, additional database auditing can be implemented based on DHS requirements. The figure below provides an example of tracking changes evidence along with the reasons for the change. **[FR1.58, FR1.59]**

Figure 15: The IE-BM Solution maintains a detailed history of case transactions, including changes.

DHS Account Administration

DHS System Administrators will determine the roles assigned, permissions, and access rights assigned to users. The IE-BM Solution will provide preconfigured roles that control access at the field level with associated tasks and workflows, for example, internal users such as Case Workers and Supervisors. Other roles, such as an Authorized Representative or a Navigator or Advisor will require new roles with specific access rights, tasks, and workflows. The IE-BM Solution will support authorized users such as a System Administrator, with the authority to create and maintain new user roles as well as the ability to modify existing out-of-the-box rules based on the needs of DHS. This representative will be registered in the system, have a unique user name and password and, by virtue of the cases to which they are linked, be allowed to perform the tasks as approved for that role. **[FR1.57, FR1.66, FR1.67, FR1.68, FR1.77]**

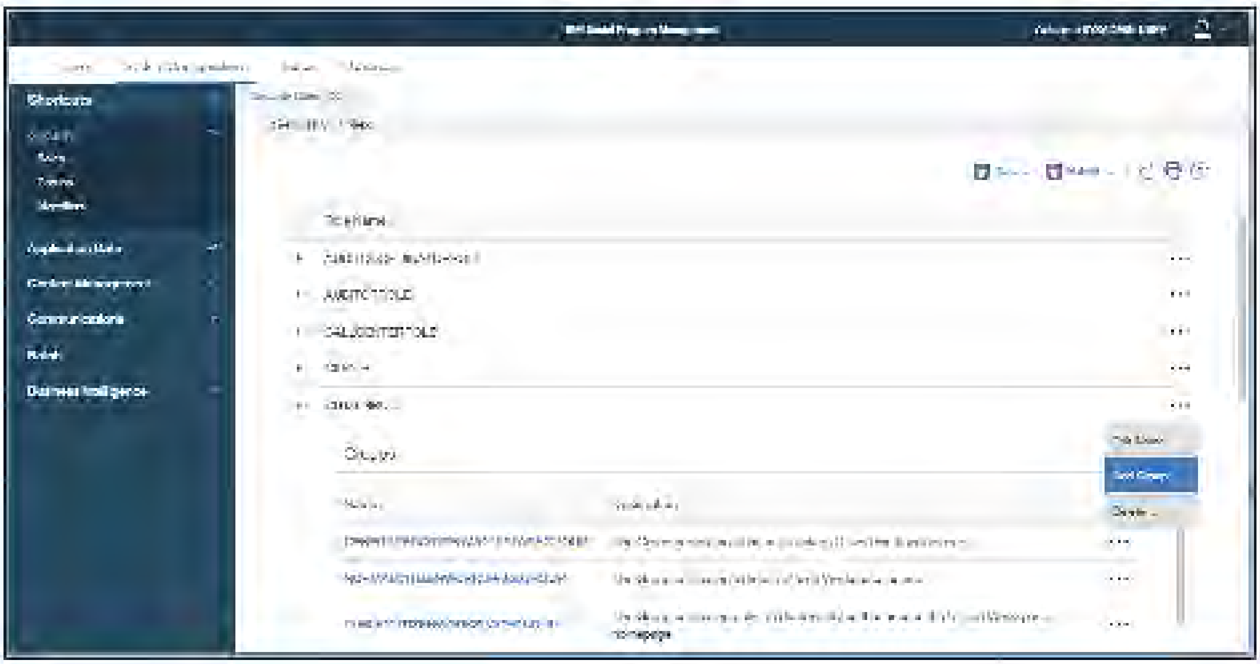


Figure 16: The System Adminsitrator or authorized staff is responsible for creating and assigning user roles.

System Administrators will also be responsible for activation and deactivation of user roles. For example, deactivation may occur when a Worker leaves DHS or within a period of time after a case closes. The System Administrator or other authorized State Staff can disable the log-in credentials of Clients or Authorized users in the event that fraud has been detected. These actions will generate notification to the users and register as a case action. **[FR1.70, FR1.75]**

The System Administrator, in compliance with DHS protocol, will determine the acceptable number of unsuccessful attempts made by the user. For example, if the number of unsuccessful attempts allowed is three (3), the account will automatically be locked upon the third unsuccessful attempt. When a lock out occurs, the IE-BM Solution will provide the user instructions on how to contact the system administrator and gain access to the system. **[FR1.71]**

1.2.4 Validation Checks Requirements

Significant System capabilities in this area include:

- Validating information as the data is entered
- Validating address information
- Allowing for a system administrator to indicate mandatory and optional fields
- Providing the capabilities to upload images

Instructions: The Vendor should describe its approach to addressing Validation Checks requirements.

Timely and accurate eligibility and benefit determinations are critical to serving DHS Clients and administering the programs through which those benefits are issued. To increase Worker efficiency and reduce the risk of error caused by data entry into multiple systems, the IE-BM Solution uses real-time onscreen features such as dropdowns, designations at the field level indicating mandatory data, and real-time, onscreen edits to check the format of data entered.

The IE-BM Solution leverages the IBM Cúram user interface that ***validates data as it is entered,*** generating easy to understand messages back to the user as needed. Our proposed Solution also includes validation checks at the field level within each data collection screen. The Solution also supports validation against external data sources during scripted capture of information, such as capture and validation of income information through a tax interface during online application entry.

Data entered must also conform to the format designated for that field, such that numeric values are not acceptable in alpha-only fields. Further logical edits can be applied so that the solution requires certain constraints around the entry. For example, numbers may not be entered into a Name field, birth date entries cannot reflect dates prior to 1/1/1900 and entries into zip code fields must conform to a 5-character configuration. Social security numbers, date fields, and email address fields are examples of other format checks performed by the Solution. **[FR1.85, FR1.86, FR1.88]**

Asterisks identify mandatory fields in which data must be entered prior to the user saving the record on the screen. In the figure below, asterisks inform the user that several fields, First and Last name and Date of Birth, for example, must include data in order for them to proceed to the next screen. While the Solution allows the user to enter optional data, the Solution will generate an error message informing user which mandatory field(s) are incomplete, directing them back to the missing field(s). The user will not be allowed to proceed until mandatory fields are entered.

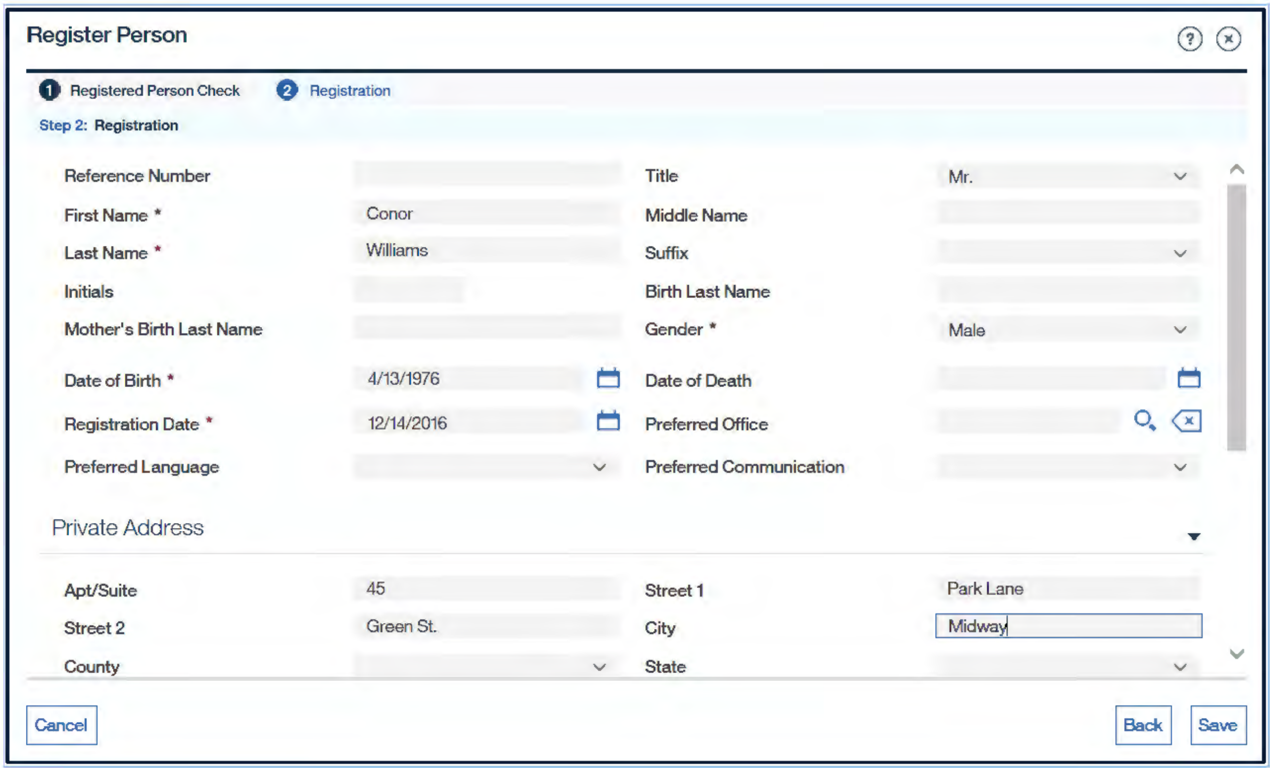


Figure 17: The IE-BM Solution designates mandatory fields with asterisks and, as seen in the DOB and Registration fields, provides aids such as calendars and dropdown menus to aid the user.

Address information is critical and is treated as person-based evidence by our proposed Solution. It drives eligibility as well as necessary communications with clients and external parties. Verified address information will be used to confirm residency requirements, deliver EBT cards for SNAP, TANF/TEA benefit distribution, and, should the Client opt to receive communications via USPS, provides a location where those communications will be mailed. ***Address information will be validated*** against a named external database such as USPS using existing geographic information system integration which will verify the address is a valid post code, but will not validate it is the Client's correct address. It is the Client's responsibility to maintain accurate information to DHS, including residential and mailing address details. They can report changes to their Eligibility Worker or other Workers responsible for their case or they can update this information by accessing their account via the secure Client Portal. **[FR1.89, FR1.93]**

Information collected about Clients and their situation is stored at the Person and Case level which allows greater application of the data across multiple programs, eliminating the need to re-enter data. The integrated case shares required data across programs with each program applying data based on program policy and rules. The Solution ***provides the capabilities to upload images*** and documents from media accessible by the user's computer and provides features to associate these records to the client or case files and to verification records. As seen in the view below, the user is able to browse for documents and images they wish to upload and attach to the Client or case record. Verification records are provided associated with evidence through the Cúram Verifications Module, which allow users to document that they have viewed and validated the evidence and attach files as proof where available. In this way, a Worker can track that they visually verified a Client's driver's license as proof of birthdate or they can scan and upload an image of the driver's license to attach to the verification. Where necessary, verifications can be set to expire as policy requires. So that someone who is not a U.S. Citizen may have to resubmit verifications of their residency status after a set period of time to maintain their eligibility. These verifications are managed by program rules which can require different proofs across programs, so that one program may require a W-2 to verify income and the other can require a recent paystub. which can be used as proof of evidence and documented as verifications. **[FR1.92, FR1.94]**

Figure 18: The IE-BM Solution facilitates the collection and storage of documents and images used to validate information.

Throughout our IE-BM Solution, users will have the ability to enter narrative text to provide additional details or explanations of data entered. In the figure above, the Description field is an example of this feature. Spell check is available to assist users with spelling by identifying misspelled words entered as part of the narrative or in a communication. As shown in the figure below, users can easily highlight a misspelled word to select corrections or run a full spellcheck on content. In the example below, the Solution presents the user with options for the misspelled word, *Imoorrtant*. The user can also format text. For example, in the screen shot below, format buttons visible would allow the user to insert a hyperlink, or format text as subscript and superscript. Options available but hidden behind the spellcheck feature include bold, italic and underline. **[FR1.87, FR1.91]**

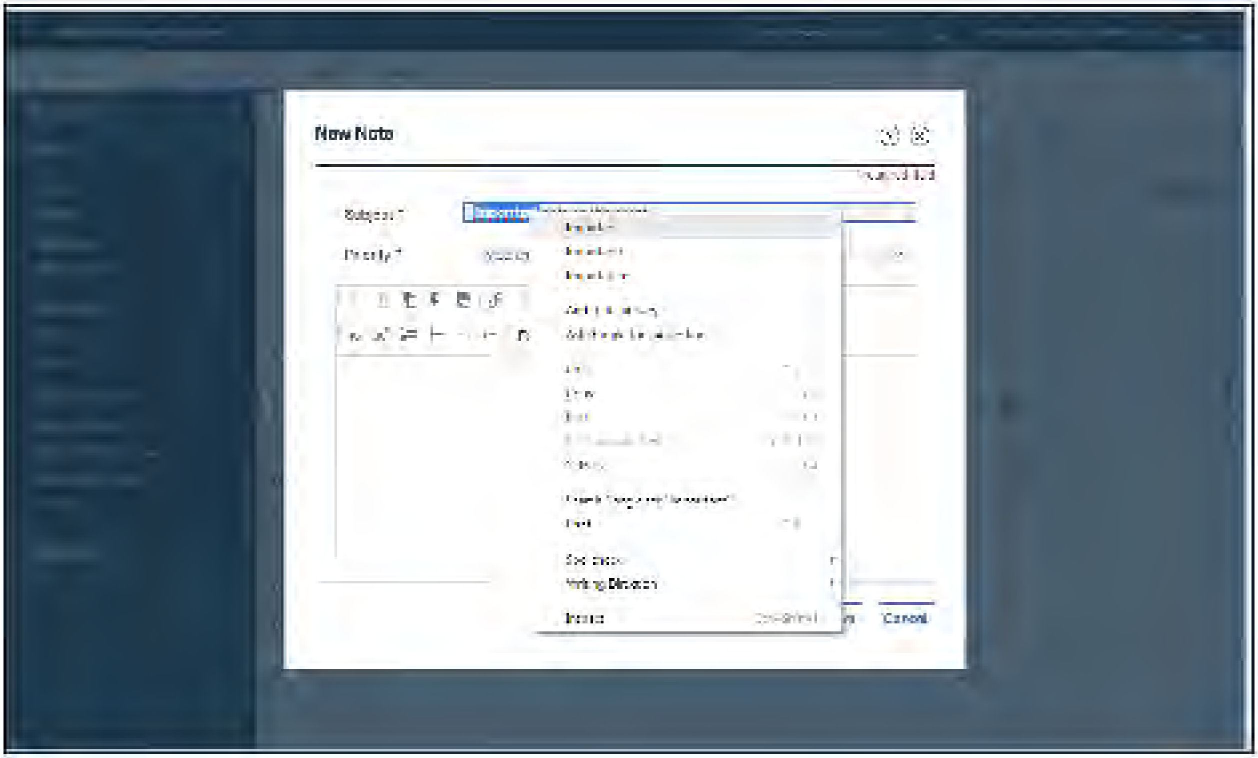


Figure 19: The Spell Check feature is available to IE-BM Solution users.

Workers continue to deal with increasing caseloads, planned and unplanned time away from work, and Applicant and Client delays, which can impact timely processing of applications, redeterminations, or responding to reported changes. To assist Workers to manage caseloads that continue to increase in size and complexity, the IE-BM Solution tracks the progress of applications and cases and auto-generates reminders to Intake and Eligibility Workers as time-sensitive completion dates approach. For example, the Solution tracks application processing timeframes, by program, updating the Worker's task list to bring the impending deadline to their attention. In some cases, the Worker's inability to process cases within policy prescribed timelines results from variables outside their control. There are approved reasons to extend a processing timeline to account for these situations. The Solution provides the flexibility for authorized users to override deadlines. **[FR1.95]**

In summary, The IE-BM Solution provides real-time on-screen edits to expedite and standardize data collection. By doing so, the Solution standardizes data across programs allowing Workers, Clients, Applicants, and other users to enter data once and use it across multiple programs, saving time and decreasing the risk of data entry errors which could in turn result in eligibility and benefit errors.

1.2.5 Alerts and Notifications Requirements

Significant System capabilities in this area include:

- Providing the ability to manually or automatically generate alerts and notifications for users (Worker or Client)
- Sending global alerts/notifications

- Sending notifications based on the user's preferred method of communications
- Providing the capability to consolidate multiple, mandated communications into one mailing

Instructions: The Vendor should describe its approach to addressing Alerts and Notifications requirements.

Well-informed Clients and Workers promote efficient and effective benefit and service delivery. We understand the need for Clients, Workers and Agencies to communicate with each other through multiple channels. In line with the State's objectives, the IE-BM Solution will provide:

- Succinct, consolidated communications using preferred methods such as text, mail, and email accessible via the Client's secure IE-BM Solution's self-service inbox as well as their personal email account.
- An intuitive alert or notification approach leveraging the Solution's Communication and Workflow Management.
- Full history of communications recorded within the IE-BM Solution and related to persons and cases to provide easy access to person-centric communications.

The IE-BM Solution supports the ability to manually or automatically generate alerts and notifications to Workers and Clients. As an end-to-end eligibility solution, the IE-BM Solution is designed to generate alerts and notifications based on defined triggers, including the following:

- Changes to case and Client data;
- Creation of calendar activities;
- Worker/Client actions that need to be taken, for example data verifications;
- Key events that occur throughout the life cycle of a case; and
- System-wide events such as office closures.

Automated tasks, alerts and notifications will be system generated based on predetermined system events and process milestones. They are integrated with workflows associated with the rules engine that underpins our IE-BM solution. Tasks would be generated for specific work processes which must be assigned and monitored for completion. Alerts or notifications would be generated as informational and not require the same level of tracking as a task. For example, a Worker may receive a notification that they have been assigned ownership of a case. However, they would receive a task to perform the case review for that case. Workers may also receive system-wide notifications via the banner alerts on their homepage. Clients may also have information 'pushed' to their account home pages. In this way system administrators can issue **Global alerts or notifications** as broadcast messages to the entire internal user population or a subset of the user population such as in the case of emergency office closures or security alerts. The figure below provides an example of an 'office closure' global alert. **[FR1.104]**

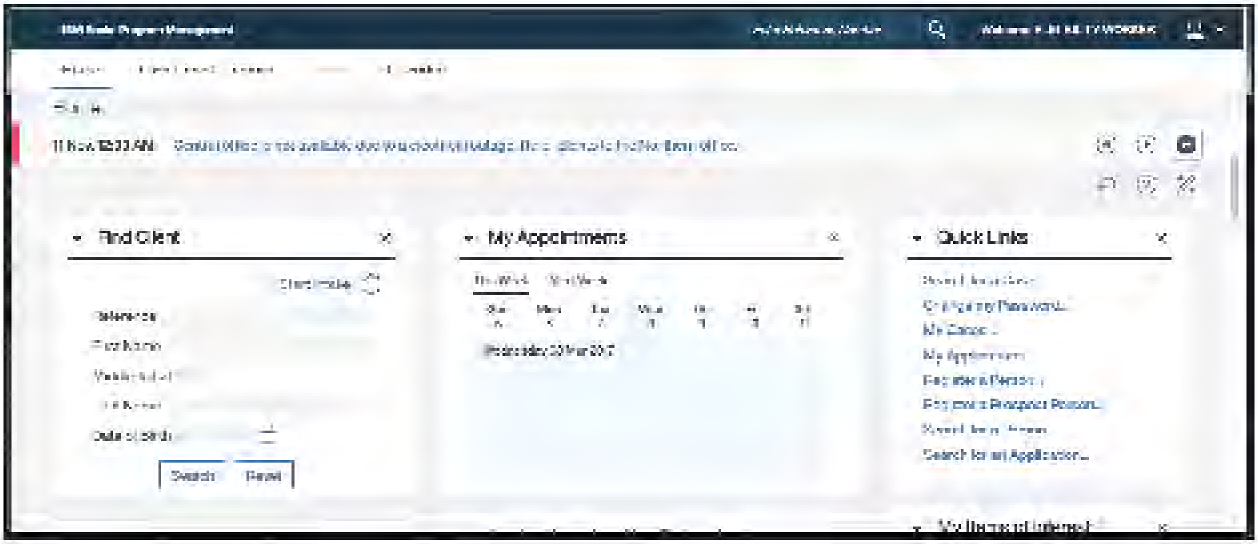


Figure 20: Authorized Staff can issue global alerts or announcements such as Amber alerts, weather alerts and, as seen above, office closures as global, time sensitive alerts.

For a Client, notifications and communications would be issued where permitted by policy using the Client's preferred ***method of communication.*** For example, a Client may have specified a preference to receive their communications electronically so that the Client would receive an email or text message informing them of new correspondence available via the Client Portal. They can then login, access, and view the correspondence via their secure account. However, policy or legislation may specify that certain communications must go out via hard-copy mail distributions. Notices of determination or termination may require these paper distributions, in addition or instead of electronic communications. Our IE-BM Solution will support this capability. **[FR1.98, FR1.99, FR1.100, FR1.113]**

Workers and Clients can update their preferred communication methods in their profiles and will have the ability to manage their subscription to various alerts and notifications as allowed based on security, policy, role and business rules. **[FR1.103]**

In addition to correspondence, Clients may receive notifications that are reminders of activities or requirements associated with their program involvement. For example, Clients or their representatives can be notified via the secure portal of renewal or recertification submissions, outstanding verification documents required for determinations, work-requirement activities, and interview appointments. Other outreach information can also be 'pushed' out to client populations, such as information about new programs and community services. **[FR1.109, FR1.110]**

Additionally, Workers can manually initiate an alert or notification to a co-worker or to a Client by manually creating a task. Manually set alerts may include reminders of a scheduled event or an action that must be taken, for example, a Supervisor may remind a Staff member that they must complete a performance evaluation or an Eligibility Worker may inform a peer of an upcoming workshop; while neither impact a specific case the informational reminder option is available. **[FR1.96]**

Alert and Notification content may vary based on the message being conveyed. Electronic messages can include hyperlinks to additional information such as policy guidelines and help resources that recipients can access. Note that written communications reflect the same information as the electronic version, so hyperlink information on a hardcopy document will not provide the same enhanced functionality as in the electronic version. **[FR1.105]**

Alerts

An alert often refers to an internal message distributed to a member of the DHS Staff. Similar to the concept used to distribute notifications, the IE-BM Solution can auto-generate reminders at predetermined intervals leading to a milestone due date. As described above, the Worker will receive task reminders via their Landing Page until the task is complete. The IE-BM Solution can escalate overdue tasks to the attention of the Supervisor. Because the IE-BM Solution collects and maintains preferred communication methods; email, SMS, paper, and secure messaging, for both Workers and Clients, it will generate communications, manual and auto-generated, observing these preferences.

Notifications

Notification is the term used to describe communications to the Applicant, Client, Authorized Representative or third-parties often triggered by a case event such as need for a redetermination, changes to a case, or general information notices. Communications may include appointment notices, notices detailing eligibility determination results and benefit calculations, and global or mass mailings generated by DHS informing Applicants and Clients of special events or new programs. Unless restrictions apply, notifications will be distributed using the recipient's preferred method of communication. For example, if a Client designates an Authorized Representative and both have indicated different preferred methods of communication as well as indicating communication is to be sent to both Client and AR, the Solution will distribute the communication adhering to each recipient's identified preference. **[FR1.97, FR1.98, FR1.101]**

As a further example, a Client applies for multiple programs and the IE-BM Solution applies the appropriate program-specific rules against provided data to make program eligibility determinations. Once decisions are reached, communications will be sent to the Client. The Solution ***provides the capability to consolidate multiple, mandatory communications into one mailing.*** While the IE-BM Solution produces detailed notices of each eligibility determination, the notifications will be consolidated. Other communications scheduled to be sent on the same day will also be sent in the same communication package. This consolidation provides the Client with the eligibility for multiple programs in a single mailing while significantly saving the State postage by preventing multiple mailings to a Client. **[FR1.102]**

Once saved and sent, forms and notices are not editable, but will be saved within the system. The IE-BM Solution maintains copies of communications in printable formats. It also maintains a detailed log of the communications including date, recipient(s), and method. Authorized users will have access to notifications. Applicants, Clients, and Authorized Representatives can access case and Client information based on their role. By accessing the IE-BM Solution via the Client Portal, the Applicant, Client and Authorized Representative can view case related communications, the status of an application, and other eligibility related information. If a Client is deceased, the Worker has the ability to designate an alternate recipient for the Client's email by adding an Authorized Representative, if one is currently not associated with the case, and updating the Client's preferred method of communication. **[FR1.106, FR1.107, FR1.108, FR1.111, FR1.112]**

1.3 Approach to Pre-Screening

The Vendor should ensure that the responses to this section are in alignment with the requirements set forth in Template T-6 – Functional Requirements Traceability Matrix, Tab FR2 – Pre-Screening.

Significant System capabilities in this area include:

- Allowing the public to access the anonymous pre-screening tool
- Providing a set of questions to capture Applicant data for use in providing guidance for programs or benefits
- Providing the Applicant easy access to the online integrated application and provide instructions how to apply for benefits and receive an official decision about his/her (or household) eligibility
- Providing easy access to the integrated application and the option of transferring the Applicant's data from the anonymous pre-screening tool to the self-service integrated application
- Providing the Applicant a PDF version of the information presented and the preliminary eligibility determination

Instructions: The Vendor should describe its approach to addressing Pre-Screening requirements.

The IBM team will leverage the State's existing investments by utilizing IBM Cúram's Intelligent Evidence Gathering (IEG) to develop a pre-screening script. The IBM team will work with DHS employees, who have experience interpreting legislation and defining departmental policy, using a collaborative approach that engages your staff throughout the development process to configure and deploy a pre-screening tool that provides Applicants two (2) main features:

- A consistent and clear user interface coupled with intuitive navigation features allowing Applicants to easily find and understand eligibility requirements without the assistance of your staff.
- A dynamic multi-program screening questionnaire to support an integrated, person-centered enterprise-wide application.

This will quickly and significantly change how Applicants engage with DHS, by reducing the need to call or physically visit local agency offices and improving self-sufficiency and Client satisfaction. This has the added benefit of reducing the administrative burden on your personnel, enabling them to focus on value added activities.

The graphic below provides a high-level overview of the Pre-Screening business process, which highlights the topics to be further elaborated within this section.

Figure 21: The IE-BM Solution will support Applicants seeking information about State and non-State programs by providing a seamless transition from the Pre-Screening functionality to application functionality, should the individual opt to apply for benefits or services.

This section describes our approach to pre-screening requirements in more detail by discussing three sub-areas of the pre-screening high-level process:

- **Complete the Pre-Screening Tool** – The IE-BM Solution will provide DHS a pre-screening tool that facilitates secure online access to information about available services and programs. The screening function will allow Applicants to determine potential eligibility for State and non-State programs, a complete list of these programs will be provided by DHS.
- **View Potential Eligibility Assessment Results** – We will configure predefined program rule sets to provide the Applicant with a preliminary eligibility assessment for a list of identified IE-BM programs regardless of whether the IE-BM Solution supports the final eligibility determination for the program. Along with the potential eligibility determination, the Applicant will be provided guidance on how the determination was made, where to find more information, and actions available to the Applicant. The IE-BM Solution can also provide details regarding non-State programs such as community services that may be of interest to the Applicant attempting to address immediate needs.
- **Complete an Application** – The IE-BM Solution will provide Clients a multi-channel option to complete an application regardless of the potential eligibility assessment results. The data collected by the pre-screening questionnaire will be loaded into the application, eliminating the need to re-key information, and reducing the burden on Clients.

Complete the Pre-Screening Tool

The IE-BM Solution's Client Portal includes prebuilt functionality allowing us to quickly deploy a user interface that supports pre-screening for a diverse set of benefits and services. The screening function will ***allow the public to access the anonymous pre-screening tool*** to learn if they are potentially eligible for one or more programs or benefits. Users will navigate to a single location to complete a set of guided questions, built using Cúram's Intelligent Evidence Gathering (IEG). Since the users will be able to complete the questionnaire anonymously, users can include the actual Applicants as well as Authorized Representatives, Providers, or others with an interest in potential eligibility benefits in the State of Arkansas. For example, the high level nature of the information collected and the ability to complete the pre-screening process anonymously supports queries by individuals who are not residents of Arkansas but are seeking information concerning potential eligibility should they relocate. **[FR2.1, FR2.14]**

SECTION HIGHLIGHT

One of IBM's successful implementations of a Client Portal was for the State of Missouri and completed in January of

2014. The landing page of the Client Portal includes a 'No Wrong Door' pre-screening script for MAGI eligibility. It includes pre-screening for Low Income Family and Children, Pregnant Women, Children, The Children's Health Insurance Program (CHIP), and Uninsured Women's Health Services (a Family Planning Waiver).

The IE-BM Solution will support two types of screening:

- ***Filtered screening*** allows Applicants to indicate for which programs they wish to pre-screen. Based on the Applicant selection(s), the pre-screening questionnaire presents an abbreviated list of questions; the IE-BM Solution will assess the Applicant's responses in order to return a list of potentially eligible programs. Filtered screening typically uses high-level factors to screen Applicants into (or out of) a range of programs. For example, a question will ask if the Applicant is unemployed. The answer to this question can immediately target programs based on employment status. Filtered screening provides Applicants information to guide their decision regarding which programs they will apply.
- ***Eligibility screening*** is used to determine the Applicant's potential eligibility for particular programs and it gathers more detailed information than filtered screening. Applicants will be presented with a question script, divided into several major categories, such as residency, household demographics, income, assets, and expenses. Using this detailed information, the system applies an extensive eligibility rule-set to the data and when the analysis is complete, a list of programs is presented for which the Applicant (and their family) may be potentially eligible. **[FR2.4]**

When the Applicant navigates to the Client Portal, the system will prompt the user to select the language for the self-service option. The IE-BM Solution will support multiple languages in accordance with the State's language requirement; languages include English, Spanish, and Marshallese. Once the language is selected, the Applicant will initiate the pre-screening questionnaire, which will ***provide a set of questions in the selected language to capture Applicant data for use in providing guidance for programs or benefits***. At the start of the questionnaire, the system will display a list of State and non-State programs and provide the capability to drill down for detailed information about each program. The Applicant has the option to choose one or more of these programs to screen for potential eligibility. Based on the program selection, the pre-screening questionnaire will be tailored to prompt the Applicant with only questions needed to make a preliminary determination for the program(s) selected. **[FR2.2, FR2.5, FR2.28]**

The IBM team will develop a user interface for the IE-BM Solution that caters to usability and effectiveness. Pre-screening content will comply with a fourth grade reading level and Limited English Proficiency (LEP) requirements. Additional guidance will be displayed along with answers to historically confusing questions; such as calculation of total value of assets or expenses criteria. Questions can also be configured to allow multiple methods of responding to a question. For example, if an Applicant does not know or cannot estimate monthly income, the system will capture current sources of gross income and calculate the monthly income for the user. The banner can also be configured to display relevant information to the Applicant such as a link to a self-service help tool or DHS contact number throughout the screening process and on each view throughout the system. **[FR2.6, FR2.7, FR2.8, FR2.26, FR2.27, FR3.31]**

DHS will be able to manage a list of programs including removing, adding, and changing the order of the available programs. DHS can also maintain the drill-down summaries and the corresponding rule set for each program. The below screens provide an illustration of the program administration functionality available within the IE-BM Solution. **[FR2.24]**

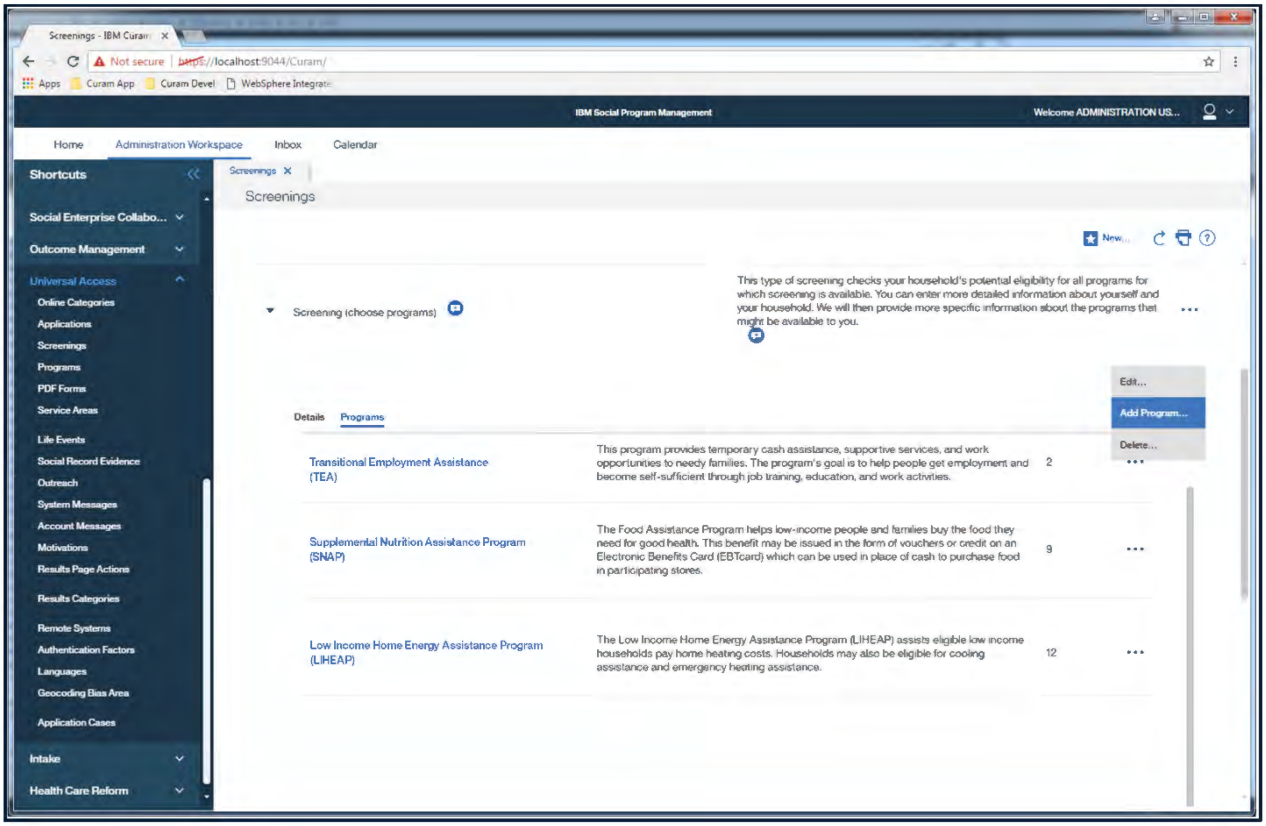


Figure 22: The Administration functionality provides users easy access to manage programs by giving them the abitliy to edit, delete, or add new programs for the pre-screening functionality.

As shown above, users can manage a list of State and non-State programs. In addition, users can also manage the individual program by changing the order in which the programs display and editing or renaming the program name or description as shown below.

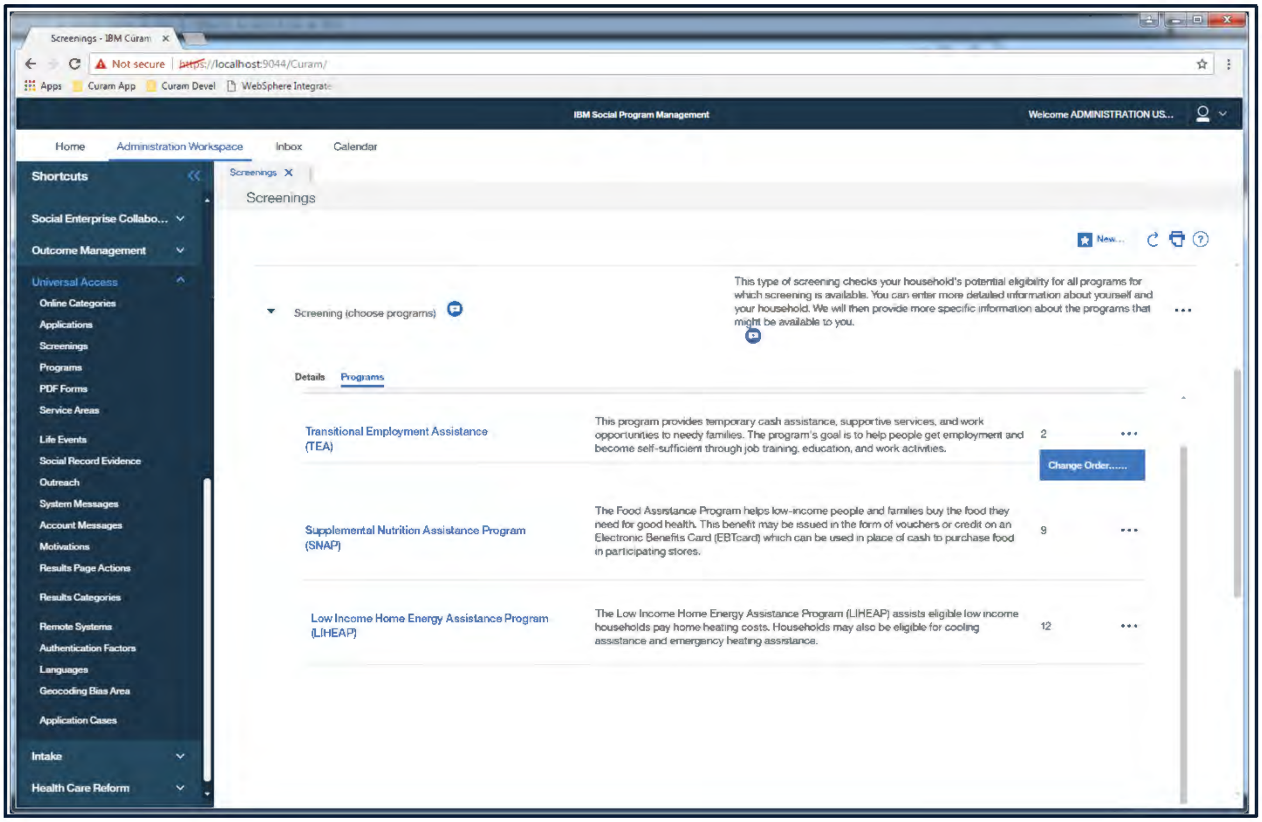


Figure 23: The Administration functionaliy provides users the capability to change the order of how the programs are displayed and rename programs so that user experience and feedback can be incorporated.

The pre-screening process also has multiple user interface features to assist the Applicant as they complete the pre-screening questionnaire. The system will allow the Applicant to re-start the questionnaire, erase individual responses within the questionnaire, erase the entire questionnaire, and exit the questionnaire during the pre-screening process without submitting the questionnaire. Applicants will be able to select a help icon that displays a separate tab with detailed information and access to related help information. We will embed help text in the screen to provide context sensitive information for multiple fields that a user can hide or show. As the creator of the IBM Cúram Social Program Management Platform, we are highly skilled in configuring the screening questionnaire so that product capabilities are used effectively for the benefit of the Applicant and conform to DHS processes. **[FR2.19, FR2.20, FR2.21, FR2.25]**

View Potential Eligibility Assessment Results

Once the questionnaire is completed, an eligibility rules engine analyzes the answers provided and provides eligibility guidance based on the identified programs and their rules, regardless of whether the IE-BM Solution supports the program rules for final eligibility determination. Below is an illustration of an example of the pre-screening assessment results that display when the Applicant completes the pre-screening questionnaire.

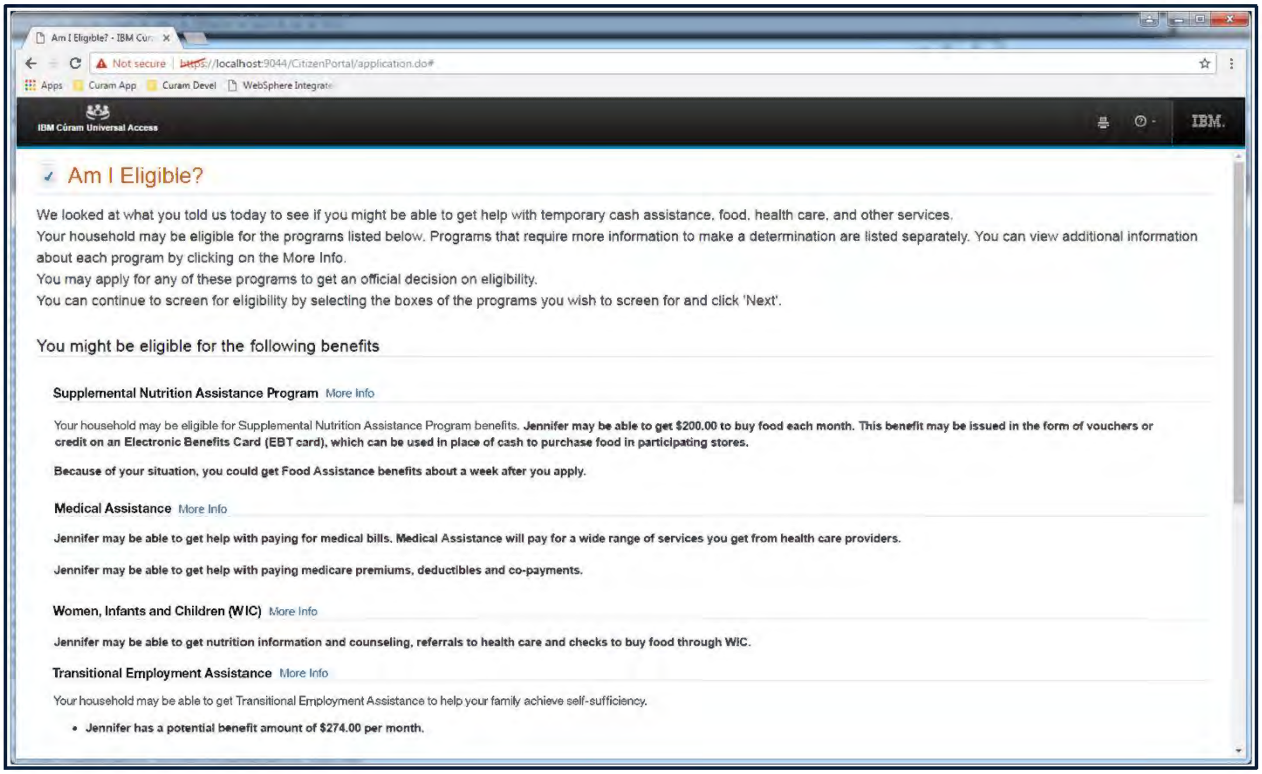


Figure 24: The Pre-Screening Questionnaire will provide clear and easy-to-understand terminology to describe the Appicant's potential eligibility and related guidance.

Given that the pre-screening tool, in order to be client friendly, is abbreviated and not intended for definitive eligibility decisions, the system will determine and display the following results for each program:

- May be eligible,
- May not be eligible for these benefits, or
- Did not provide enough information to determine potential eligibility.

Along with these determinations, Administrators can configure the pre-screening assessment rules so the IE-BM Solution displays guidance on how the determination was made and applicable limiting language required by DHS, including the qualifier that a successful pre-screening assessment does not guarantee eligibility. The system will also provide supplemental information based on the determinations. For example, the system can provide the Applicant resources and general recommendations for users who do not appear to qualify for a specific program, such as households that indicated a need for SNAP or WIC but were determined ineligible for both. The system can also provide a list of community action agencies where the Applicant can apply should they appear eligible for LIHEAP. **[FR2.3, FR2.9, FR2.10, FR2.16, FR2.17]**

We will also extend functionality to provide Applicants a "receipt" of the preliminary eligibility determination. The Pre-Screening Questionnaire Results Page, example displayed above, will be ***provided to the Applicant as a PDF version of the information presented and the preliminary eligibility determination***, to print or email to themselves. **[FR2.23]**

Complete an Application

Regardless of the Pre-Screening results, the Applicant is given the option to receive and complete an integrated application through a multitude of methods

- **Online Application** – The system will ***provide the Applicant easy access to the online integrated application and provide instructions how to apply for benefits and receive an official decision about his/her (or household) eligibility*** regardless of the pre-screening results. If the Applicant wishes to complete an online application but not at this time, the system will provide a link for the Applicant to save and navigate to when the Applicant is ready to apply. The Applicant can choose to access the online integrated application after completing the pre-screening questionnaire within the same session. This ***provides Applicants easy access to the integrated application and the option of transferring the Applicant's data from the anonymous pre-screening tool to the self-service integrated application***. For example, screening evidence can be passed to the application process without requiring the Applicant to log in using an existing account or creating an account. The persistence of data from one stage of the process to the next eliminates the need for re-keying and reduces the amount of data that needs to be entered by Applicants and Intake Workers. The application process is further described in T-7 Section 1.4 Approach to Integrated Eligibility Application.
- **Mail a Paper Application** – The Applicant can choose to download a paper application. The system will provide a mailing address if they choose to complete a paper application to complete and return to DHS.
- **Contact a DCO County Office –** The system will provide contact information including a phone and fax number for DCO County Offices for Applicants to utilize for questions, applications, and application appointments. **[FR2.11, FR2.12, FR2.13, FR2.18, FR2.22]**

Once the Applicant is ready to submit the application, the user will be prompted with the option to create an account, log in with an existing account, or submit the application without an account. Creating an account will allow the Applicant to check the status of the application and access additional functionality such as viewing notifications and notices and updating information. At the time of submission, the Applicant will receive a signature request, an explanation of their rights and responsibilities, and an invitation to complete an application or update voter registration information. **[FR2.15]**

SECTION HIGHLIGHT

Our proposed Solution provides a robust, multi-channel self-service and an integration application for benefits, which will lower postage expenses, promote more reliable communication, and further engage Clients.

The IE-BM Solution provides a secure, configurable self-service option that assists people seeking information about State and non-State programs. Our proposed approach will provide DHS significant self-service functionality, including pre-screening, early in the project to deliver quick value to Workers and Clients. It provides a seamless transition from the pre-screening functionality to application functionality should the individual opt to apply for services. The self-service option will not only increase Client self-sufficiency, helping to decrease the stress on the State's resources, but will also provide the public increased access to data and information, demonstrating DHS's commitment to a person-centered model of practice.

1.4 Approach to Integrated Eligibility Application

The Vendor should ensure that the responses to this section are in alignment with the requirements set forth in Template T-6 – Functional Requirements Traceability Matrix, Tab FR3 – Application.

1.4.1 Application General Requirements

Significant System capabilities in this area include:

- Supporting multiple application submission approaches
- Pre-populating the information fields whenever available
- Determining the list of documentation required
- Validating information based on available real-time and stored data sources
- Providing the ability for Applicants to leverage documents and information submitted across divisions

Instructions: The Vendor should describe its approach to addressing Application General requirements.

The IE-BM Solution provides a single access point for Applicants seeking benefits and services offered by DHS and other agencies as specified in the RFP. Our proposed Solution will provide your Clients online access to an integrated, multi-program application, program information, and the steps required to access benefits and services. Today, gaining access to information via the Internet is second nature; however, understanding that information may prove challenging. To promote understanding, the IE-BM Solution will provide a clean, crisp, and intuitive user interface. Additionally, the application and instructions for completion of the application form will be available in English, Spanish, and Marshallese and instructions and information available through the Help feature will be written to the level indicated (4^{th} grade). **[FR 3.31, FR3.32]**

A single Client Account that can be used across organizations is key to organizing Client and case data, sharing data across organizations, minimizing redundant data entry, and increasing the efficiency of resources. The process of a Client creating an Account is explained in greater detail in T-7 Section 1.2.3 User Account Management. The Solution will monitor accounts created in an effort to avoid creation of multiple accounts for an individual. An additional benefit will be the ability for organizations to monitor program participation and expenditures. Awareness of benefits received by Clients across programs will help to increase awareness and discovery of fraud, improving program operations, avoiding misspent dollars, and potentially increasing the number of Clients that can be served. **[FR3.5, FR3.25]**

SECTION HIGHLIGHT
The IE-BM Solution supports a person-centric vision that will enable an outcome-based service delivery model.

The IE-BM Solution ***supports multiple application submission approaches*** allowing Applicants to apply via telephone, or complete a paper form which they can fax, mail, scan, email, or bring to their local County Office. The Solution's Client Portal provides Clients with access to DHS information and also supports additional online functionality such as the ability to complete and submit an application. Additionally, the integrated application removes the concept of a siloed approach to eligibility by incorporating multiple programs into a single application. Applicants can choose to apply for Medicaid, CHIP, SNAP, TANF/TEA, LIHEAP, WIC, and other programs as specified by DHS. While the IE-BM Solution will be responsible for determining eligibility for programs specified by DHS, data gathered for programs whose eligibility is determined on an external system will be transmitted to those systems via a secure interface. **[FR3.1, FR3.2]**

The Solution supports both pre-screening, as described in T-7 Section 1.3 Approach to Pre-Screening, and application processing. In both situations the Solution will guide the user (Applicant or Intake Worker) through the data collection process. A sample of the data collected includes applicant demographics, income, resources, and medical and educational details. If an Applicant completes the pre-screening questionnaire and then choose to apply, the IE-BM Solution will pre-populate the applicable data into the application. The figure below, while used to support the Client Registration process, provides a sample of data captured. The system can capture multiple Client addresses, for example, mailing and residence. As Clients report address changes, once validated the Solution can end-date the prior address and activate the newly verified address. The Solution maintains a history of Client addresses. **[FR3.3, FR3.35]**

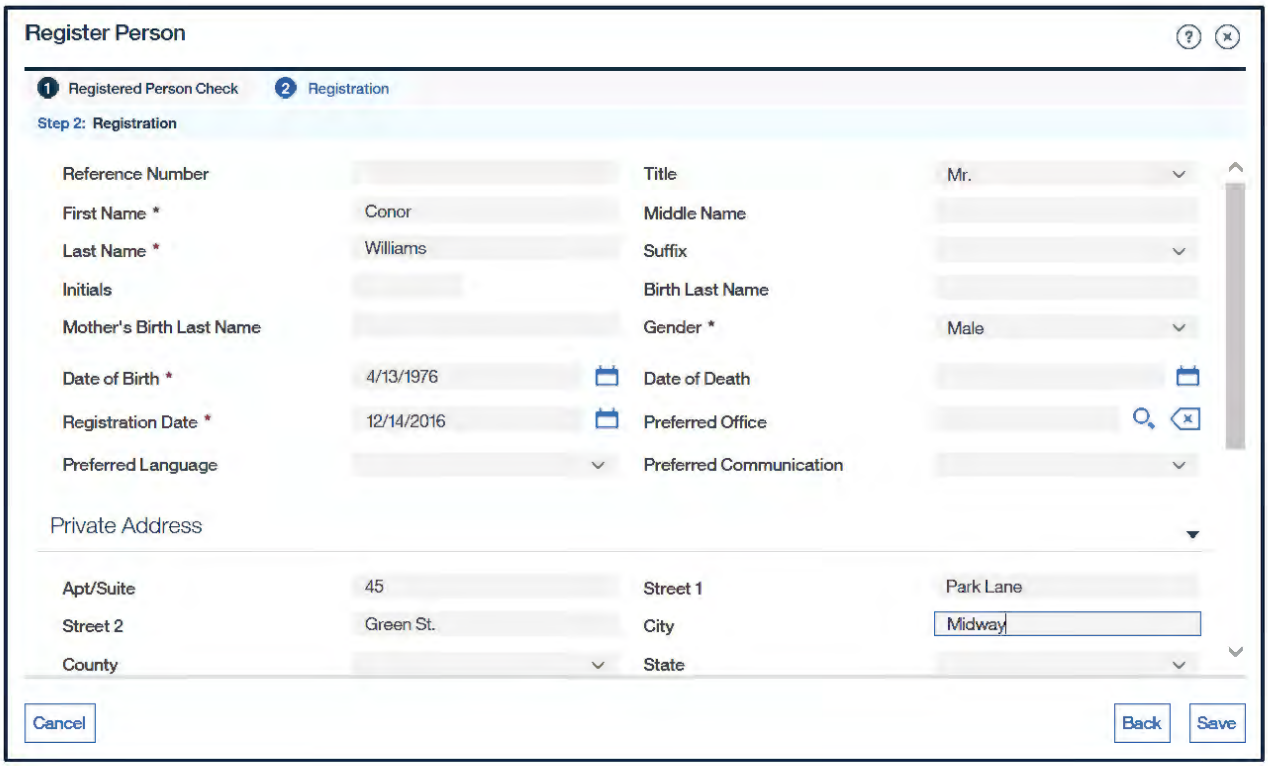


Figure 25: We will configure the IE-BM Solution to capture required data fields for Client contact information as defined by the State.

The online application is configured to mirror the integrated paper application which will be developed as part of the IE-BM project; in other words, data collected on a paper application is collected in the same order as when applying online. For applications submitted directly to DHS, for example, those received through the mail, via fax, or hand-delivered by the Applicant and those situations where the Applicant has requested Intake Worker assistance, the DHS Intake Worker will enter the application data into the system. Applications received via interface from the Federally Funded marketplace will follow this same process. The Intake Worker will review and confirm that the data is available, contacting the Applicant, and arranging an appointment to obtain missing application data. The Intake Worker will first conduct a search for existing, pending applications from this Client. If one is located, the Intake Worker can select the application and the Solution will display available data. The Intake Worker will review existing data, update based on information on the latest application form, and enter and save the remaining application data. If the Applicant indicates that they have a prior case, the Intake Worker will conduct a search on the Applicant, select that individual, and align the new application to the existing case. The Intake Worker will also conduct searches on individuals listed on the application. This linking supports DHS' objective of a single case across the agencies; DHS, DFA, DWS, and ADH. Additionally, to avoid creating a duplicate client record, the IE-BM Solution will guide the Intake Worker or Applicant through the process of searching for existing records. A search on each Applicant will be conducted across DHS approved systems. Applicants known to DHS, for example individuals who have received services or benefits from DHS or other organizations identified in the RFP, will not have to re-enter data available in the system. For example, if John Doe received SNAP or TANF/TEA benefits at one time, data used in previous eligibility determinations, including that available on household members listed on the new application, will be used to ***pre-populate information fields whenever available*** in the IE-BM Solution. If the individual is known to DHS, i.e., there is historical information such as demographic details, prior eligibility, and supporting documentation, once the Worker selects that individual, the prior data is displayed and the Intake and Eligibility Worker have access to the historical data. The IE-BM Solution guides the Applicant or the Intake Worker through the process by presenting screens in a logical order based not only on data required for each program, but also based on the Applicant's response to application items. The Solution maintains a history of case transactions including the date, time, person performing the action, and in the case of an application, a record of how the application was filed – online or with the assistance of an Intake Worker. Collection and assessment of self-service data provides DHS with information needed to improve and expand self-service options to better serve its clientele. **[FR3.3, FR3.4, FR3.33, FR3.37]**

SECTION HIGHLIGHT

IBM's successful implementation of a Client Portal for the State of Missouri provides pre-screening and application functionality. By utilizing this functionality, Missourians have greater access to information related to benefits and services as well as access to the federally facilitated marketplace if screening does not show potential eligibility for MAGI based Medicaid programs.

Application information is shared across programs. The data requested is dependent on the type of assistance requested. For example, applications for TANF/TEA require the collection of information concerning absent or disabled parent(s). The screens presented to the Applicant or Intake Worker depend on the Applicant's indication of disability or absence of one or both parents. This information will be shared with DFA's Office of Child Support Enforcement in order to establish and enforce child support obligations for the absent parent, establish paternity, or, in the case of a disabled parent, provide the Child Support System with details needed to eliminate the need for previously identified child support-related activities. **[FR3.14]**

Applications indicating disability of at least one parent require the collection disability-related details and documentation. The Solution will guide the Applicant or Intake Worker through a series of screens to collect disability details and apply the data collected against rules to determine if involvement from the Medical Review Team (MRT) is needed. This process is further explained in T-7 Section 1.11 Approach to Medical Review Team. The Medical Review Team will review available reports and, with the consent of the disabled party, contact providers in order to access records needed to render a disability decision in accordance with program rules. The MRT's decision will be documented in the Solution, applied against program rules, and an eligibility decision based on the disability will be communicated to the Applicant. Documents received during this process will be uploaded and linked to the individual and maintained in the Client's historical file. Authorized users can access these records as needed. **[FR3.7, FR3.8]**

The application process asks for the Applicant's consent to share information across programs. The IE-BM Solution will capture this consent or the Applicant's refusal as required to support DHS processes and policies. The IE-BM Solution will proceed or discontinue the application process in accordance with DHS policy. **[FR3.6]**

The IE-BM Solution will provide a summary of information recorded on the application and provide the opportunity to update information prior to submission. This summary can be produced as a PDF file suitable for printing. The system will require the Applicant to sign the application attesting that information provided is true and accurate in order to submit the application. Our proposed Solution will support capturing a signature electronically. Once the Applicant's signature is obtained, the application cannot be altered until the eligibility interview. Eligibility determinations will be based on the information provided on the application once it has been validated. Validation can occur via secure real-time or batch interfaces or obtained through other means. For example, verification of housing expenses may be obtained via a landlord's statement. Eligibility determinations performed by the Intake Worker can be automatically routed to a Supervisor for review and approval. The Solution will track the process and provide an audit trail documenting that the Intake Worker determined eligibility which was then reviewed and authorized or denied by the Supervisor. **[FR3.11, FR3.26, FR3.28, FR3.33]**

The Applicant has the option of withdrawing an application after the application has been submitted. The Solution will capture withdrawal details including the date, reason, and the program(s) on the application impacted by the withdrawal. The IE-BM Solution will auto-generate a notification reflecting the details of the withdrawal and send that notification via the Applicant's stated preferred notification method. The withdrawal transaction, like other case transactions, will appear on the case event log. **[FR3.20, FR3.21]**

The IE-BM Solution supports the organization of worker responsibilities. The calendaring function will notify the worker of upcoming events issuing reminder notifications via the Worker's Landing Page. The Solution's tracking feature significantly benefits the Worker's ability to manage their workload and process time-sensitive items according to deadlines. An application involving multiple programs, each having different policy-driven processing timeframes can be difficult to track. The Solution, using the application date will set the processing deadline for each program based on applicable policy, notifying the Worker via their landing page as the processing deadline for each program approaches. For example, the Solution will prioritize processing and tracking an application for SNAP and TANF/TEA where circumstances indicate eligibility for Emergency SNAP benefits. The priority will be the processing of the Emergency SNAP benefits within ten (10) calendar days – the Eligibility Worker will be notified prior to day ten (10) that the case must be processed. The Eligibility Worker will receive additional alerts informing them, perhaps at day 25, that the SNAP case must be processed and again at day 35 that the TANF/TEA case must be processed. An example of the IE-BM Solution's tracking and automated processing capabilities occur when an online application was saved but not submitted. The Solution will store the saved application for a pre-determined period of time as required by DHS. It will track this incomplete application form including the date saved, notifying the Applicant at a predetermined interval that the unsubmitted application will be deleted on a specific date unless further action is taken by the Applicant to complete or delete the application. As the application is submitted, the IE-BM Solution will assess programs selected, determine the Worker or agency responsible for the determination and route the application appropriately, and track the processing requirements. For example, based on the application data the IE-BM Solution will determine if the case is eligible for expedited SNAP benefits, route the application to the appropriate unit or worker, track the number of days since application, and alert the assigned Worker that the case must be processed within the ten (10) day SNAP required timeframe. The Solution will also, based on the application data, determine the need for MRT review and notify the appropriate MRT users. MRT involvement will likely generate additional communications to the Applicant concerning the medical review process. **[FR3.12, FR3.13, FR3.15, FR3.27, FR3.30]**

Eligibility determinations require validation of the information provided by the Applicant. The IE-BM Solution will ***determine and generate a list of the documentation and validations required*** to process eligibility. This list will be presented to the Applicant at the close of the online session or after the Intake Worker enters the application information. This list will be updated as needed, for example following an interview with the Intake or Eligibility Worker and the Applicant. The IE-BM Solution can also distribute this list to the Applicant via their preferred method of communication. The list will include a statement indicating that validations are required in order to proceed with the application and transition to the eligibility phase. The Solution will also track receipt of required validations and documentations. Client notifications will conform to DHS requirements. **[FR3.9. FR3.10]**

The IE-BM Solution will take full advantage of ***validating information based on available real-time and stored data sources*****.** DHS has provided a list of required interfaces. The type and frequency of those interfaces will be determined. The IE-BM Solution will 'compare' information provided on the application to data received via interfaces (real-time and stored data sources), it will not automatically change or update information. When a discrepancy is discovered, the IE-BM Solution will generate notification to the assigned Worker indicating that a discrepancy has been discovered that requires their attention. The Eligibility Worker may be required to obtain additional verification in order to determine the correct data to be used when determining eligibility. Because the IE-BM Solution's integrated application supports the application process for benefits administered by several external agencies, when data discrepancies are noted that impact those programs, the IE-BM Solution will pass that information to the appropriate agency or agencies. **[FR3.16, FR3.17]**

The IE-BM Solution will support reuse of available data, eliminating the need for the Applicant to provide validations to multiple agencies. The IE-BM Solution will support ***leveraging documents and information submitted across divisions.*** Access to this information will be governed by the person's role as applicable to the case. For example, if the Applicant provides a proof a statement from their landlord verifying living expenses such as rent, the Solution will factor verified shelter expenses into the eligibility determination in accordance with policy for programs selected on the application. If shelter expenses are factored into eligibility determinations performed on external systems, for example LIHEAP, authorized State users can access and use the statement provided by the Applicant's landlord. **[FR3.23, FR3.24]**

The Solution's calendar feature allows Applicants and Clients to schedule meetings with their Intake or Eligibility Worker based on need. DHS staff can also schedule meeting with Applicants and Clients using this feature. For example, a face-to-face interview may be required following an application for certain programs. The Client can schedule an Intake interview by accessing the Client Portal, calendar feature. The Worker and Applicant will both receive notifications of the scheduled appointment. If the Applicant opts to withdraw their application prior to the scheduled meeting, they can initiate the withdrawal for one or many programs identified on the application and based on this action, the Solution will cancel meeting associated with this application. Participants will receive notification of the cancellation and the Applicant will also receive a communication confirming the withdrawal of the application. IE-BM Solution will generate a list of the programs for which an interview is required. Integrated calendaring capabilities will be developed that will allow the Applicant to schedule the interview utilizing their Client Account. Calendaring functionality is further described in detail in T-7 Sections 1.13.1 Appointments and 1.13.3. Establishing Calendars. **[FR3.18. FR3.22]**

Clear, concise, and timely communications are essential. The IE-BM Solution's communications capabilities are designed to auto-generate notifications to system users and Clients for specific purposes based on identified events. Communications such as notifications informing the Applicant of the status of their application, eligibility determinations, availability of funds, application withdrawals, and scheduled interviews will meet your specifications. Communications will be sent to the recipient using their stated preference (i.e., email, SMS, mail). There are times, however, when the Worker opts to manually select and modify communications. In these situations, the Worker will be presented with communication options with the ability to modify text. Prior to sending to the Client or Applicant, the Worker will save the document and by doing so allows the Solution to maintain a copy of the communication and associated details. For example, based on a conversation with the Client the Client may request that a communication be sent to an alternate address. The Worker will first confirm that the alternate address was reflected in the case record and subsequently select that option. **[FR3.19, FR3.21, FR3.29]**

System Administration

As an integrated eligibility solution, the IE-BM Solution supports the State's movement towards 'No Wrong Door' in terms of Client access to DHS-offered benefits and services. The Client experience will improve with the sharing of documents supporting eligibility and entitlements for multiple programs. Staff efficiency and accuracy will also improve as a result of the following IE-BM Solution features:

- Shared data eliminates redundant data entry
- Share validated data across programs serves to increase the accuracy of eligibility determinations and benefit calculations
- Standardized application process, driven by workflow and edits decreases delays caused by incomplete applications
- Increased Client independence and responsibility – online access to applications, case status, and communications provides quicker access to critical information and responsibilities
- Notifications, distributed via the recipient's preferred method, expedites receipt, putting the progress of applications in the hands of the Applicant

- Cross program sharing of benefit information can decrease fraud as you will have more accessible Client benefit information.

1.4.2 Application Completed Online Requirements

Significant System capabilities in this area include:

- Providing a step-by-step form with branching logic requesting required and optional data elements
- Providing context sensitive help
- Allowing the Applicant to save the application and exit at any time before final submission
- Allowing the Applicant to give access to their draft or completed applications to an Intake or Eligibility Worker
- Accepting electronic/telephonic signatures at the appropriate points in the application process

Instructions: The Vendor should describe its approach to addressing Application Completed Online requirements.

The IE-BM Solution, through its self-service options, increases Applicant and Client independence while increasing the time available for Intake and Eligibility Workers to conduct interviews, deal directly with Clients, and process cases. This discussion will focus the tools available to Arkansans to research available DHS programs and services promoting more informed decisions regarding filing applications. This section is divided into the following two (2) topics areas:

- General DHS Information
- Online Application

General DHS Information

Recognizing that individuals have varying degrees of understanding and perception, it is imperative that the IE-BM Solution provides the means to research programs, benefits and services available through DHS and agencies whose programs are accessible through the Solution. To make informed decisions, individuals can access the DHS website or access the IE-BM Solution's Client Portal in order to review program and service options and obtain information such as populations served by each program, general eligibility guidelines, and the type of acceptable documents used by DHS and other agencies to determine eligibility and entitlement to each of these programs. Additional information provided includes DHS contact information such as office location, hours of operation, and telephone numbers. DHS contact information will also be available throughout the application process. **[FR3.42, FR3.55]**

Policy and legislative changes may result in updates to the IE-BM Solution. These changes may include the addition of a new program and associated data fields, workflows and rulesets and updates to the integrated application and will be evaluated through the change control process as needs arise. The proposed Solution has the capability to support these modifications allowing DHS authorized users to effect the required changes such as adding new questions and modifying or deleting existing questions. DHS authorized staff can review and confirm that required changes to workflow, screens, and rules will be implemented without compromising the security of data. General program information and County Office contact information available via the Solution's Client Portal can be updated to reflect current program and service offering as well as DHS County locations and contact details.

Online Application

The IE-BM Solution provides a user-friendly, intuitive and guided approach to initiating pre-screen activities and filing applications online. Individuals wishing to check potential eligibility for one or more programs can complete the pre-screen process, doing so anonymously if they choose.

To submit an application online by accessing the Client Portal, the Applicant must create an Account by choosing a user name and password. The Applicant has the option of creating their Account prior to beginning the online application or, if they overlook this step the Solution will inform them that they must create an account prior to submitting their application. Once the account is created and the Applicant and Client accesses their Account, they are presented with a log on screen similar to the one seen below. The process used to retrieve or reset a password involves the user responding to security questions, contacting a help line, or the issuance of a temporary password. Processes will conform to the State's password retrieval processes. A Client can retrieve or reset their password by selecting the *Forgot your password?* link and responding to the security question(s) presented; contacting the help line is also an option. **[FR3.38, FR3.39, FR3.40, FR3.41]**

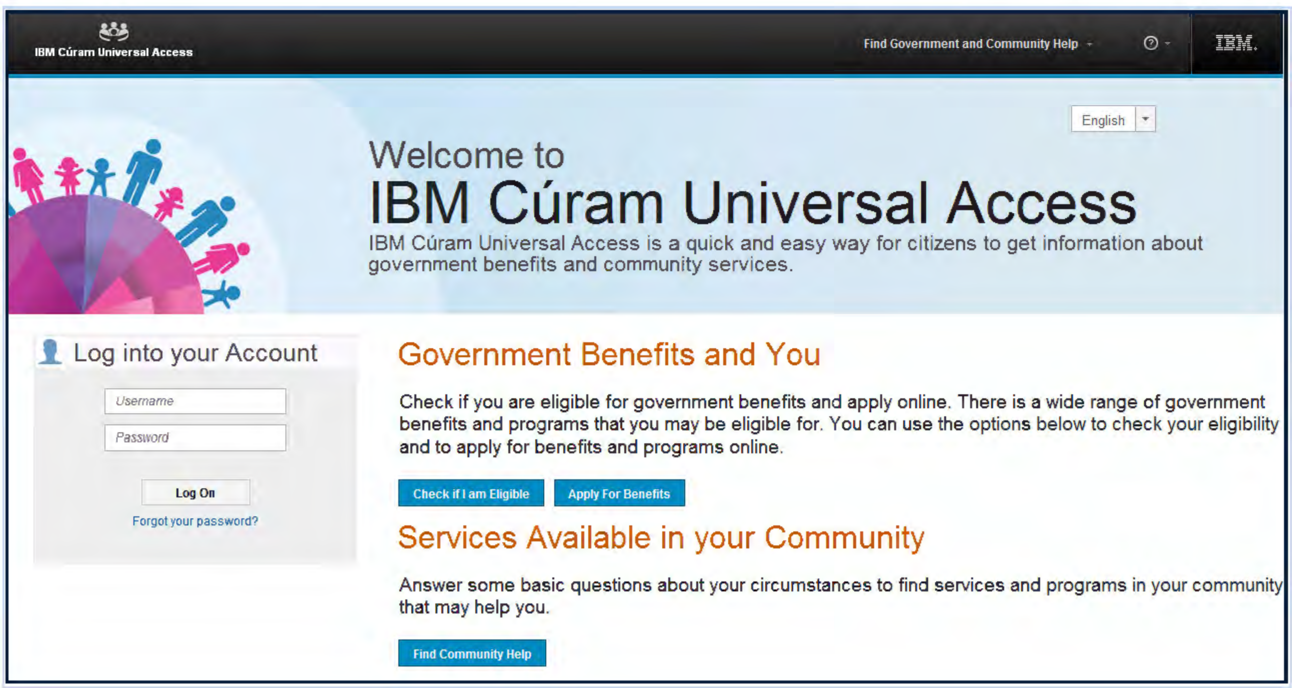


Figure 26: The Applicant will begin their journey to complete an online application on a landing screen designed to allow those with accounts to login or access program information without a registered account.

The Applicant begins the application process by choosing the program(s) for which they are requesting assistance. Prior to filing an application, the Applicant can pre-screen for benefits. The figure below presents an example of how the Applicant can initiate pre-screening functionality. During the pre-screening process, the Solution captures high level Applicant and household data in order to determine the Applicant's and Applicant household's potential eligibility for one or multiple programs as selected. Data provided during the pre-screen process will be applied against program-specific rules. The Solution provides details concerning pre-screen results indicating potential eligibility, by program, and inform the Applicant of the steps required should they opt to apply for benefits or services. **[FR3.46]**

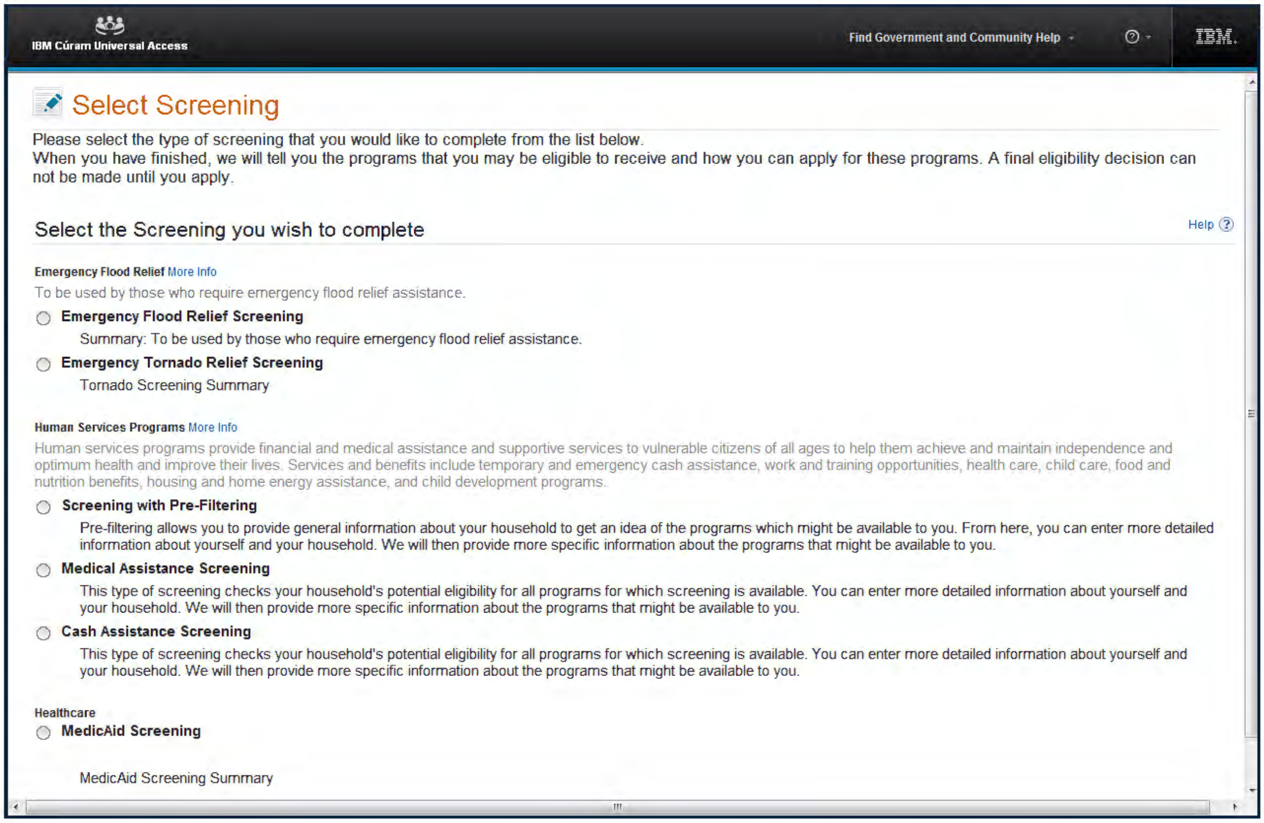


Figure 27: The IE-BM Solution will collect and assess Applicant and household data in order to determine potential eligibility for each program selected.

As the pre-screening process is completed, the Solution can provide the Applicant with guidance in the form of *Next Steps.* The figure below provides a sample view of the information that can be displayed at the completion of the pre-screen process. This view provides general information and hyperlinks that will allow the person to initiate an application at the conclusion of the pre-screen process.

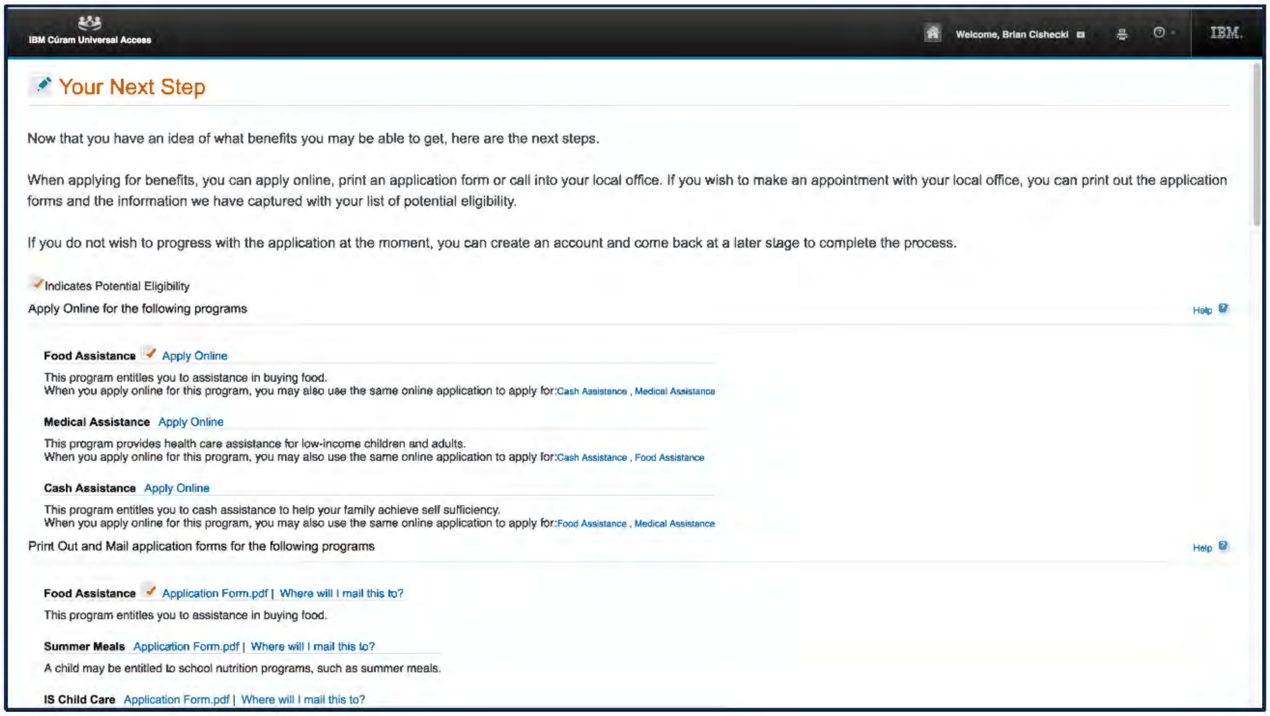


Figure 28: The IE-BM Solution, based on pre-screening results, will provide the individual with the option to continue with an application or where to find additional information.

The Applicant may base their decision to submit an application based on pre-screen results. As you can see from the representative screen below, the Solution's integrated application allows the Applicant to apply for one or more programs. This integrated application allows the Applicant to complete a single application for multiple programs and supports DHS in its effort to increase accuracy and efficiency by collecting the data once and applying it as appropriate across programs.

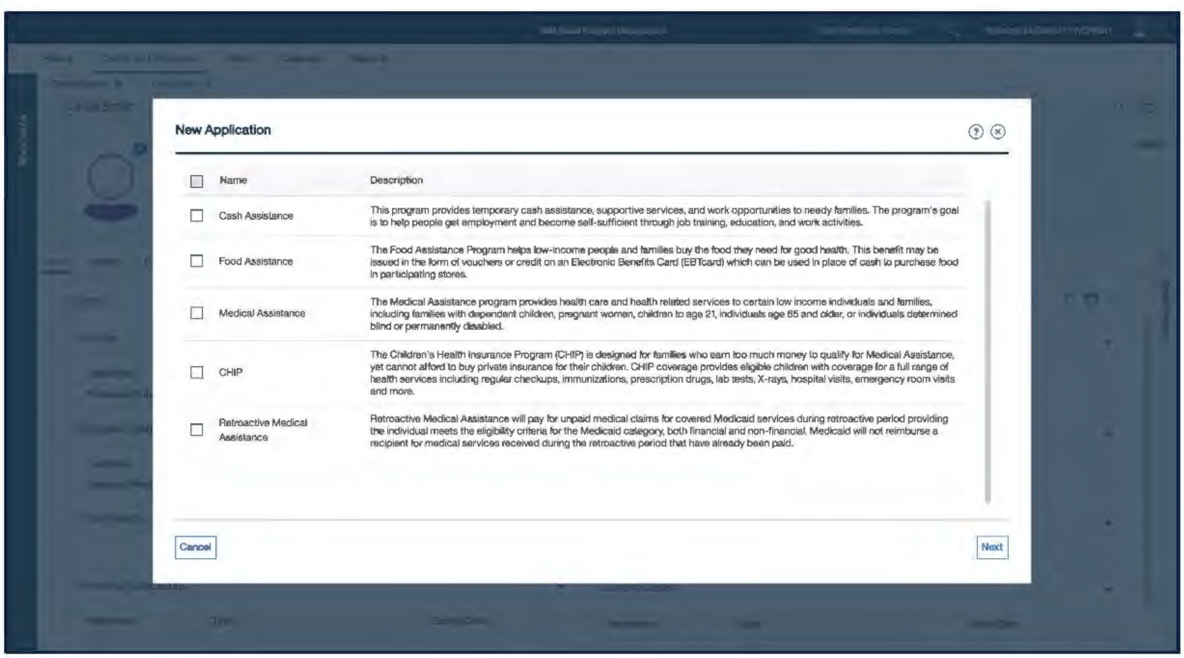


Figure 29: The IE-BM Solution allows the Applicant to select the specific programs of interest.

The IE-BM Solution uses a ***step-by-step approach to collect data using branching logic to request and capture required and optional data*** by guiding the Applicant through a prescribed series of steps, configured to DHS specifications, in order to confirm that required data is captured. Data collection is first based on information that is required for each of the programs selected. The Solution's dynamic questionnaire capability uses branching logic to expand the efficiency of data collection and to reduce the likelihood of redundant or irrelevant data being requested. For example, if an Applicant indicates that they or a member of the Applicant household is employed, the Solution will collect information such as employer, and wages; if the application includes multiple individuals, the IE-BM Solution will present screens to collect mandatory and non-mandatory data for each individual, again based on the benefit programs selected. The data is collected and shared across programs eliminating the need to reenter the same information multiple times. It is maintained throughout the life of the case with validation or verification of data provided in accordance with program-specific policy. In other words, if a birth certificate is acceptable proof of citizenship, this document is used across programs that requires proof of citizenship. At the conclusion of the application process, the IE-BM Solution will present a list of the verifications needed to process the application. The IE-BM Solution will support the Applicant's ability to upload documents to be used during the validation process. **[FR3.43, FR3.45, FR3.47]**

The Solution's flexible and convenient integrated application allows Applicants to complete applications in their own time and when they have gathered the requisite information. It reduces the need for the Applicant to physically go into the County Office to complete an application, benefitting both agency staff by freeing up their time to deal with more complex case work, and Clients by preventing unnecessary office visits, time off from work or school and travel. Additionally, the Solution is designed to accommodate busy schedules and time limitations by allowing the Applicant to complete portions of the Application, save it, and continue at a later date and time that is conducive to their shedule. The IE-BM Solution will ***allow the Applicant to save the application and exit at before final submission***. There is no limitation to the number of times the Applicant can stop and restart an application. Each time the Solution will return the Applicant to the furthest point reached prior to saving the application. Prior to the submission of the application, the Applicant can restart the application. In these cases, the Solution offers a *Delete* option which will remove the Application; the Solution, however does not require that the Applicant delete the application. **[FR3.49, FR3.50, FR3.51]**

If during the Application process the Applicant has a question, the online Help feature ***provides context sensitive help*** maintained by DHS. The Applicant can access procedures or guidance to complete the task currently in progress, and receive clarification of definitions or concepts applicable to the task they are in the process of completing. During the application process should the Applicant require additional assistance or prefer to seek assistance from a DHS Intake or Eligibility Worker the Applicant has the ability to indicate the need for assistance. By ***granting permission for a DHS Intake or Eligibility Worker to access the application***, the Applicant opens the door to one-to-one assistance to complete the process the application. **[FR3.44, FR3.52]**

The application data collected throughout the application process is summarized and can be reviewed online as an end to end summary before submission. This provides the Applicant with the opportunity to correct information and enter missing or optional information at will.

Our proposed Solution provides the applicant with a list of supporting documents that required in order for the application to be processed. To improve processing time, Applicants can upload documents and submit them at the time the online application is filed. Applicants can also send documents directly to the assigned Worker using other means such as mail or fax. **[FR3.45]**

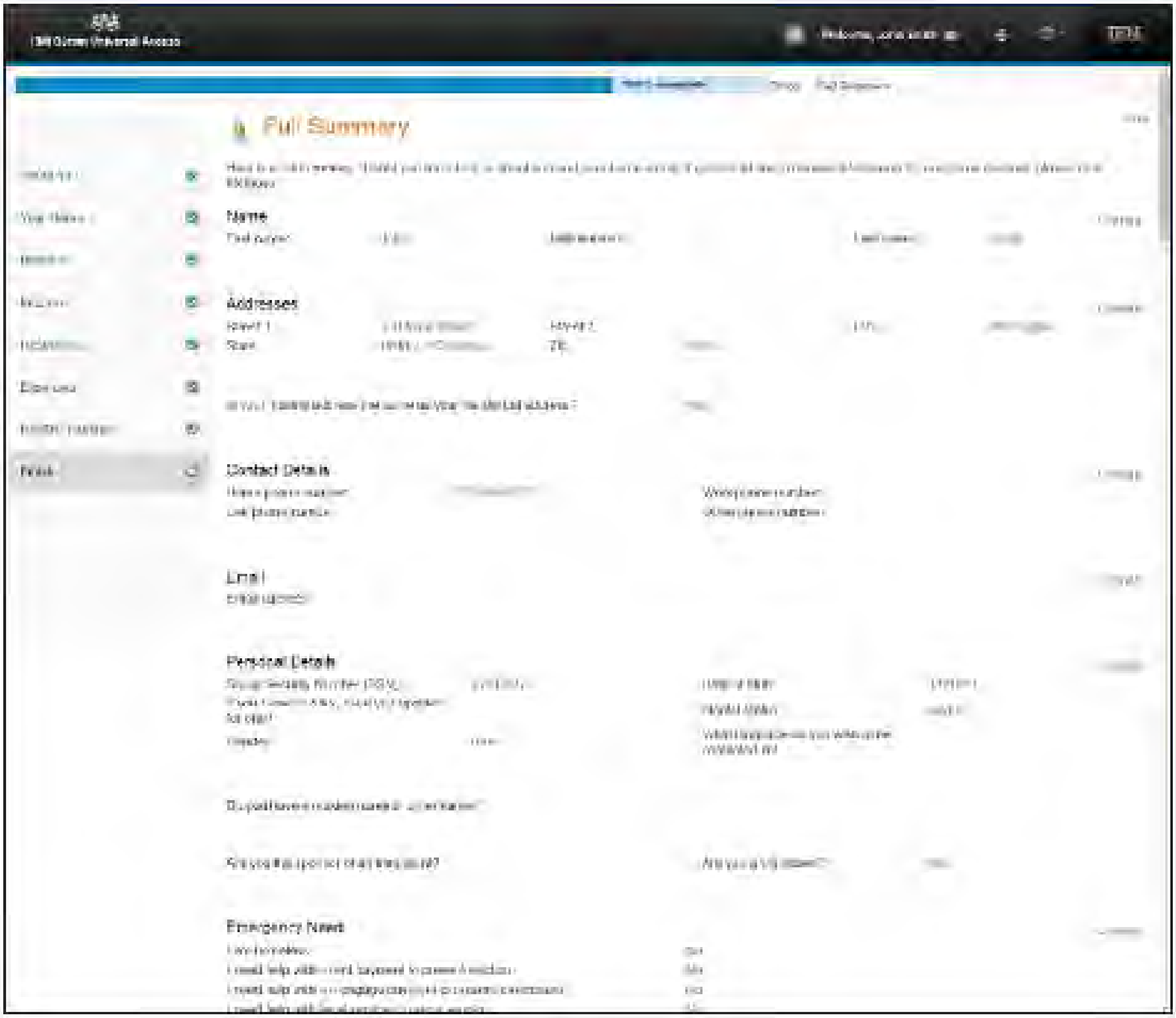


Figure 30: The IE-BM Solution presents a summary of data entered during the online application process affording the Applicant the opportunity to correct information and add non-mandatory data.

Consent information and ***electronic signatures are accepted at predetermined milestones during the application process*** prior to the application being submitted. By providing their consent, the Applicant agrees that the information they have provided on the application can be shared across programs as authorized by DHS. Their electronic signature confirms that the information provided on the applicantion is complete and accurate. In the figure below we present a sample Electronic Signature page. This page will be configured to DHS specifications to include Agency approved text. **[FR3.47, FR3.48, FR3.54]**

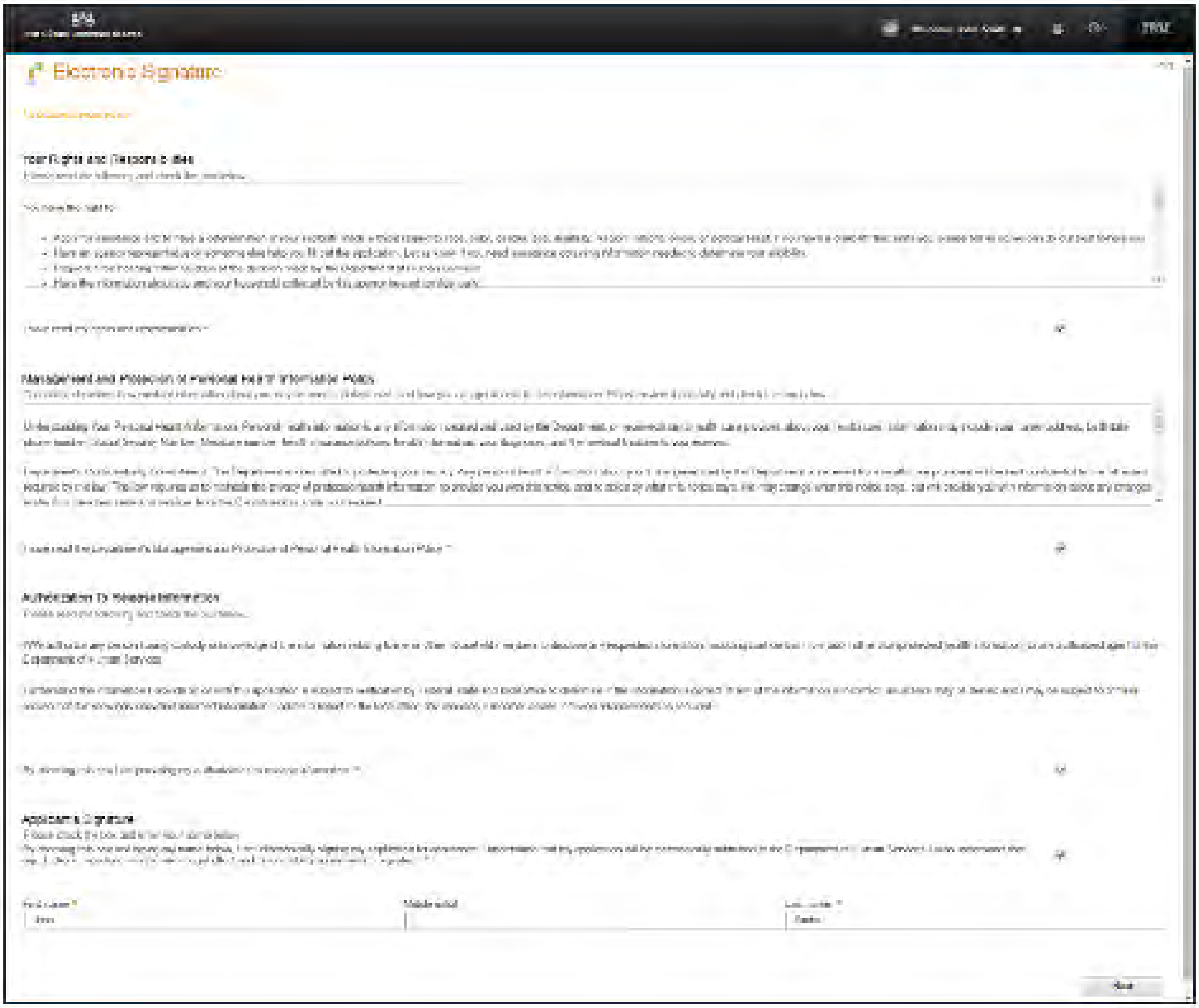


Figure 31: The IE-BM Solution will capture the Applicant's signature electronically indicating that they attest to the accuracy of information provided on the application and agree to the conditions reflected.

Once the application is submitted through via the Client Portal, the application is routed to the appropriate queue based on the applicant's present or past involvement with the DHS and can be accessed and reviewed by the assigned Intake Worker. Upon review, the Intake Worker can contact the Applicant through their preferred communication channel requesting additional details that needed for the eligibility determination for one or multiple programs.

Using rules that will adhere to DHS data retention policies, the IE-BM Solution can automatically archive or purge unsubmitted, approved, or denied applications after a pre-determined period of time. Transaction details will be recorded as part of the case history **[FR3.53]**

In Summary, the integrated eligibility application will support DHS objectives to achieve greater efficiency. Through the online application process, the Applicant's responsibility increases and their dependence on DHS staff decreases; DHS Staff, in turn gain additional time to process cases, and realize an increase in the time they have available to work directly with Applicants and Clients. The intuitive process guides the Applicant through the process and confirms that required information is captured. Applicants can better plan their time and avoid employment absences through the online application feature.

1.4.3 Application Completed with an Intake Worker Requirements

Significant System capabilities in this area include:

- Providing a user Interface configured for use by Intake Workers
- Allowing the Intake Worker to create a new record for the Applicant
- Allowing the Intake Worker to override the deadline before which additional actions must be taken

Instructions: The Vendor should describe its approach to addressing Application Completed with an Intake Worker requirements.

The IE-BM Solution will allow Applicants to submit applications in a variety of ways. In addition to the Applicant's ability to submit an application using the self-service capabilites, DHS accepts applications submitted by mail, fax, in-person drop off, and by telephone. The IE-BM Solution is designed to provide Intake Workers with end-to-end support of the Intake process. In addition to a ***user interface designed for use by the Intake Worker*** assisting the Applicant through the application process, the workflow will adhere to the DHS Intake process, in this case specifically as it applies to Intake Worker intervention. Screens are presented to logically record data reflected on the application. This section will provide an overview of the Intake Worker assisted application process.

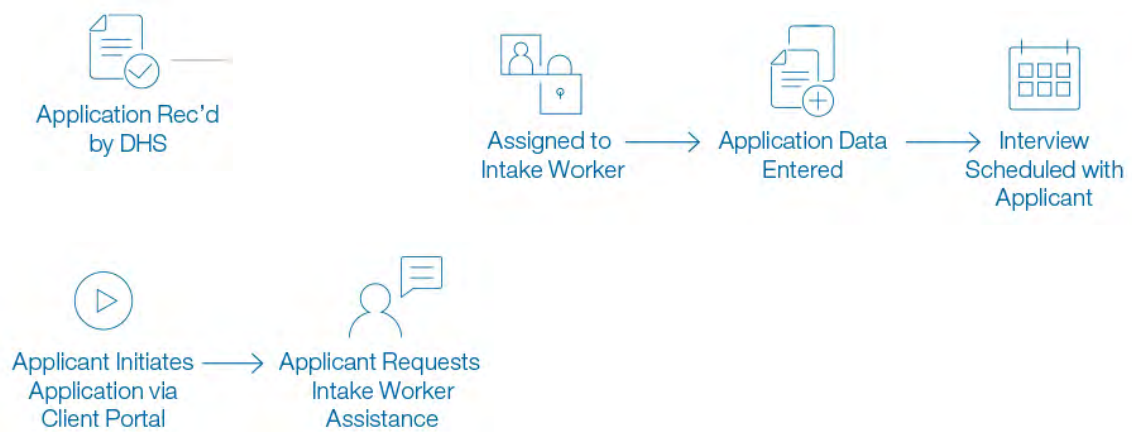


Figure 32: Intake Workers can assist Applicants with the application process by entering application data on behalf of the Applicant and schedule an interview.

Our proposed Solution serves two key functions. First, it aims to provide a means for DHS Intake Workers to support Applicants and complete applications on their behalf in a cohesive, consistent, and efficient manner. Second, it supports the person-centric vision of DHS and provides a collaborative 'No Wrong Door' approach to the intake process by providing Worker functionality that mirrors what is available to Applicants using the self-service feature available to them through the Client Portal.

As the application is received, its path will be determined by the structure of the county office responsible for serving the Applicant and DHS processes as they relate to assignments. For example, the application can be routed based on the operations in place for that County Office.

The Solution can route the application to a unit, a Supervisor, or directly to an Intake Worker based on the process followed by that County Office. In each case, the newly received application will appear as a task on the Unit's, Supervisor's, or Intake Worker's landing page. The IE-BM Solution will track the application from point of receipt to support compliance with processing timeframes for each program selected on the application. The Solution will provide the assigned party with access to the case based on their assigned role. If, based on reasons acceptable to DHS, the Intake Worker is not able to meet program-specific processing deadlines, authorized Workers or Supervisors may ***override the processing deadline***. To do so, the Solution will require that the reason for the extention be documented. They may also document the reason for the processing delay and actions requried in order to process the application as case notes.

SECTION HIGHLIGHT

IBM successfully extended eligibility determinations in the State of North Carolina, by adding an 'on hold' feature for changed determinations that result in an increase or decrease in benefit amount (SNAP and TANF) or when there is a change in eligibility (Medicaid). This allows the Worker to conform and 'accept' the eligibility change prior to notification to the Client.

The Intake Worker Landing Page is designed to accommodate their everyday work needs. Information groupings or pods available are based on the user's role. In this case, the Intake Worker can select and position the pods that suit their personal work style. The sample screen shot below displays the Worker's appointments for the current week with a tab to access next week's appointments as well as recent notifications and other pods as chosen and placed by the Worker.

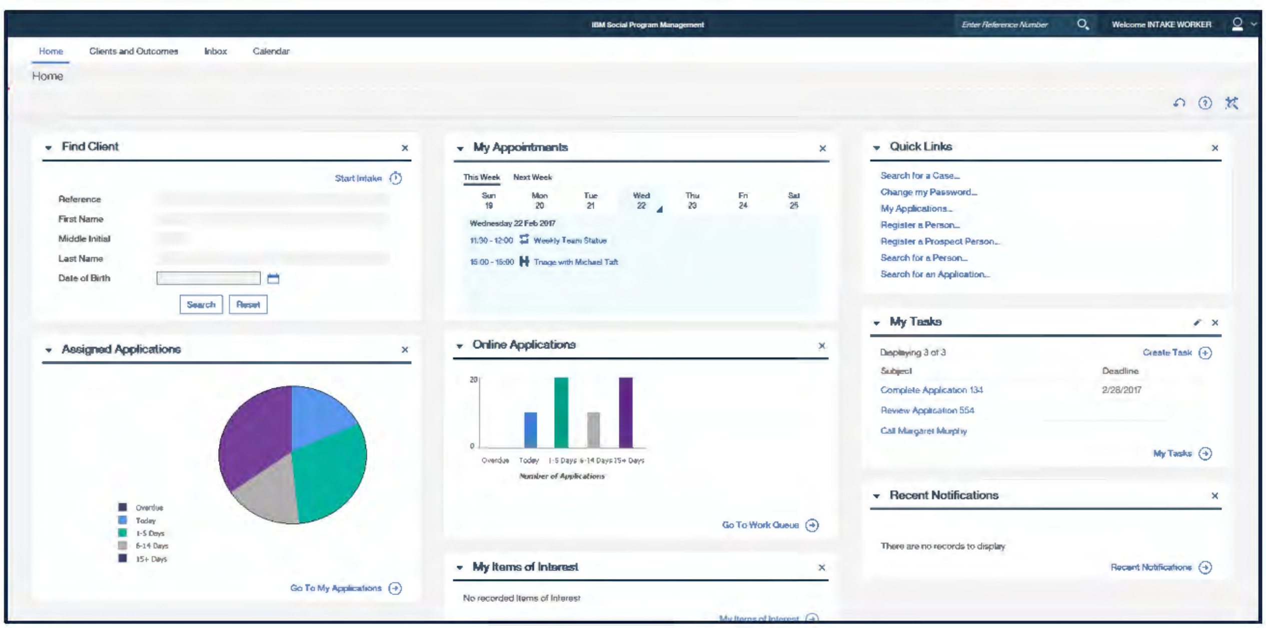


Figure 33: The configurable Landing Page presents Workers with time-sensitive, role specific information.

Applications received directly by DHS, i.e., those that the Applicant has not initiated via the Client Portal, are assigned to an Intake Worker who will review information provided on the application. The Intake Worker, to avoid creating a duplicate Client record, conducts a search of individuals listed on the application. The Find Client pod, as seen in the top left corner of the sampe Intake Worker Landing Page above, provides easy access to the IE-BM Solution's search function. Based on the information available, the Solution will return a list of potential matches. Using the details available on the application, the Intake Worker selects the match. By doing so, data available for that individual will be presented on the appropriate screens allowing the Intake Worker to review and update information saving data entry time. The data brought presented may include data brought in via interfaces with external systems. The Intake Worker will first compare the information reflected on the application with that populated by the Solution. Acceptance or update of pre-populated data will depend on information provided on the application and discussed with the Applicant. To supplement the application and to document conversations with the Applicant during the application process, the Intake Worker can enter notes explaining their actions based on discrepancies noted. Additionally, by delving into Client details, the Intake Worker has visibility into that person's previous interactions with DHS including prior applications, prior eligibility, and prior case affilitations. Further details may be accessed by selecting an entry. For example, by selecting a prior application, case, or prior eligibility period the Intake Worker is able to access details that may further assist with the application process and possibly future eligibility determinations. The figure below provides an example of the applicant's prior applications. **[FR3.58, FR3.59, FR3.60, FR3.61]**

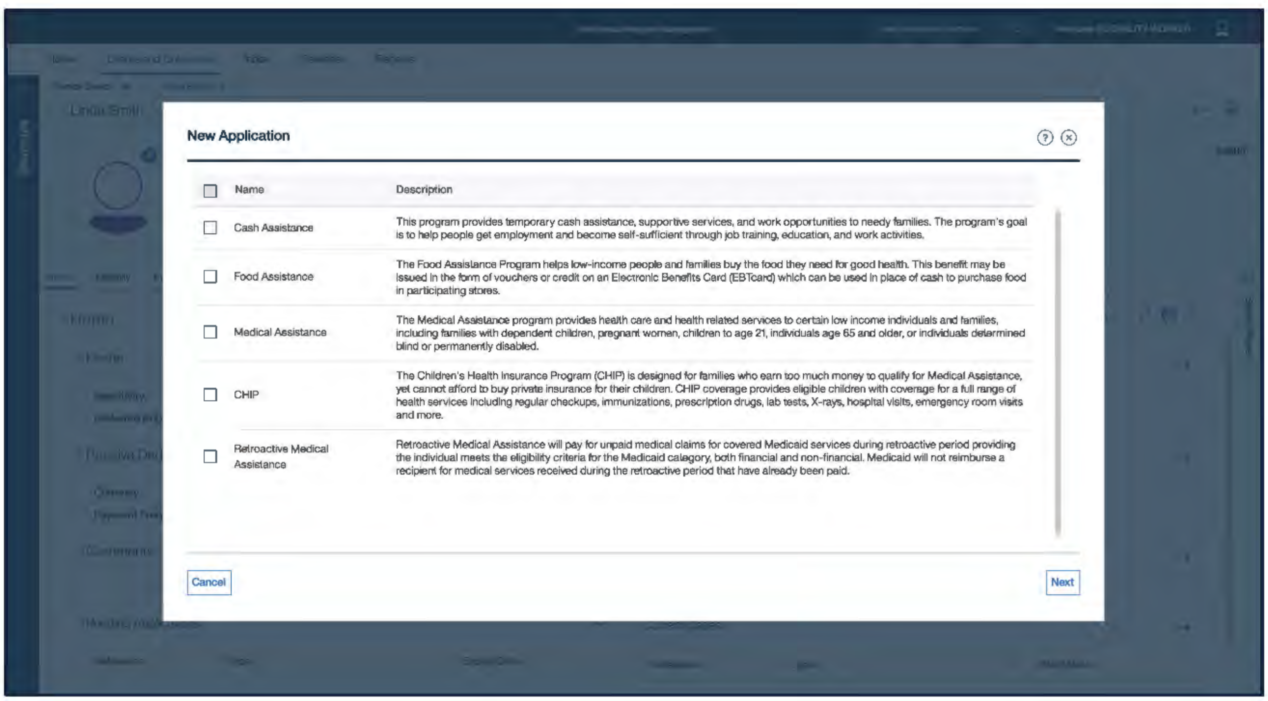


Figure 34: The IE-BM Solution's Search feature helps to avoid duplicate records and the need to re-enter available Applicant data.

Search results will inform the Intake Worker of potential matches for each applicant listed. If the Applicant is not known to DHS, the Intake Worker will create a new Client record. The IE-BM Solution will guide the Intake Worker through the new Client record process by presenting screens in a logical manner, displaying screens based on data entered, and indicating mandatory data fields. The IE-BM Solution will allow the Intake Worker to enter the information available; however, it will require the Intake Worker to provide mandatory data as required by DHS**. [FR3.57]**

The IE-BM Solution provides a structured, logical process for collecting and recording application data. As an integrated eligibility solution, the IE-BM Solution will present views to collect Applicant data based on the programs selected on the application, information reflected on the application, and data entered throughout the application process. For example, if an applicant indicates employment, the Solution presents the Worker with Employment related screens (employer, wage details), allowing the Intake Worker to collect application related information and the supporting evidence across program offerings eliminating the redundancy that occurs when a separate intake must be completed for each program. The Solution identifies mandatory and non-mandatory data based on the programs selected on the application. The Intake workflow will guide the Intake Worker through the collection of the required data for each program specified. **[FR3.56]**

Some of the key features and benefits of the IE-BM Solution's automated Intake process include:

- An integrated application process for multiple programs promotes a 'No Wrong Door', person-centric approach.
- A user-friendly, dynamic process to collect information guiding the user through the questions confirms that mandatory and other required data is collected based on the Applicant's circumstances.
- The ability to document observations and notes gathered throughout the Intake process will provide insight to other staff working with the Client and case and can be used to prompt the Worker to complete tasks.
- Automated tracking of applications, alerting assigned Workers of impending program-specific application processing promotes timely processing.

In summary, the IE-BM Solution standardizes the Intake process. Regardless of the method of receipt (online, Intake Worker assisted, mail), the IE-BM Solutionguides users through the process confirming that the required information is collected. It eliminates the need to enter data for each program and provides Workers with available data throughout each process. Intake and Eligibility Workers have the ability to review and update data, but they can also note items of interest as a case note. For example, highlighting conflicting data that will be validated or reasons that initiated the need to override a processing deadline. The IE-BM Solution will maintain a detailed log of case activity and preserve notes entered throughout the life of the case. Case notes inform Workers as the application transitions to the eligibility phase and can also be used for auditing purposes.

1.4.4 Application Completed by Applicant on a Paper Form Requirements

Significant System capabilities in this area include:

- Utilizing bar coding and Optical Character Recognition (OCR) to read the application and pre-populate information
- Allowing the Intake Worker to review the pre-populated fields and enter in corrected or new information

Instructions: The Vendor should describe its approach to addressing Application Completed by Applicant on a Paper Form requirements.

As discussed in T-7 Section 1.4.1. Application Completed Online Requirements, by offering an intuitive online integrated application via the Client Portal, the IE-BM Solution will provide Arkansans a single point of access to apply to multiple programs simultaneously. While this will be a prime example of the State's commitment to delivering a person-centered delivery system, we understand it will be equally important for the IE-BM Solution to remain flexible and service Applicants with varying technical abilities, preferences, and needs. As such, the IBM team will work with your staff to address Application Completed by Applicant on a Paper Form Requirements to provide Applicants options while allowing DHS to reduce staff workload and increase productivity.

The IE-BM Solution will leverage the State's investments in Xerox DocuShare and its corresponding add-ons to utilize bar coding and Optical Character Recognition (OCR) to read the application and pre-populate information. The existing mail room processes for scanning the paper application will be enhanced to pass the data collected via OCR to the Cúram application. The legible data will be mapped into a Cúram IEG electronic application form and saved as as an in-progress application, and a task will be created in an appropriate work queue. This will allow an Intake Worker to examine and modify the data if necessary, and eventually complete and submit the application. The original scanned application will be saved as an attachment and linked to the person for use by the Intake Worker or Document Processing Staff. The IE-BM Solution will display the electronic application information in the same sequence as the paper application in order to facilitate data verification and data entry by the Intake Worker. **[FR3.62, FR3.63, FR3.64, FR3.65, FR3.66]**

Application forms generated by the system (such as those necessary for "Renewals") will be enhanced to include a bar code. The bar code will then be used to identify the application form and Applicant with increased accuracy. Once the application is completed by the Applicant and received by DHS via mail, fax, or email, the Document Processing Staff can OCR the application as previously described. The application data can also be automatically or, if needed, manually linked to existing Applicants so existing account or pre-screening information can be applied. Metadata read from the application using OCR can be utilized across programs. Additional details related to bar coding are described in T-7 Section 1.6.2. Paper Documentation.

1.4.5 Authorized Representatives Requirements

Significant System capabilities in this area include:

- Providing account registration of third parties who are authorized to help Applicants
- Providing a list of Applicants for whom the individual can act as an Authorized Representative
- Sending all correspondence to the Authorized Representative in addition to the Applicant

Instructions: The Vendor should describe its approach to addressing Authorized Representatives requirements.

An Authorized Representative, individual, or organization selected by the Client to represent their interests as it pertains to their interactions with DHS may become involved during the application process, or throughout the duration of the case. Authorized Representatives can be assigned to a single case or to mulitple cases. The AR registration process is also discussed in T-7 Section 1.2.3 User Account Management Requirements. The IE-BM Solution fully supports the process of ***account registration of third parties who are authorized to help Applicants.***

The graphic below depicts at a high level, the process used to register an individual as an Authorized Representative (AR), linking the Authorized Representative to a one or more cases, and informing the AR of case events and status.

Figure 35: The IE-BM Solution supports Authorized Representative registration, credential assignment, and case assignment processess.

Once chosen by the Applicant or Client, the Authorized Representative (AR) will be registered in the IE-BM Solution and linked to the case. The IE-BM Solution will capture demographic and other details as required by DHS. For example, address, contact information, preferred method of communication, and relationship to the Client are required during the AR registraion process. The AR's relationsip to the Client establishes their role in the case, a role tracked by the IE-BM Solution. Authorized Representative registration can be performed by the Eligibility Worker but may also be completed by the Applicant or Client. **[FR3.70, FR3.72]**

The AR registration process mirrors that of Applicant registration. Views will be presented prompting the Client or the Worker registering the third party authorized to assist the Client with the application, such as an Authorized Representative or designated hospital staff. AR to provide mandatory data as required by DHS for someone assuming the AR role. The AR is free to provide additional data at their discretion. If the AR is known to the system for example, the Worker can select that person, link them to a case, and establish their relationship as the Client representaive. **[FR3.67, FR3.69]**

Since the Authorized Representative can be assigned to one or many cases, the AR's role in a case will link them to cases based on their relationship to the Client. For example, a Guardian-at-Litem may be the AR for multiple cases while another AR may be chosen to represent a single Client. Each Authorized Representaive will be provided with credentials and a user account that will allow them to access cases assigned.

The Authorized Representative's log-in credentials will allow them to access their case(s) via the IE-BM Solution's Client Portal. Their personal Landing Page will provide the AR with a list of Applicants they represent as well as tasks, responsibilities, and upcoming events or activities, by Client, that require their attention. The AR's assigned credentials govern the cases and level of detail they can access as well as the tasks they can perform on behalf of their Client(s). For example, Authorized Representatives can apply for programs such as SNAP, TANF/TEA, presumptive Medicaid elgiblity or other programs supported by the Solution on behalf of the Applicant. The IE-BM Solution captures case activity including the person performing the action.

In this example, the IE-BM will record that the AR filed the application on behalf of the Applicant, or later in the process, initiated a change or contact on behalf of a Client. **[FR3.68, FR3.71]**

The IE-BM Solution supports the process of de-authorizing Authorized Representatives providing they are not the Client's legal guradian. De-authorizations may occur due to a change in Authorized Representative or the Client's decision to eliminate AR involvement entirely. To de-authorize the Authorized Representative, the Client, Assigned Eligibility Worker, or AR can update the AR's relationship to the Client, essentially terminating the representatve relationship and therefore removing access permissions to the Client's case. Once changed, the Solution will notify Client, AR, and others identified as 'to be notified' of the de-authorization action. **[FR3.73, FR3.74, FR3.75]**

The IE-BM Solution is configured to issue correspondence to Authorized Representatives for Clients they represent. The ***communication may be sent only to the AR, to both the AR and the Client, and others designated by the Cient***. The IE-BM Solution will issue communications in the preferred method indicated by the communication recipient. For example, if the Client has indicated that the Authorized Representative will receive communications generated to the Client, the IE-BM Solution will generate each communication as instructed. The may prefer that notificaions be received via USPS while the AR prefers email. The Solution will maintain a detailed log of each communication issued documenting, at a minimum, date issued, method, recipient, and type or purpose of the communication. **[FR3.73, FR3.75]**

The inclusion of Authorized Representative data and support of functionality surrounding the role and responsibilty of the AR provides DHS with a full view of the case while providing a single case file where they can access and monitor the activities performed by the AR on behalf of their Clients. This integration also provides the abiltiy to access correspondence to the Authorized Representative and documentation provided by the AR on behalf of a Client. Protection of Client data is a main focus of DHS. In the event DHS is notified of an allegation or supported claim of wrong doing against a Client, DHS is ***provide a list of Applicants and Clients for whom the individual can act as an Authorized Representative*** and initiate appropriate action to protect the safety and well being of Clients that may be impacted.

1.5 Approach to Interviews

The Vendor should ensure that the responses to this section are in alignment with the requirements set forth in Template T-6 – Functional Requirements Traceability Matrix, Tab FR4 – Interviews.

Significant System capabilities in this area include:

- Providing the steps (i.e. a script) for the Eligibility Worker to conduct the interview
- Allowing the Eligibility Worker to override data fields if the Applicant indicates the pre-populated application data is not correct
- Providing a summary of all the documents provided, any outstanding actions, and actions taken during the interview
- Sending interview appointment reminders to Applicants

Instructions: The Vendor should describe its approach to addressing Interview requirements.

Our approach to addressing interview requirements is to work closely with your staff via a series of sprints to collaborate and create a design that meets three (3) objectives:

- Improve searches so Clients and applications can be found easily and quickly
- Increase effectiveness in capturing accurate and consistent data
- Highlight outstanding action items to support timely resolution for eligibility determination

Our approach is to extend Cúram's interview functionality so that the IE-BM Solution will improve interview efficiency allowing your staff to focus on services and outcomes. We understand that Health and Human Services (HHS) staff often struggle with heavy workloads preventing timely eligibility determinations. The IE-BM Solution will assist your staff in managing scheduled interviews by simplifying the interview process depicted in the graphic below. First, our proposed Solution will allow both Clients and Workers to manage scheduled appointments including providing appointment reminders. When the Client attends the appointment either over the phone or in-person, the Eligibility Worker will utilize the system to document collection of necessary information. Evidence updates made by the Eligibility Worker to Client information will then flow to the person and case records. Prior to and at the completion of the interview, the Eligibility Worker can use application case functionality to document notes, create tasks, and reference verification requirements that have been met or are still outstanding.

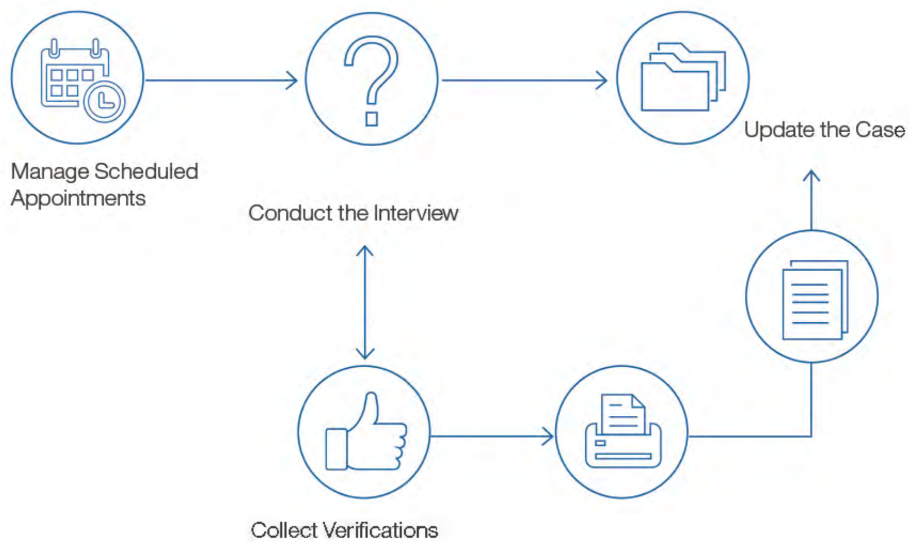


Figure 36: The IE-BM Solution will provide an end-to-end solution so that interviews are conducted effectively and efficently.

The remainder of this section describes the interview process in detail using four (4) topics:

- **Manage Scheduled Interviews** – Notifications reminding Clients of appointments via their preferred communication channel decreases no-shows and augments staff productivity.
- **Conduct the Interview** – Cúram's Intelligent Evidence Gathering (IEG) will support Eligibility Workers efficiently collecting necessary information based on each household's circumstances.
- **Update the Application Case** – The application case supplies staff with multiple functions including maintaining evidence, notes, and tasks which provide additional capabilities that support an efficient interview process.

- **Collect Verifications** – The standardization of types of evidence that need to be verified and acceptable forms of verification will allow the system to easily identify which verification requirements have been met and which are still outstanding so that verifications can be automated where possible.

Manage Scheduled Appointments

We will utilize the IE-BM Solution's extensive calendaring functionality to enable DHS to record and keep track of appointments. The calendaring functionality is fully integrated with other areas of functionality and supports various business processes associated with cases, Clients, providers and the DHS in general. Calendaring functions can be integrated and event information can be sent to Microsoft Outlook. Appointment functionality is further described in detail in T-7 Section 1.13.1 Appointments.

Our proposed Solution will utilize the calendaring functionality to help Clients track their appointments and avoid missed appointments that may cause delays in processing. Once an Applicant submits their application and indicates their preferred electronic communications method, the system will send appointment reminders via their preferred method at a frequency and timeframe determined by the State.

Sending interview appointment reminders to Applicants will be helpful in reducing last minute cancellations and no-shows. In addition, if the Eligibility Worker utilizes the calendaring functionality to indicate an Applicant did not show for their scheduled appointment, the system can send a notification with the newly assigned appointment time or a request for the Client to reschedule the appointment. This functionality will help Clients and staff meet timeliness standards. **[FR4.3, FR4.18]**

SECTION HIGHLIGHT

Capitalizing on out-of-the-box functionality IBM successfully configured interview functionality for the State of North Carolina by following the State policy for programs that require face-to-face interviews using the out-of-the-box interview logging process. The IBM team will leverage this experience as well as our in-depth knowledge of how to properly customize integrated eligibility solutions to meet the State of Arkansas's additional interview requirements.

Conduct the Interview

In the example of an existing Client and submitted application, an Eligibility Worker can search for the Client or completed application using a simple search screen. The Eligibility Worker can establish search criteria which may include partial name searches, date ranges, addresses, program type, application status, and reference numbers. Reviewing the search results the Eligibility Worker can select the Client or application and navigate to the Client's application, where they will have access to information on previous case actions such as previous applications, flags, determinations, and existing overpayments. **[FR4.1, FR4.2]**

From within the application, the Eligibility Worker can initiate the interview script. Whether an Eligibility Worker conducts an interview with the Client to complete and submit an application or the Eligibility Worker conducts the interview after an application is submitted, we will develop a ***household specific script for Eligibility Worker to conduct the interview***. Our proposed

Solution will use features of Cúram Intelligent Evidence Gathering (IEG) to design and configure both the questions in the script and the script execution path for the interview process. We will work you to utilize IEG capabilities to define a dynamic questionnaire which augments the efficiency of data collection and reduces the likelihood of redundant or irrelevant data being requested.

To support increased employee efficiency and the collection of relevant, essential data needed to determine eligibility, the IE-BM Solution will take full advantage of the features and benefits of Cúram IEG:

- An intuitive questionnaire that accelerates the data collection process so that your staff can focus more on Client services
- Scripts and subscripts that can be easily configured for integrated multi-program interviews

The questions presented will reflect information previously provided so that the Eligibility Worker can review, discuss, and confirm the existing responses with the Applicant. As a result of this discussion, the Eligibility Worker will ***update responses if the Applicant indicates the pre-populated application data is not correct*** or current. If the Eligibility Worker modifies an answer, the script execution path is re-evaluated to assess whether the right data is being collected. Following an update to the pre-populated information and based on the programs identified on the application, the script will determine if required information is missing, and prompt the Eligibility Worker to collect the data as needed. The original application submission is saved in addition to changes made by the Eligibility Worker. An audit history is maintained so that the original data and subsequent changes are not lost. **[FR4.7, FR4.11]**

As the Eligibility Worker conducts the interview, our proposed Solution will display the steps of the script. Below is an example of a screen where Cúram IEG has been used to develop a script. On the left hand side, the pages are categorized so that the Eligibility Worker can easily navigate from page to page. At the top, the system displays a progress bar for Eligibility Workers to easily see how the interview is advancing by determining percentage complete. **[FR4.4]**

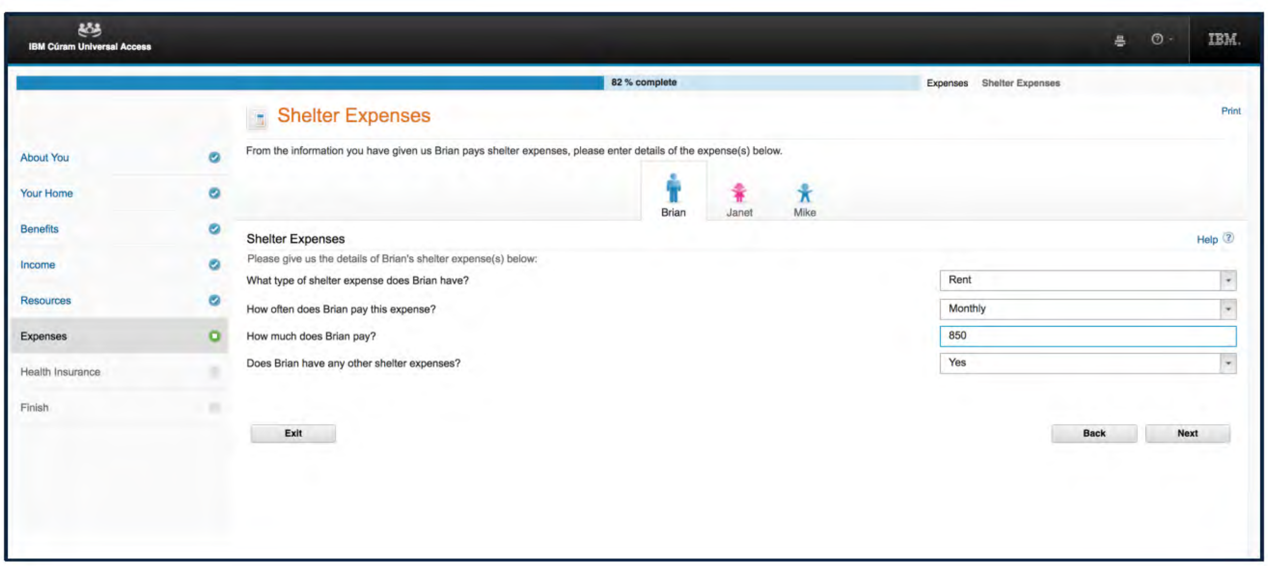


Figure 37: Cúram IEG will help Eligibility Workers easily navigate, review, and conduct interviews by providing interview questions in a logical manner.

Once the Eligibility Worker completes the interview script, the system will display a summary page. Summary pages enable the Eligibility Worker to quickly review the collected information and make final changes after reviewing the collected information with the Applicant. The Eligibility Worker can, during the interview and throughout the life of the case, record notes. In the case of the interview, the Eligibility Worker may note information provided by the Applicant for example, documenting the reason for a change in data provided on the application and later changed during the interview**.** Interview notes will be associated with the specific program for which the interview is being conducted. **[FR4.5, FR4.14, FR4.16]**

Eligibility Workers will benefit from using the interview script for multiple reasons including:

- The script will record which data the Eligibility Worker has validated and confirmed during the interview.
- The script will identify additional programs that the Client is eligible for and will prompt the Eligibility Worker to ask additional program-specific application or interview questions the Client has not already answered, if the Client wishes to apply.
- The script will integrate with trusted sources such as the Social Security Administration System to validate information based on available real-time and stored data sources identified by DHS, preventing inaccuracies and false eligibility determinations while avoiding processing delays. **[FR4.8, FR4.13, FR4.19]**

Eligibility determinations require that the Applicant provide documentation to verify certain data, for example, proof of earned income and assets such as bank accounts. If the Applicant has verification available at the time of the interview, the Eligibility Worker will scan available documentation and electronically attach the forms and images to the Applicant's case. At the conclusion of the interview, the system will produce a final confirmation page that will display and save a ***list of the documents provided, outstanding actions or verifications needed to process each program selected on the application, and actions taken during the interview.*** **[FR4.9, FR4.15]**

Update the Application Case

The IE-BM Solution's case management will provide extensive functionality to facilitate the creation, management and tracking of cases in support of multiple programs. Cases provide multiple functions including evidence, notes, and tasks which indirectly support the interview functionality.

Evidence data is used by the IE-BM Solution to determine eligibility for an application case. Once the Eligibility Worker completes the interview, the Evidence Flow will update Client, application, and integrated case evidence, as applicable. Based on the modifications made within the interview IEG script, the Evidence Flow can add or modify evidence as well as activate in-edit evidence that has been verified. Updates to evidence indicated as requiring approval of the change will result in an alert to the specified approver. Evidence updates can also be made available to external systems such as an Applicant's worker classification (e.g., mandatory, voluntary, not work eligible) for the E&T or DWS Systems. **[FR4.6, FR4.12]**

In addition to evidence, our case management has a feature called Case Notes. Case Notes, also known as Narratives, are used to tell a case's story. Case Notes can be entered and updated by authorized users that are authorized to maintain the case based on security group. They can also be created by the system as a result of specific events occurring on the case for example, SSA benefit updates resulting from the interface with SSA. The Eligibility Worker can also capture notes as free text during the interview, and then apply them to the case. The system will associate interview notes with the specific program for which the interview is being conducted. Notes may be assigned a sensitivity rating further restricting access so that the note can only be viewed by certain users as deemed appropriate by DHS. There is also an audit trail that records modifications to a note, including the note version, the time and date the note was entered on the system, and the user who made the note modification. **[FR4.5, FR4.16]**

Lastly, the IE-BM Solution's workflow will create tasks to track the completion of incomplete case actions. Once created, these tasks will display on the particular case, as well as the Worker's landing page, with a type, deadline, and priority so DHS staff are reminded of outstanding responsibilities. **[FR4.20]**

Collect Verifications

We will leverage the IE-BM Solution's verification functionality to provide the functions needed for efficient management of verifications. There are multiple ways an Eligibility Worker can monitor and capture verifications such as pay stubs, legal documents, and medical bills, or verbal attestations. Below is a table outlining the features and benefits of our verification functionality.

Table 2: Features and Benefits of the IE-BM Solution's Verification Functionality

Feature	Benefit
Standardization of evidence across programs	The IE-BM Solution will standardize the types of evidence that need to be verified along with the acceptable forms of verification so that Client information can easily be utilized across programs
Rulesets to determine necessary verifications	Our proposed Solution will systematically determine the necessary verifications based on program rules, allowing Workers to assist Clients with requests for information in a timely manner.
Configurable rules engine	Our proposed Solution's configurable rules engine enables the system to recognize when a certain type of document may be required for some cases in order to render an eligibility determination whereas in other cases the same type of document will only be required to submit a change in circumstance.

The verification functionality works seamlessly with evidence management functionality, which provides an "evidence workspace" to record and maintain evidence, as well as verification requirements. The workspace enables users to review system assessments on whether verification requirements have been satisfied. This information can be utilized by the interview script to communicate and record current and outstanding verifications to Eligibility Workers. This prevents Clients from "falling through the cracks" and missing timeliness standards. **[FR4.10]**

Our proposed Solution will also leverage Xerox DocuShare so that verifications received in hard copy can be electronically stored and applied across programs. Clients can submit verifications by uploading photographs or electronic records via their account. Eligibility Workers can also add attachments received during an in-person interview by scanning the verification at their workstation. T-7 Section 1.6 Approach to Document Management further details the IBM team's approach to document management. **[FR4.17]**

SECTION HIGHLIGHT
Our proposed Solution utilizes a single, integrated view of Clients across programs. Common shared information across multiple programs improves data integrity.

Once the evidence verification requirements have been satisfied, the evidence can then be applied to the case and used to determine eligibility. If active evidence is subsequently updated either by a Client self-reporting a change or a trusted source, such as a death or incarceration, the system will determine whether the relevant evidence needs to be re-verified or the existing verification information should be re-used. This determination is based on the verification requirements as defined when configuring verifications through the Cúram administration application.

In conclusion, as a leading systems integrator for Cúram based Health and Human Services solutions, we will be able to deliver the IE-BM Solution so that it leverages the State's existing investments, but it will be implemented the right way based on numerous successful deployments. We will configure and extend the following functions of the IE-BM Solution to support and automate the interview process where possible:

- Calendaring Functionality
- Interview Functionality, including the addition of an IEG script to support data collection
- Case Management
- Verification Functionality, including integration with the State's current DocuShare capabilities and integration with external trusted data sources identified by DHS

The IE-BM Solution will reduce complex transactions required by Workers. As such, we will be able to provide your staff a system that supports a streamlined business process so that time and energy is spent on Client interactions and not technical challenges

1.6 Approach to Documentation

The Vendor should ensure that the responses to this section are in alignment with the requirements set forth in Template T-6 – Functional Requirements Traceability Matrix, Tab FR5 – Documentation.

1.6.1 Electronic Documentation Requirements

Significant System capabilities in this area include:

- Providing the Applicant/Client any outstanding required documents when Applicant/Client logs into their online account
- Allowing the Applicant/Client to upload the electronic version/picture of the required documents

- Allowing the Applicant/Client to enter any additional information required including free form text comments
- Associating all attachments with the Applicant/Client record
- Supporting DHS Workers uploading electronic documents to an Applicant/Client's record

Instructions: The Vendor should describe its approach to addressing Electronic Documentation requirements.

Our approach to addressing electronic document management is to leverage the State of Arkansas' existing investment in the integration of the Eligibility and Enrollment Framework (EEF) System with Xerox DocuShare. We understand eligibility determinations require a large amount of documentation and managing that documentation is an integral part of the eligibility determination process. Our proposal to leverage DocuShare will provide two (2) main benefits:

- The implementation of the IE-BM Solution will not require a conversion of existing documents, which historically can require complex logic and be prone to defects
- Document management training requirements will be reduced for existing users already familiar with DocuShare

This section will discuss our proposed Solution's approach to the functionality requested and the benefits it will bring to DHS using two (2) main topics:

- **Electronic Documentation within the Client Portal** – The IE-BM Solution will notify Clients of outstanding documentation required. Applicants and Clients will have the ability to comply with these requests by accessing the Client Portal and submitting requested documentation electronically.
- **Electronic Documentation recorded by DHS Workers –** Workers will utilize the IE-BM Solution to upload, view, and access documents from within the case.

Electronic Documentation within the Client Portal

Applicants and Clients can access ***outstanding required documents when they log into their online account.*** The IE-BM Solution will use the verification rulesets to determine and display what documentation is mandatory by program type as defined by DHS and display it to the user within the Client Portal. The verification rulesets will not only determine the documentation needed by program, but also by purpose. For example, the list will include documents required to process an application; documents needed for a redetermination or review; medical documentation needed to determine disability status; and other documentation or verifications requested by DHS in support of initial or ongoing eligibility for benefits or services. **[FR5.1, FR5.12]**

We will extend existing out-of-the-box functionality within the Client Portal so that users can upload documentation in order to comply with DHS requests. Users can also choose to upload a document by selecting one of the valid document types identified by DHS. We have provided the below screens as a mock-up to help you visualize the process. The IBM team will work with you to design and confirm the screens via a series of sprints as described in Template T-11 Implementation Requirements. The below figure provides an illustrative example of an intuitive, user-friendly view that the system may present to Applicants and Clients. In this example, the Applicant or Client will select 'Upload Document' from the left navigation menu to begin the process. **[FR5.2, FR5.3]**

Figure 38: The Self-Service functionaltiy supports the Applicant's and Client's ability to upload electronic versions of verifications improving data accuracy and timeliness.

After the user selects the Next button, the Solution will display a list of valid document types as deemed appropriate by the State. The user will then proceed to select the document type and ***upload the electronic version or picture of the required documents and additional information required including free form text comments,*** which can be added in a text field when uploading the document***.*** When the documents are uploaded, the system will verify the file has been uploaded in the correct format and display an error message if a document is not able to be uploaded. **[FR5.2, FR5.4, FR5.5, FR5.6]**

Once users have successfully uploaded the electronic documentation, the system will provide the user a list of the documents uploaded within that session. By reviewing this list, the user can confirm that the necessary documentation has been loaded and identify those documents still to be added. Once confirmed by the user, our proposed Solution will send a notification to the user using their preferred method of contact such as mail, e-mail, or SMS message that includes an itemized list of documents uploaded and will serve as receipt and acknowledgement that the document(s) have been received. These confirmation notices will also display in the Client Portal, listing the documents successfully uploaded and attached to the user's file. **[FR5.4, FR5.7, FR5.8**]

Documents uploaded by a user within the Client Portal will be shared by each of the Client's cases across programs and divisions eliminating the need for users to resubmit the same documentation for multiple requests. For programs managed outside of the IE-BM Solution, we will provide an interface to other DHS Agencies such as WIC to identify documents received based on permission. To assist authorized staff in locating document(s), the IE-BM Solution will include search functionality that allows documents to be searched by key terms such as name, address, and case number. **[FR5.10, FR5.11]**

Electronic Documentation Recorded by DHS Workers

The IE-BM Solution will utilize the same verification rulesets used to display outstanding required documents within the Client Portal to indicate to Workers a list of required document(s) that are still outstanding. Our proposed Solution will provide screens and dashboards to assist Workers in identifying verification requirements. The below figure depicts an example of a Verifications Page that displays a list of verifications related to a project delivery. The screen indicates to the Worker the type, the Applicant, whether it is mandatory, the due date, and the status of each verification.

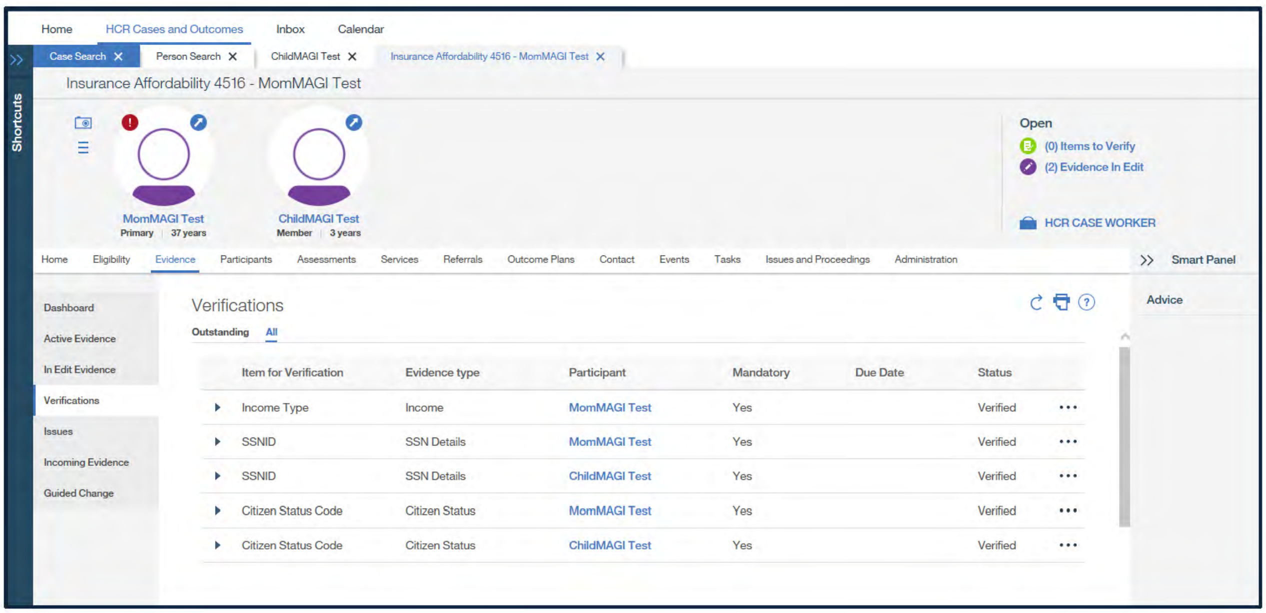


Figure 39: The case Verifications list, viewable by the Eligibility Worker, provides visibility into missing verifications.

Workers will view which verifications have yet to be verified and ***upload electronic documents*** as needed to the Applicant's record. The figure below depicts the screen displayed when a Worker aims to verify the evidence and upload a document. The electronic documents will provide support for the verification and can include documentation such as a birth certificate, medical record, or bank statement. The system will not restrict the file size of the attachment, although should DHS wish to set a limit using an application property, the system can enforce this validation. Our proposed Solution will support a range of file formats including Microsoft Word, Microsoft Excel, and PDF and verifies the file format is acceptable at the time of upload. **[FR5.9]**

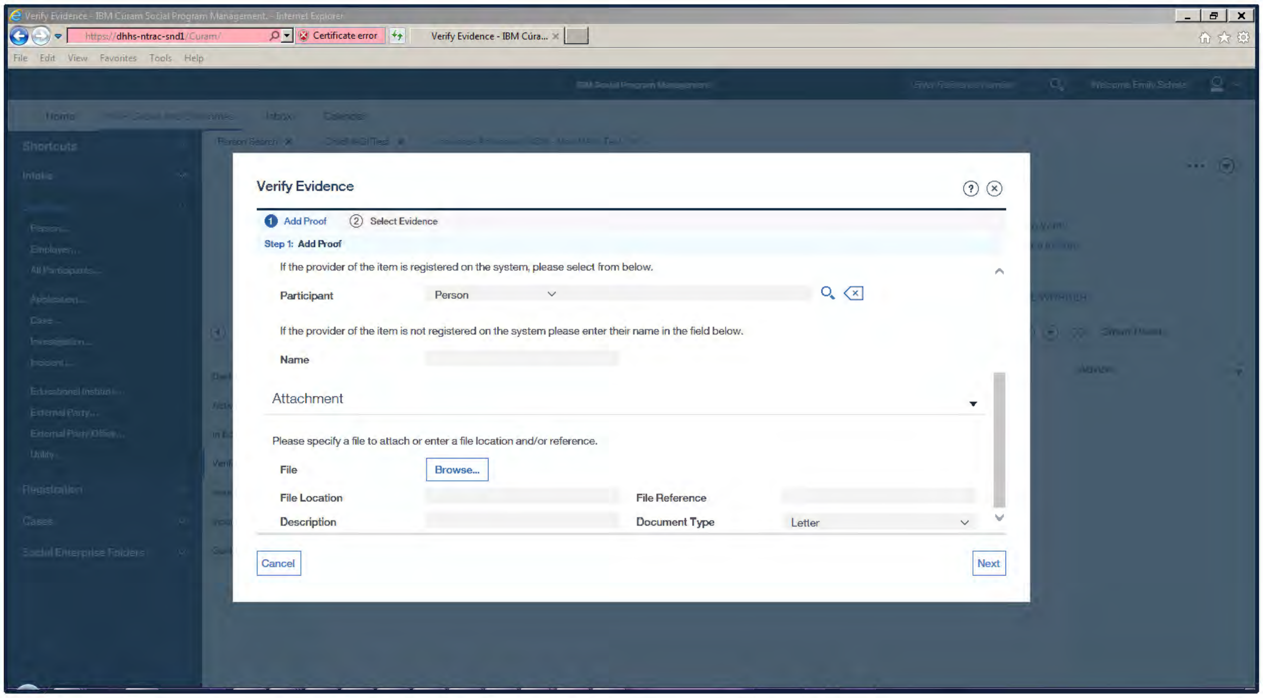


Figure 40: The iE-BM Solution supports the Worker's ability to to upload documents.

When the file is successfully uploaded, our proposed Solution will ***associate the attachment to the Client record*** and store the document and its metadata in DocuShare. For example, our proposed Solution will store the reference number of the case to which the attachment is associated, the document type, and the date the document was received along with the document in DocuShare. When an authorized user with appropriate security privileges navigates to a Client's case and chooses to view a document, our proposed Solution will retrieve the document from DocuShare and display the document within the Client's case so that the integration between the two products appears as a seamless solution to users.

1.6.2 Paper Documentation Requirements

Significant System capabilities in this area include:

- Allowing the Documentation Processing Staff Worker to upload documents to the Applicant's record
- Allowing the Documentation Processing Staff Worker to indicate the type of document if the document was not barcoded
- Notifying the Client/Applicant of receipt of the document
- Saving the document in the repository of documents that were unable to be associated with a case record if the Document Processing Staff Worker is unable to identify the specific case to which the document should be associated

Instructions: The Vendor should describe its approach to addressing Paper Documentation requirements.

Our approach to addressing Paper Documentation requirements is to leverage the State's Xerox DocuShare component to provide a seamless and robust document management process that reduces the often large overhead of dealing with paper documentation. We will integrate Xerox DocuShare with our proposed Solution by using the DocuShare Application Programming Interface (API) as detailed in Template T-9 Technical Requirements Section 3.2.3. Utilizing this integration, the IE-BM Solution will enable the ***Document Processing Staff Workers to scan and attach documents to the Applicant's record*** as depicted in the proposed process included below.

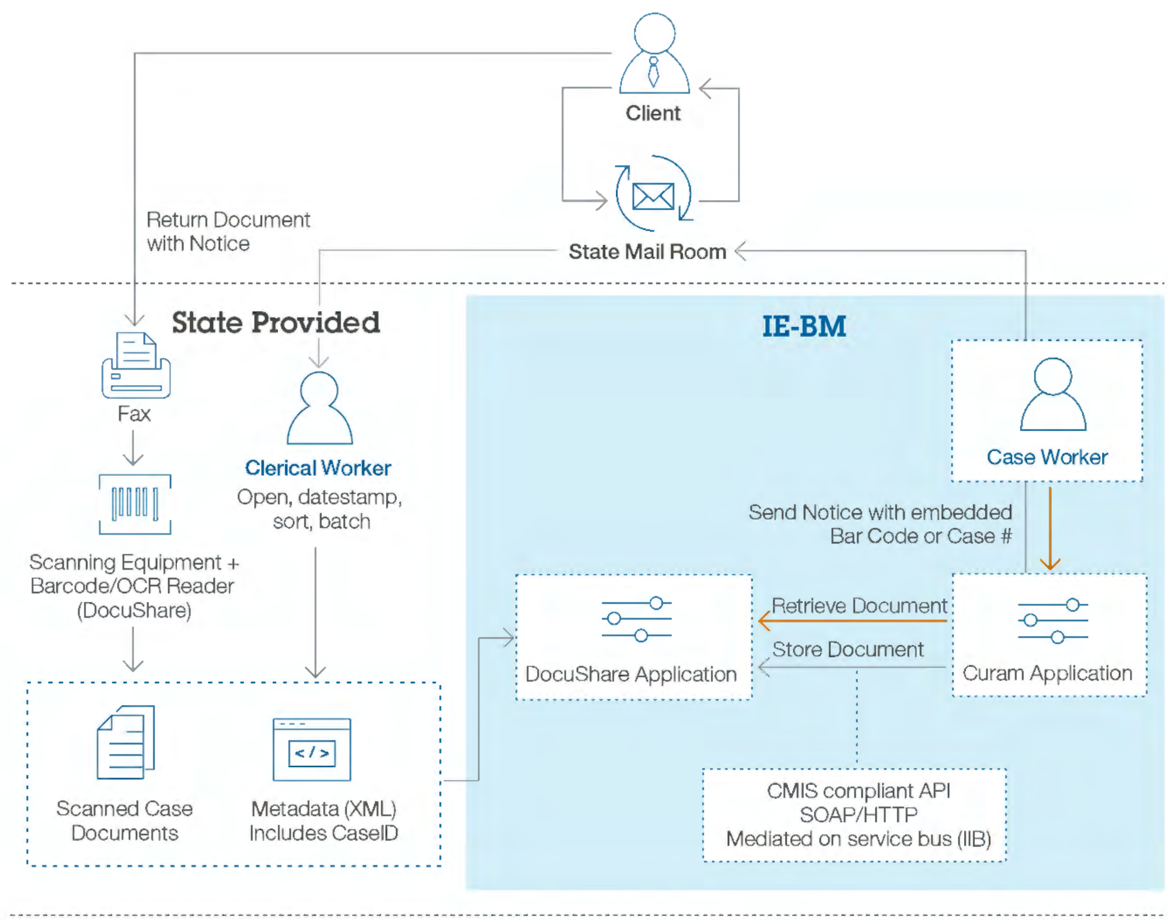


Figure 41: IE-BM Solution's paper documentation process supports a seamless solution that allows for data received in paper to be appropriately documented and made available to users.

As part of case management, the IE-BM Solution will generate notices to Clients when appropriate. Notices will contain a header page that will include a bar code. The bar code has the case and other pertinent information included in it. The header page will also include instructions on how to return paper documents to DHS. For example, instructions will explain the need to submit the header page along with other paper documents. The purpose of the header or cover page is to associate the documents to the Client or case when returned with the requested verification. The above figure illustrates the paper documentation process beginning with the Client sending paper documents to the State of Arkansas. The incoming documents will then be processed in four (4) steps:

1. The Document Processing Staff will scan the received documents using a scanner configured for the IE-BM Solution.

2. The scanner will read the barcode data, if found, and store information found on the barcode as metadata along with the image of the document captured during the scan.
3. The IE-BM Solution will utilize DocuShare Optical Character Recognition (OCR) service to determine if a document is readable. If so, the IE-BM Solution will read the content of the document to produce a searchable PDF. If the received documents include a form as defined by DHS that includes values that have been mapped to data fields within the system, the IE-BM Solution will also utilize DocuShare OCR service to read the content and populate the applicable fields electronically. DocuShare's OCR also has the ability to determine if a document is blank. If the document read is blank, the OCR process will generate a message for the Worker to indicate that the document is blank.
4. The IE-BM Solution will make the documents will then be made available to the IE-BM Solution from DocuShare along with the documents' metadata within both the Client and Worker Portals as linked to the Client's case. **[FR5.15, FR5.16, FR5.17]**

We will integrate the IE-BM Solution and DocuShare Content Management System allowing Workers to search documents stored in the DocuShare from the IE-BM Solution's Worker Portal similar to how files are stored in a network drive. The IBM team will build a user interface that the Document Processing Staff can use for managing document images. We will configure the user interface to allow the Document Processing Staff Worker to upload and search imaged paper documents so that DHS can locate records associated with a specific Client or case. **[FR5.13, FR5.14]**

SECTION HIGHLIGHT

IBM has successfully integrated Cúram with document management systems to provide our clients with a seamless document management solution. In the case of our work with the State of Missouri, we integrated Cúram with the State's existing document management system, FileNet. Currently, applications received are stored, indexed, and referenced in FileNet but the document storage location link is stored in Cúram which reduces the need for users to attach documentation separately.

If a document is received without a barcode, the scanned document will be time stamped and stored in a non-index queue signifying that the document is successfully scanned but could not complete the linking without the barcode. Without a barcode the case number cannot be associated to the document. In this scenario, the document remains in the non-index queue until further determinations can be made regarding the documents. In order to notify the Document Processing Staff of an outstanding action, the IE-BM Solution will utilize work queues that will assign work based on the rules identified by DHS. For example, DHS may choose to assign work based on geographical location so that Workers out of an office in Pine Bluff Center should not process mail received for Washington County. The IBM team will build a user interface for Document Processing Staff to access these documents. The Document Processing Staff will be able to open the document, determine the type of the document and update the document properties once the information is identified at a later point. In this interface the Worker will also be able to add additional information about the document as free form text. The IE-BM Solution records case activity and as such will time and date stamp actions taken by the Document

Processing Staff, and other users, to attach documents to the case. **[FR5.18, FR 5.19, FR5.22, FR5.23]**

Documents will be stored in DocuShare even if they were unable to be associated to a case record by the Document Processing Staff Worker. We will build an interface between the IE-BM Solution and DocuShare content repository that allows Eligibility Workers to search for a document stored in DocuShare from an IE-BM Solution search screen. The IE-BM Solution's integration with DocuShare allows authorized users to search key terms within a document (such as name, DOB) so that they may pull up a document and add or modify document properties as additional information becomes available in the future, such as case number, which will allow the document to then be associated with a case record. **[FR5.23]**

When a document is successfully scanned and attached to the appropriate case in the IE-BM Solution, the system will issue a communication ***notifying the Client that a document(s) has been received*** and is being processed. IBM will work with the State to design the notice format and content including guidance for the Client. This confirmation notice will be sent back to the Client via their preferred communication method(s). **[FR5.20, FR5.24]**

When a paper document is scanned and uploaded to the IE-BM Solution and subsequently attached to the appropriate case, the IE-BM Solution will also generate a task for the Document Processing Staff to destroy the paper document and close the task when done. Tasks within the IE-BM Solution are often associated with a deadline, a date used by the Solution to confirm completion, or to notify the staff or Clients of an impending task due date or escalate the task to the appropriate Supervisor. The IE-BM Solution's workflows determine the path of the task supporting processes and notifications that help to keep Workers and Clients timely. The IBM team will also work with the State to determine the purging schedule of documents that meet certain criteria (i.e. unassociated documents) so that the purging activity will automatically remove the document reference from the IE-BM Solution based upon DHS policy. **[FR5.21, FR5.25]**

In summary, the IE-BM Solution offers document storage capabilities which allow Clients and Staff to upload and associate documents and images to a case. Once stored, those authorized can access documents, utilizing the data provided on those documents to guide eligibility determinations and support overall holistic case management. **[FR5.14]**

1.7 Approach to Eligibility Determination/Spend-Down

The Vendor should ensure that the responses to this section are in alignment with the requirements set forth in Template T-6 – Functional Requirements Traceability Matrix, Tab FR6 – Eligibility Determination.

1.7.1 Eligibility Determination Requirements

Significant System capabilities in this area include:

- Maximize the volume of case actions which can be completed without review by an Eligibility Worker
- Continuously review all submitted applications and redeterminations to determine if all of the required documents and information for a Program specific application or redetermination have been submitted

- Notifying the Eligibility Worker that there are applications or redeterminations that require Eligibility Worker review
- Calculating the benefit amount
- Incorporating existing overpayments information and any flags to the Client/Applicant's eligibility into the eligibility determination and update overpayments information
- Providing the Program specific eligibility determinations and benefit amounts for each Program applied
- Denying benefits or change the Client/Applicant's status to ineligible and terminate any benefits currently being issued to the Client/Applicant if all outstanding actions have not been completed within the predetermined time
- Providing eligibility information to the appropriate division
- Monitoring deadlines on a continuous basis and notifying the Client/Applicant and Eligibility Worker of any missing information/documentation
- Re-running eligibility for all when the rules engine changes

Instructions: The Vendor should describe its approach to addressing Eligibility Determination requirements.

The IBM team has successfully implemented large-scale integrated eligibility systems similar to the IE-BM Solution described herein for other states such as North Carolina, Minnesota, and Missouri. Based on past implementations of similar size and scope and our partner's in-depth knowledge of the State's infrastructure and data, we believe the IBM team is the right choice to deliver the IE-BM Solution and its eligibility determination functionality.

Our approach to addressing the Eligibility Determination requirements is to leverage the State's existing infrastructure. By delivering a set of components that encompasses a seamless solution aimed at focusing on automation. Our proposed IE-BM Solution supports the Department of Human Services' (DHS) goal by providing a single integrated benefits management solution.

This section will provide insight into the functionality and benefits aligned with the Eligibility Determination process within the IE-BM Solution by discussing four (4) main aspects of the eligibility determination process as depicted in the below graphic.

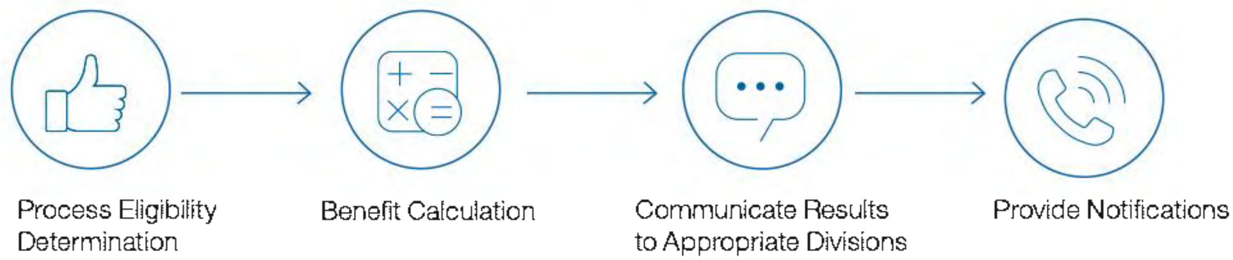


Figure 42: The IE-BM Solution provides automation throughout the eligibility determination process allowing Workers to focus on more high need tasks.

- **Process Eligibility Determination** – The IE-BM Solution will automate eligibility determinations where possible increasing the accuracy of payment calculation and decreasing the need for Worker intervention.

- **Calculate Benefits** - The IE-BM Solution will provide the DHS the benefit of timely and accurate benefit calculation, which in turn will help decrease misspent benefit dollars.
- **Communicate Results with Appropriate Divisions –** The IE-BM Solution will send eligibility determination to appropriate divisions as identified by DHS such as MMIS.
- **Provide Notifications** - The IE-BM Solution will leverage Cúram's extensive communications functionality so that Clients have access to benefit information, which will decrease calls to DHS staff.

Process Eligibility Determination

The IE-BM Solution supports the integration and streamlining of service delivery for a range of programs that provide assistance and services to eligible Arkansas residents. Our proposed Solution delivers a broad set of business processes, rules, and evidence to enable organizations to automatically determine eligibility for benefits and services for multiple needs-based programs, including those providing TANF/TEA, SNAP and Medicaid including both MAGI and Traditional Medicaid. It provides the flexibility to expand, extend and incrementally grow these programs as legislation and socio-economic drivers dictate.

The IE-BM Solution will utilize Cúram Eligibility and Entitlement which applies rules to a household's evidence in order to determine eligibility and entitlement***, providing specific eligibility determination and benefit amounts for each specific program applied for***. Cúram evaluates the evidence and carries out the necessary computations to determine the program entitlement(s). The outputs from eligibility determination typically include a number of elements – one of which is a case decision – or eligibility determination. A sample eligibility results page is shown below. [**FR6.10**]

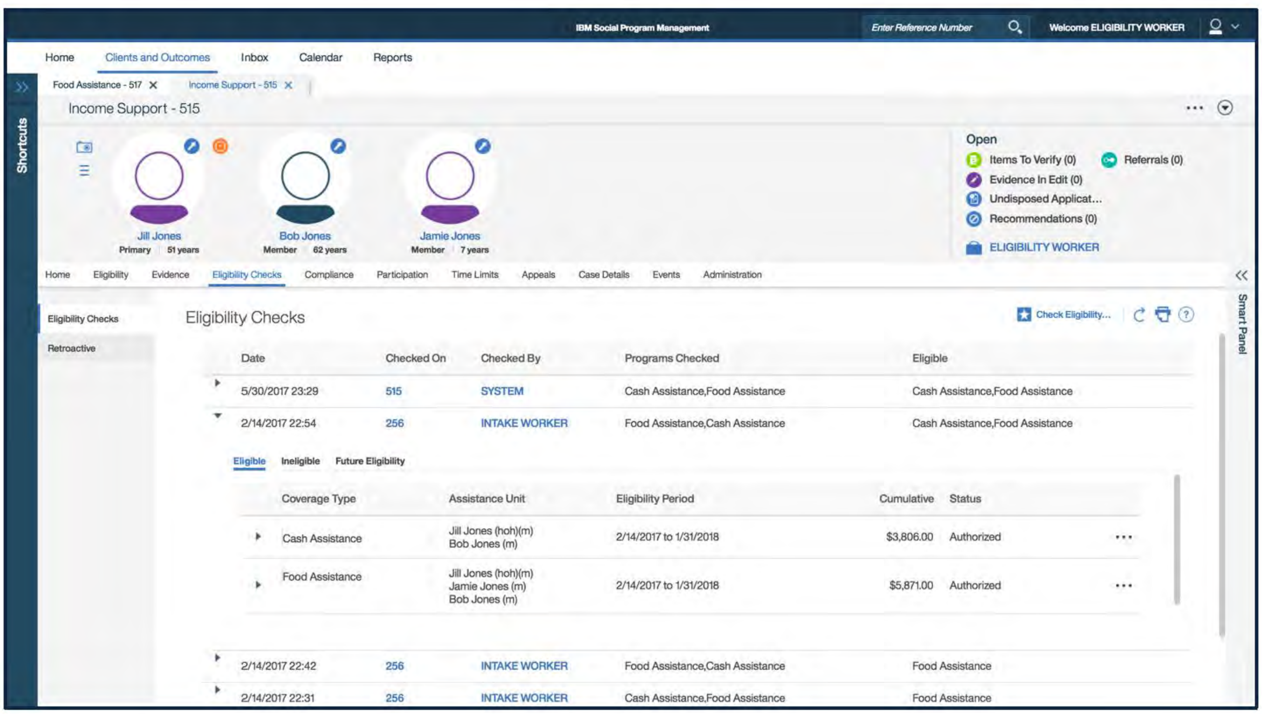


Figure 43: The Eligibility Check indicates the eligibility determination and benefit calculation resuts, by program.

The IE-BM Solution supports the process by which the accuracy and validity of evidence is verified. Verification functionality is in place to define multiple effective-dated verification conditions and items for a piece of evidence, for example, a date of birth, an address or an income amount.

We will work with DHS to define and manage the categories of evidence data that require verification as part of program delivery. Where verification of specific categories of evidence is a prerequisite for program eligibility, the IE-BM Solution provides the means for setting evidence verification requirements and the functionality to record and manage verification details. Verification in the IE-BM Solution, based on available real-time and stored data sources, will help Eligibility Workers focus on obtaining the required evidence verification items rather than needing to keep track of the types of evidence that require verification or the rules involved for each verifiable evidence type. Our proposed Solution will manage verification requirements such that the verification of critical evidence is controlled in a consistent manner. ***The IE-BM Solution continuously reviews submitted applications and redeterminations to determine if required verifications for a specific program as defined by rules have been submitted.*** The Client and others authorized to access account information can view a list of verifications. The Solution provides details including the verification item, type of verification, applicable Client or Applicant, and the status of that piece of verification. **[FR6.1, FR6.6]**

SECTION HIGHLIGHT

IBM successfully implemented eligibility determinations for HCR Medicaid in the State of Missouri which currently enrolls almost 800,000 recipients. Cúram determines the eligibility based on federal requirements and configurations made for MO specific policies. A common set of rules consistently applying policy, reduces the occurrence of Workers applying policies differently.

The IE-BM Solution will ***augment the number of cases that can be completed without review by the Eligibility Worker.*** Interfaces to trusted external systems as approved by DHS will help to verify evidence, provide information that can be used to directly update case information, support the sharing of information across programs, and automate eligibility determinations for the programs identified by DHS, which will help to increase the number of no touch cases, or those that do not require Eligibility Worker intervention. The IE-BM Solution offers the following benefits to achieve the State's goal to modernize delivery of income assistance programs:

- Provides multi-program support and service integration which reduces data entry, improves Worker productivity, and provides more responsive service.
- Provides automated program eligibility determination and facilitates the correct application of complex eligibility policies, which reduces new staff training time.
- Provides automated benefit calculation and maintains consistent payments, which helps reduce reliance on individual Worker knowledge and skill.
- Provides user-friendly explanation of eligibility determination results guides Eligibility Workers through decision analysis.
- Provides a highly configurable solution that helps reduce time to implement and risk both during the implementation and for ongoing operation and maintenance. [**FR6.27**]

In instances where the system is unable to complete the eligibility determination, the Eligibility Worker completes the processing of the application and conducts ongoing maintenance on the case. The following diagram shows the flow of functions that the Eligibility Worker performs to authorize eligibility. The Worker reviews the application details, authorizes the application's programs, activates the product delivery case, and generates financials for programs where monetary benefits are to be paid. The following diagram shows the flow of functions that the Eligibility Worker performs to authorize eligibility.

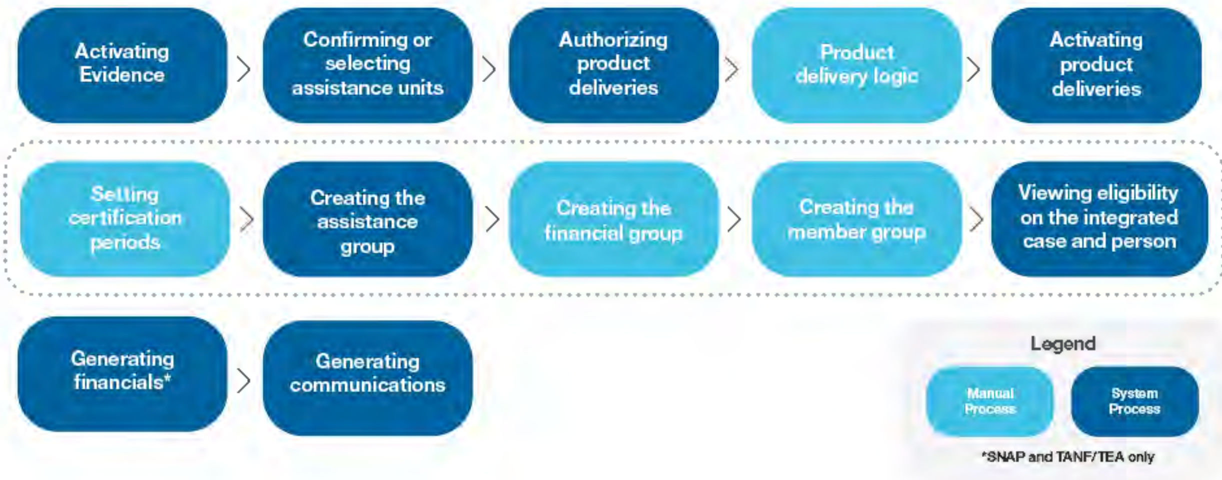


Figure 44: The IE-BM Solution provides automation and system process to streamline eligibility authorizations so that Worker intervention is limited.

The manual processes identified within the above graphic are described as follows:

- **Activating evidence** - Before authorizing the application for SNAP, TANF/TEA, or traditional Medicaid, in-edit evidence must be activated. The system will deny or close benefits if requested verifications are not provided within a predetermined period of time. The system will allow a Worker to extend a deadline if the reason the verification is delayed is not the fault of the Client. [**FR6.16, FR6.17**]
- **Confirming or selecting assistance units** - When the SNAP, TANF/TEA, or traditional Medicaid decision is ready for review, the Eligibility Worker reviews details of the application and selects the appropriate assistance units for authorization.
- **Authorizing product deliveries** – Our proposed Solution will allow the Worker to check eligibility for selected programs and determine eligibility for multiple programs and assistance unit combinations. The Eligibility Worker can action an eligibility result, authorize eligible results, deny ineligible results, and decline results the Client does not choose to proceed with. Programs can be authorized from the application and the integrated case. In addition, applications can be denied based on set time periods as specified by DHS when the outstanding evidence needed to determine eligibility has not been verified. The Solution will allow an Eligibility Worker to override the deadline. The Solution can also allow a Supervisor to access the case files and review, override, and approve eligibility determinations completed by an Eligibility Worker. **[FR6.29, FR6.30]**
- **Product delivery logic** – Our proposed Solution will provide Workers with an integrated case, which Workers can use to manage ongoing products and household information within a single case for SNAP, TANF/TEA, and traditional Medicaid.

- **Activating product deliveries** - Once the SNAP, TANF/TEA, or traditional Medicaid is authorized, the product delivery will require activation. Product deliveries can be activated using batch processing or manually by an Eligibility Worker.
- **Setting certification -** Certification is the process of certifying that a Client is eligible to receive a benefit. Certification periods will be managed by start date and end dates.
- **Viewing eligibility on the Integrated Case and Person tabs -** Over time, individuals might be eligible for different programs. Our proposed Solution will provide a holistic view of eligibility at the Integrated Case and Person level. At the Integrated Case level, the Worker will view a single consolidated timeline view of program eligibility for the members on the Income Support integrated case. At the Client level, the Worker will view a single timeline view of a Client's eligibility across integrated cases.
- **Generating financials** - After a product delivery is authorized and activated, our proposed Solution will generate financials by program. The financials initiate the payment of the cash benefit to the eligible household.
- **Generating communications** – We will work with DHS to create a notification of eligibility determination to inform the Client of the approved programs, benefit amounts, conditions, or an ineligibility decision. **[FR6.5, FR6.8]**

The IE-BM Solution allows for eligibility determinations for on-going active cases when new evidence is received (electronically or paper) or there is a change to program rules. The IE-BM Solution allows a Worker to search by an application or case so that when new paper documentation is received the evidence can be validated and applied for the appropriate application or case. The system allows a number of options for an Eligibility Worker to search for an application or case. A user can complete a search using an array of criteria including date of application, expedited applicants, program type, geographical location, or Eligibility Worker conducting interview. **[FR6.4]**

The IE-BM Solution looks for verifications received on evidence in edit and alerts the Eligibility Worker of required action so that eligibility can be reassessed. For example, if verification of the applicant's citizenship is outstanding, the IE-BM Solution may receive such verification via the interface with SSA. This is created as in-coming external evidence. Receipt of this evidence will trigger a task to the assigned Worker to review newly received evidence; this will appear as a task on the Eligibility Worker's landing page. Once verified, the IE-BM Solution will apply this evidence against rules for active cases to review and re-determine eligibility and benefit levels. **[FR6.2]**

Tasks are used to assign and track a user's workload. They may be assigned to, and by, automated processes, individual users, or groups of users. Users can be associated with jobs, positions, organizational units, or work queues. Work queues of eligibility determinations will be prioritized based on policy. For example, a program requiring a shorter deadline will be assigned to a work queue with a higher priority. ***Tasks will be used to monitor deadlines on a continuous basis and notify the Applicant or Client and Eligibility Worker of missing information or documentation.*** **[FR6.3]**

The IE-BM Solution allows for re-running of eligibility on open integrated cases when the program rules are modified due to jointly approved changes to the rules engine. When the rules engine changes due to state or federal requirements, for Medicaid cases based on MAGI methodology, our proposed Solution can use a batch process to identify and process a full reassessment on open integrated cases. For income support cases including traditional Medicaid, TANF/TEA, and SNAP programs, a bulk case chunk reassessment by product batch process can be applied to open integrated cases. An example of when this is applied is during annual cost of living (COLA) adjustments and federal poverty level adjustments (FPL). [**FR6.33**]

The IE-BM Solution eligibility determination for applicants will result in an approval or denial whether the action is completed by the system or by the Worker and on-going case determinations will result in a case closure, no change, or change in benefit determination. If an application is denied the system will capture and display the reason for ineligibility in the Determinations Tab of the Product Delivery Case. The Solution will allow a Client to provide additional information by a given deadline (within program policy) when an application was previously denied. [**FR6.11, FR6.12, FR6.13**]

The IE-BM Solution allows a Worker to re-open a closed case and redetermine eligibility when subsequent verification is provided or a subsequent action results in eligibility. [**FR6.14, FR6.34**]

Authorized users have access to case history, including details of case stakeholders (such as Clients, employers, and providers), referrals, appointments, notes, attachments, communications, eligibility decisions, evidence, financials, and other case related details. The Solution allows a defined life cycle to be assigned to Traditional Medicaid, TANF/TEA, and SNAP cases to support the agency's preferred business processes and reporting needs. Management of the case by the appropriate user(s) is supported by workflow processes to automate specific processes and automatically trigger various actions. The IE-BM Solution can be configured as required by DHS will ***notify Eligibility Workers of applications or redeterminations that require review*** by creating a task.

Calculate Benefit

The system provides benefit and payment amounts based on specific program requirements as defined by DHS. Following determination of eligibility and level of entitlement, our proposed Solution determines the Applicant's or Client's eligibility for programs selected and, based on rules, ***calculates benefit amounts*** including SNAP benefits, premiums for Medicaid programs, and spend-down amounts for those programs. Program rules are specified in an effective-dated manner and, therefore, can be executed across multiple time periods – past, present and future. This supports the development of a rules history and facilitates the automated retrospective calculation of decisions and rates or service units. Benefit eligibility periods can be modified to a longer or shorter time frame or can be extended by a user. **[FR6.7**]

SECTION HIGHLIGHT

By leveraging your investment in Cúram, an integrated platform built specifically for health and human services agencies, the IE-BM Solution will allow easy configuration of eligibility and benefit calculation rules.

If evidence, such as income amounts and household composition, changes, the household's eligibility can change. If an aspect of a Client's circumstances has changed retrospectively, and the agency has already paid the Client on the basis of the originally recorded circumstances, an overpayment situation may occur. The IE-BM Solution will update overpayment information and display overpayments flags associated to the Client or Applicant's eligibility. **[FR6.9]**

Communicate Results with Appropriate Divisions

The IE-BM Solution allows for interfaces between other systems to allow notification of benefit determination to entities identified by DHS. The system will ***provide eligibility information to***

the appropriate division or application partners including notification to MMIS, LIHEAP, DWS Welfare-to-Work System, ET&T vendor systems, or ADH WIC System, of eligibility determinations. This can be done through an interface, a referral in the form of a PDF or Word document, an ad hoc report, or by allowing access to Client eligibility information based on defined security roles. Additionally, the system will receive information about the required participation for Able-Bodied Adults Without Dependents and capture E&T or Workforce participants who do not comply with mandatory participation requirements. [**FR6.18, FR6.19, FR6.20, FR6.21, FR6.22, FR6.23**]

The Solution can also provide a report of Clients approved for Home and Community Services and the date and time of eligibility by generating a report of Clients receiving for whom HCBS Waivers enrollment has not yet occurred through our reporting component, Cognos. The system will allow the Eligibility Worker to enter the date of the program placement upon placement of a Client in a HCBS Waivers program slot. Additionally, the system will update the required annual review date to be the date of placement into a HCBS Waivers program. [**FR6.24; FR6.25, FR6.26**]

Provide Notifications

Our proposed Solution provides extensive functionality to address the correspondence and notices requirements of the IE-BM Solution. The various types of correspondence supported in IBM Cúram are referred to collectively as *communications*. Our communications functionality provides the ability to generate, manage and record various types of correspondence – for example, letters, notices, forms and other documents – used to communicate with stakeholders such as Clients, Providers and employers. Notifications include requests for information and notification of case disposition. [**FR6.15, FR6.28**]

The following categories of communications can be managed within our proposed Solution:

- Email
- Pro forma
- MS Word
- Recorded
- SMS

The IE-BM Solution will generate templates driven by specific scenarios and based on pre-defined triggers. For example, the system will allow a Worker to generate an additional request for information needed that includes a deadline by which the requested information must be provided, or notify a participant that a vendor payment is due. [**FR6.31, FR6.32**]

The email, pro forma, and MS Word categories are used to issue communications from within our proposed Solution. The recorded category is used to capture information about communications issued outside the system or received by the organization. A history of communications sent and received is maintained along with pertinent details of each communication and associated attachments, as shown in the following screen. The figure below is an example of a Client's communication list page. The Communication section lists details about the communication sent to the Client, including the subject, type of communication and date issued. Additional details for a selected communication are available in the lower part of the view.

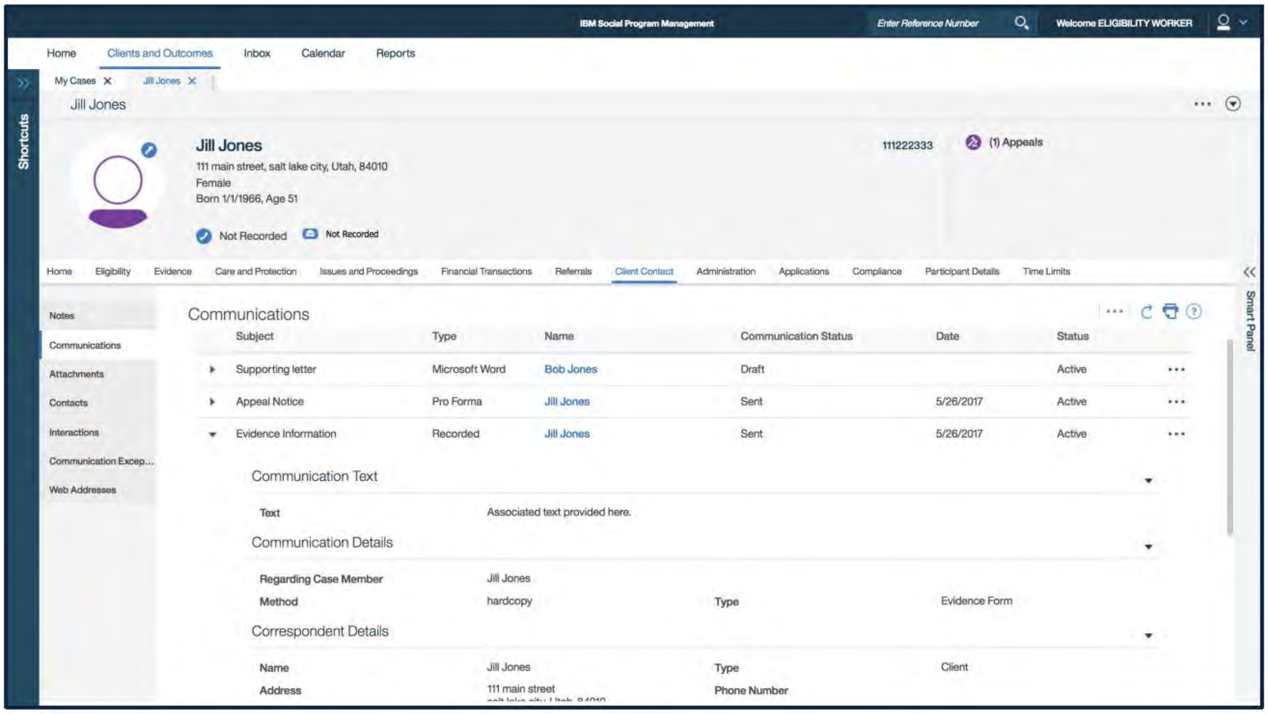


Figure 45: Client communications lists provide high-level information and links granting authorized users access to details.

In addition, our proposed Solution will allow a user to record the preferred method of communication as indicated by a Client. This can help improve efficiency of communication between DHS and the Client by encouraging the use of the communication method that helps meet the Client's needs.

1.7.2 Spend-Down Requirements

Significant System capabilities in this area include:

- Calculating the spend-down amount
- Calculating if the spend-down amount has been met for the spend-down period, any unmet liability, and the date that eligibility begins and ends for the period
- Informing DMS MMIS of any unmet liability and the eligibility start date

Instructions: The Vendor should describe its approach to addressing Spend-Down requirements.

This section will describe the IBM team's approach to addressing spend-down requirements, using two (2) topics:

- Calculate Spend-Down
- Spend-Down Coverage Period

Calculate Spend-Down

The IE-BM Solution includes eligibility determination for spend-down Medically Needy programs as well as the calculation of the spend-down calculation. Spend-down is a term used to describe an amount calculated for persons whose Household income is above the Medically Needy Income Level (MNIL) and resources are within the Medically Needy Resource Limit (MNRL). The excess income that is above the MNIL is called the spend-down amount and must be obligated or spent for medical services. Spend-down is calculated on a period basis, and both eligibility and the spend-down amount are re-determined each period. The graphic below displays the spend-down amount calculated for the spend-down period.

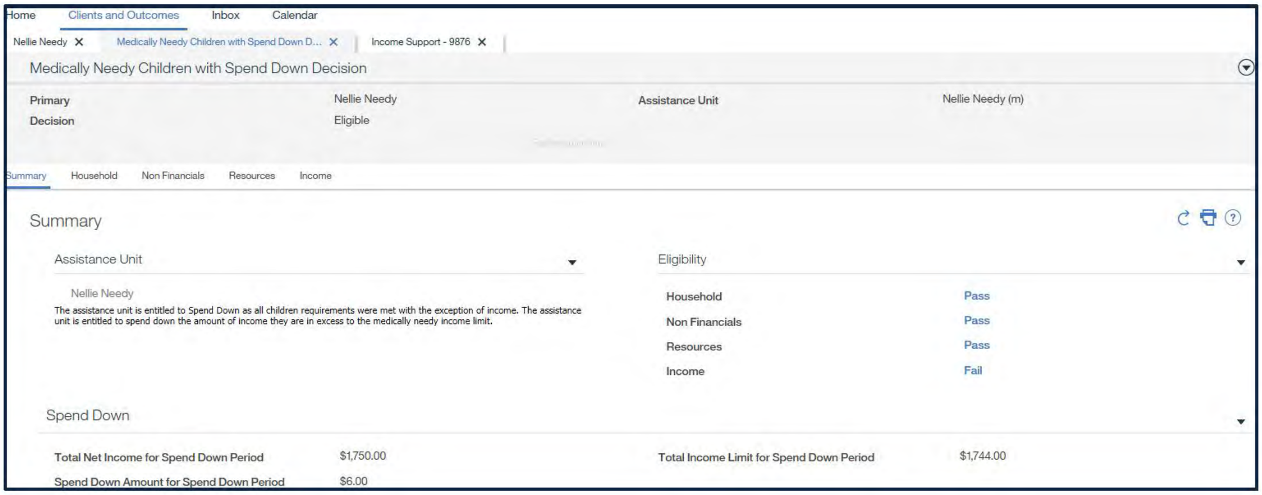


Figure 46: Client spend-down amounts are automatically calculated using verifible, countable income against the Medicaid policy threshold.

When the individual meets this spend-down amount, he or she can receive Medically Needy coverage from the date that spend-down was met until the end of the specified spend-down period. The IE-BM Solution automatically ***calculates the spend-down*** amount based on the verified, countable income of the individual and applying that amount to the thresholds reflected in Medicaid policy. The Client or Authorized Representative will provide verification of medical expenses, expenses that will be recorded in the Client's case. The IE-BM Solution will apply eligible expenses against the calculated spend-down amount to ***calculate if the spend-down amount has been met for the spend-down period, unmet liabilities, and the date that eligibility begins and ends for the period.*** The Worker enters the medical expense evidence when the verification is provided. **[FR6.35, FR6.37, FR6.38]**

In the IE-BM Solution spend-down eligibility process, business rules are applied to the evidence captured on an individual or household to determine potential eligibility for Spend-Down Medically Needy cases. The business rules are based on the Medically Needy coverage type for which spend-down is determined.

Our proposed Solution provides Eligibility Workers the following capabilities:

- Validation and application of evidence changes executes rules for medical assistance coverage types including medically needy programs with spend-down;
- View of the spend-down decisions (eligible & ineligible) and
- View of the automatically calculated spend-down amount. **[FR6.3]**

Once eligibility has been determined for Spend-Down Medically Needy, the system will notify the Eligibility Worker that there is an Applicant with a spend-down determination. The Eligibility Worker can view the eligibility results from which the Eligibility Worker can select to authorize, decline, or deny. If the Eligibility Worker selects to authorize an eligible result for a household member(s) eligible for Spend-Down Medically Needy, the system will either create a new spend-down case or reuse an existing one. If the household member(s) has an existing spend-down case of the same type on the current integrated case, the system will update the existing spend-down case record with the new spend-down period. Notifications or tasks will be sent to the Eligibility Worker to notify them of an unmet spend-down amount. The figure below provides an example of how the Eligibility Worker will enter the Client's submitted medical expenses. If it is an allowable expense, it will be applied to the Client's spend-down amount for that period. **[FR6.36, FR3.37]**

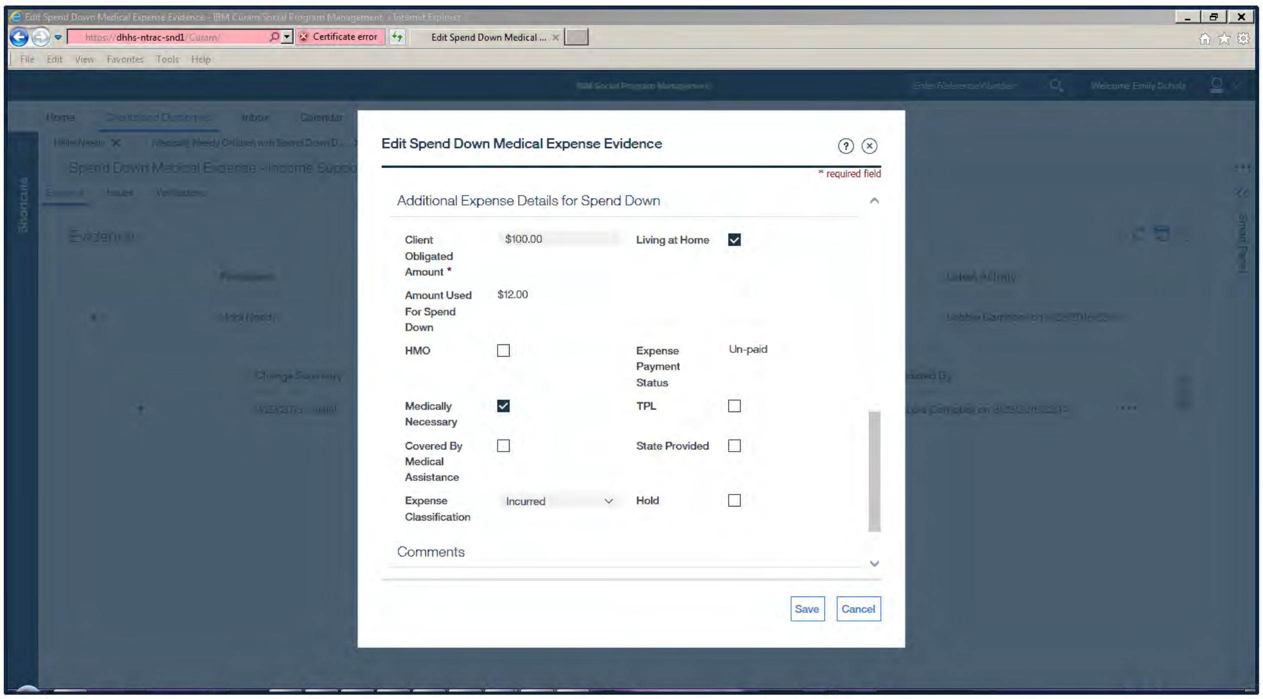


Figure 47: Eligibility Workers enter medical expense details to determine whether they will be applied to the Client's spend-down.

The Eligibility Worker can view the details of spend-down periods and spend-down details records. The spend-down Details page displays the start and end dates of the spend-down period, the spend-down amount for the period, the outstanding amount (unmet liability), the spend-down status, whether or not spend-down has been met, the reason if not met, and the spend-down period status.

For each spend-down period, the Eligibility Worker can view the amounts and order in which Expenses or Pay-Ins have already been selected for use towards the spend-down period. Eligibility Workers have the ability to enter and manage the spend-down evidence, assigning amounts toward the spend-down from either expenses or pay-ins. Once these changes are activated, our proposed Solution will automatically recalculate the outstanding amount. **[FR6.37]**

Spend-Down Coverage Period

The begin date of Medicaid coverage is based on a number of factors including the date the last eligible expense is applied to reduce the outstanding spend-down amount to zero, the date of application for the period, and the start and end dates of the spend-down period.

Generally, the date of application is earlier than the spend-down period coverage begin date. When the last eligible expense applied to meet spend-down has a date prior to the date of the application, the coverage start date is set to the date of application. When the last eligible expense applied to meet spend-down has a date post the date of application, the coverage start date is set to the date of the last eligible expense. If a Medical Expense is used, the incurred date of the expense is set. If pay-in is used, the date paid is set. **[FR6.38]**

Based on the expense details entered, the system determines if bills were paid outside the spend-down period and will provide validation messages to the Eligibility Worker. If the date of application is later than the spend-down period end date and the date of the last evidence item used to meet spend-down has a date prior to the start date of spend-down period, the coverage start date is set to the start date of the spend-down period. When the date of the last evidence item used to meet spend-down has a date post the start date of spend-down period, the coverage start date is set to the date of the evidence item. If a Medical Expense is used, the incurred date of the expense is set. If Pay-In used, the date paid is set. **[FR6.42]**

The household member must then furnish sufficient Medical Expense evidence or provide Pay-In, which the Eligibility Worker records as evidence in the system.

Eligibility Workers are then required to enter additional spend-down medical expense information to enable the system to classify the expense, automatically determine if it can be used, and present the available expenses to the Eligibility Worker in the appropriate order for use toward the particular spend-down period. The system will prevent duplicate entries of spend-down expenses by displaying an error if the same amount, date, or type of expense is entered or additional matching criteria as specified. **[FR6.41]**

Spend-down details are listed for spend-down periods determined for each household member on the spend-down product delivery case tab. The IE-BM Solution maintains details by spend-down period for each Client. An authorized user will have the ability to view spend-down details for spend-down periods. Our proposed Solution will send notifications to the Client of unmet spend-down liability for a specific time period. **[FR6.39]**

Eligibility is determined for spend-down by evaluating evidence recorded in the system against a predefined set of rules which are specific to spend-down. In order for an individual to be eligible for spend-down, that individual must first be eligible on the categories except income for the Medically Needy coverage types specified for spend-down. Once determined eligible for the Spend-Down Medically Needy coverage type, the individual must then meet the spend-down amount for the budget period. We will develop an interface ***to inform DMS MMIS of unmet spend-down liability amount as well as the start date when spend-down is met*** as required by DHS. **[FR6.40]**

1.7.3 Processing the Semi-Annual Reports (SAR) or Annual Review Requirements

Significant System capabilities in this area include:

- Providing to the Eligibility Worker a queue of submitted Semi-Annual Reports
- Generating a notification for the Client with information regarding the status of their SAR or Annual Review

Instructions: The Vendor should describe its approach to addressing Processing the Semi-Annual Reports (SAR) or Annual Review requirements.

This section will describe the IBM team's approach to addressing spend-down requirements, using three (3) topics:

- Calculate Review Dates
- Submit Reports
- Send Notifications

Calculate Review Dates

The IE-BM Solution will calculate review dates based on program-specific criteria. For example, annual review date calculations for some case types use the initial date of eligibility setting the review dates 12 months from that date, while a Home and Community Based Waiver Services recipient's annual review date, per DHS requirements, is to be based on placement date.

Submit Reports

The Client may return the SAR or Annual Report through a variety of channels, for example, via email, the Client Portal, or by paper. As these documents are received they will be aligned with the appropriate case. Since the SAR and Annual Report documents are IE-BM Solution-generated, paper submissions will contain bar codes. Using the bar code and DocuShare's OCR capabilities, the SAR or Annual Report forms in paper can be linked to the case using the same process described in 1.6.2. Paper Documentation.

The IE-BM Solution provides the benefit of a workflow process that will support SAR and Annual Review requirements. The workflow will allow staff to track tasks and priorities, issue reminders at pre-determined intervals, and escalate the task to a Supervisor if not addressed in a timely manner. For example, regardless of the submission method, the Solution, using the Client and case information, will ***display to the Eligibility Worker a queue of submitted Semi-Annual Reports*** and send a notification that will require action on the part of the Eligibility Worker. Workers will utilize the work queue to identify received SAR and will navigate to the case to view eligibility determinations and benefit amounts for each program as well as conduct outstanding actions. The workflow can also notify staff of SAR or Annual Reviews scheduled for their Clients or, based on DHS policy, can assign SAR and Annual Reviews to specified Eligibility Workers or units. **[FR6.43, FR6.44, FR6.48]**

Send Notifications

The IE-BM Solution uses a batch process to run notice generation processes for a specified list of cases. This feature will be used to ***generate notifications for the Client with information regarding the status of their SAR and Annual Review*** as required by DHS. The IE-BM Solution will issue communications in the Client's preferred method of communication and maintain a record of communications. **[FR6.47]**

We will work with DHS to identify the timing, cases, and Clients for which external systems are polled for data and identify validation rules to verify Client authorization is available for accessing the data. We will also work with your staff to review the mappings of data to evidence types so external data is categorized properly. Our proposed Solution will track when these polls take place, and what data is received and populated in the cases for Eligibility Workers to review. In cases where a predefined data set is received that differs from the information provided by the Client, the Eligibility Worker will have the ability to issue a notification to the Client requesting additional information. [**FR6.45, FR6.46]**

1.8 Approach to Benefit Issuance

The Vendor should ensure that the responses to this section are in alignment with the requirements set forth in Template T-6 – Functional Requirements Traceability Matrix, Tab FR7 – Benefit Issuance.

Significant System capabilities in this area include:

- Determining the appropriate benefit payment dates
- Determining all payments that are due for the specific time period for all Clients
- Sending the benefit issuance information to the EBT vendor's system
- Providing a notification for the Client of the availability of funds

Instructions: The Vendor should describe its approach to addressing Benefit Issuance requirements.

In T-7 Section 1.4 Approach to Integrated Eligibility Application we explained how the IE-BM Solution collects Client and household data needed to determine program eligibility. Screens presented and data collected are determined by program(s) identified on the application. To determine one's eligibility and the level of benefit for each program selected, the IE-BM Solution will apply this information against program-specific rules sets. Benefit Issuance is the next step in the process. The graphic below provides a high level overview of the Benefit Issuance business process.

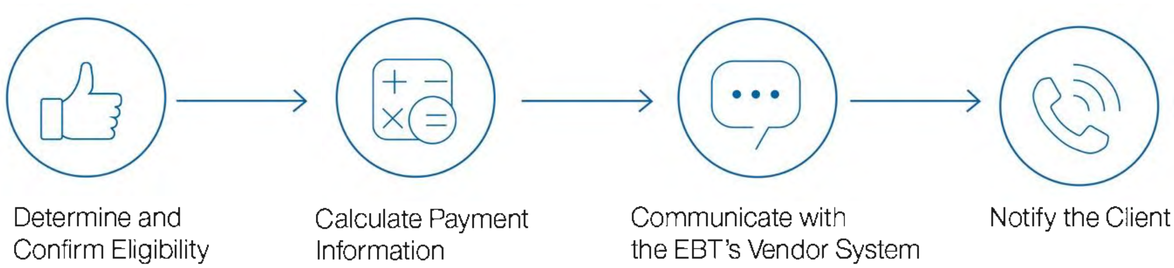


Figure 48: The IE-BM Solution will automate the Benefit Issurance process allowing your staff to focus on services and outcomes.

This section will provide insight into the functionality and benefits aligned with the Benefits Issuance process within the IE-BM Solution by discussing three (3) main topics:

- **Calculate Payment Information** – The IE-BM Solution will automate benefit determinations where possible increasing accuracy of payment calculation and decreasing the need for Worker intervention.
- **Communicate with the EBT's Vendor System** – The IE-BM Solution will send and receive benefit issuance information to and from the EBT vendor's system in a secure exchange at pre-determined intervals so DHS staff have access to current and accurate information.
- **Notify the Client** – The IE-BM Solution will leverage Cúram's extensive communications functionality so that Clients have access to benefit information, which will decrease calls to DHS staff.

Calculate Payment Information

As explained in the section above, the Solution determines initial and confirms ongoing eligibility based on verified Client circumstances. *This* ***determination includes designation of the eligibility period and the amount of each benefit payment or issuance.*** The Solution will enforce the DHS approved benefit issuance schedules, by reviewing Client data in order to ***determine payments due for the specific time period for Clients.*** DHS determines the issuance schedule for Client benefits for each program; the Solution will maintain this information and generate benefit issuance details accordingly. The system will determine the benefit payment date. Payments may be recurring or single one time payments, with the exception of authorized expedited or emergency payments, which will occur at pre-determined intervals. **[FR7.1]**

Determination of the level of benefits takes into consideration various factors, some of which include the application date, processing date, number of benefit pay periods impacted, and type of issuance. Program-specific policy and rule sets will consider each of these factors along with Client circumstances. For example, SNAP Applicants may be eligible for emergency benefits – in this case the Solution, using case circumstances and application date (at a minimum) will prorate the initial month's SNAP benefits issuing them within the program specified period. The Solution will also determine the monthly SNAP benefit moving forward.

Situations arise that prompt a review of Client benefits and may result in the cancellation or withdrawal of benefits. Authorized staff will record details concerning the withdrawal or cancellation of benefits in the IE-BM Solution. Changes in the benefit details will be communicated to the EBT system via interface. The case event log will be updated to reflect withdrawal or cancellation activity. **[FR7.7]**

An example of the ruleset invoked to determine a household's SNAP benefit is presented below; rulesets are configurable to support DHS specific programs. For initial issuance of SNAP benefits, the system prorates the total as defined by DHS policy. The Solution automates the following steps when determining the household's benefit amount for SNAP for the initial month of eligibility:

1. A household's benefit for the initial month of certification will be based on the day the household filed an application unless the application is reopened in the second 30-day period at which the proration is based on the day the household takes action necessary to complete the application.
2. Prorated initial benefit amounts will be determined by using the chart found in SNAP 8612 or the following formula: Monthly benefit amount x (31 - date of application) = prorated allotment 30
3. Rounding: Prorated benefit amounts ending in one (1) through 99 cents will be rounded down to the nearest dollar
4. No benefits are issued for initial month if the prorated allotment is less than ten (10) dollars
5. If the benefit to be issued is more than the DHS threshold for that type of benefits, the IE-BM Solution will forward that case to a Supervisor for review and approval.

Processing dates may result in benefits owed to the Client that span multiple benefit payment periods. In this case, the IE-BM Solution will consolidate payments due by program. In the above example, it's possible that the emergency SNAP benefit amount may be combined with the ongoing SNAP benefit with a single amount passed to the EBT system. In this case, the IE-BM Solution will maintain benefit details by payment period, documenting issuance details for each benefit period.

If the Client is eligible for multiple programs, the IE-BM Solution will maintain program specific information, reflecting that benefit information in the case and pass program-specific benefit details to the EBT system. The *Summary List of Participant Financials* if, for example, Mr. Williams was eligible and receiving SNAP and TANF/TEA benefits, each benefit type and amount will be reflected on the Payments Issued tab.

Authorized individuals can access and review a summary of Client benefits as seen in the figure below.

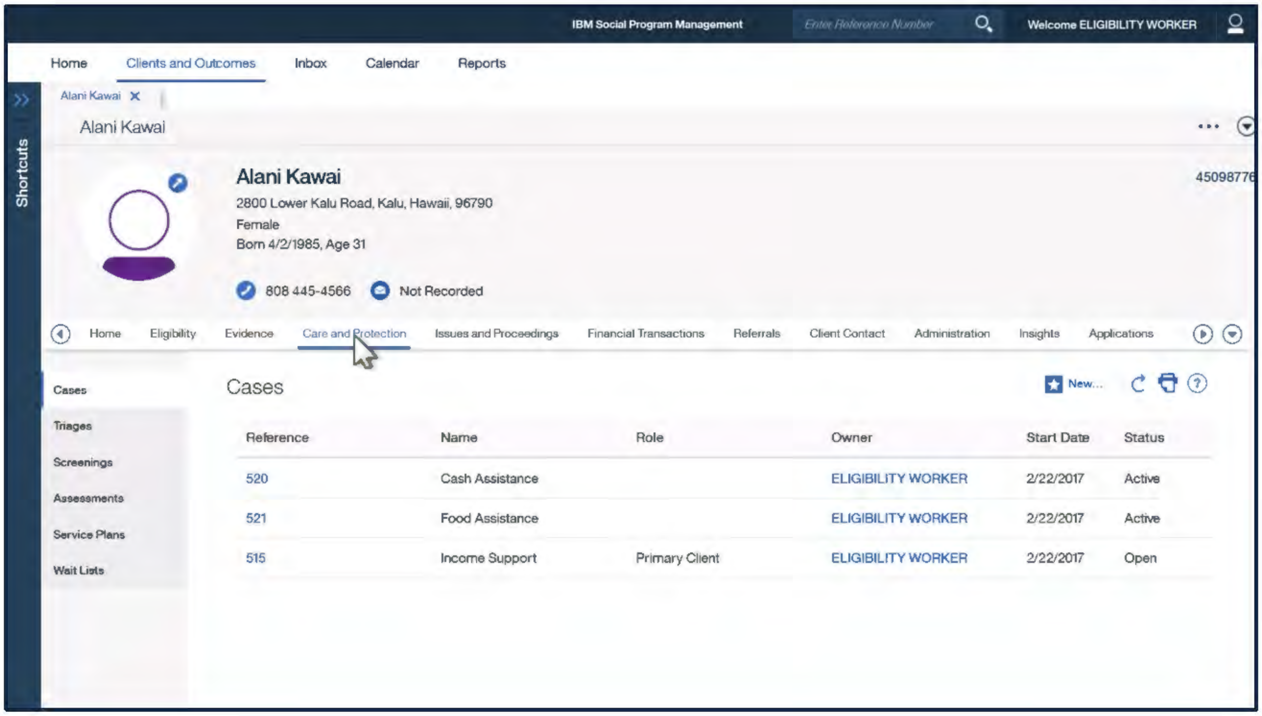


Figure 49: The IE-BM Solution will consolidate and list Client benefits by program.

By selecting a specific benefit issuance or payment, authorized users gain access to payment or transaction details as seen below. Clients will have access to benefit details by accessing their case via the Client Portal.

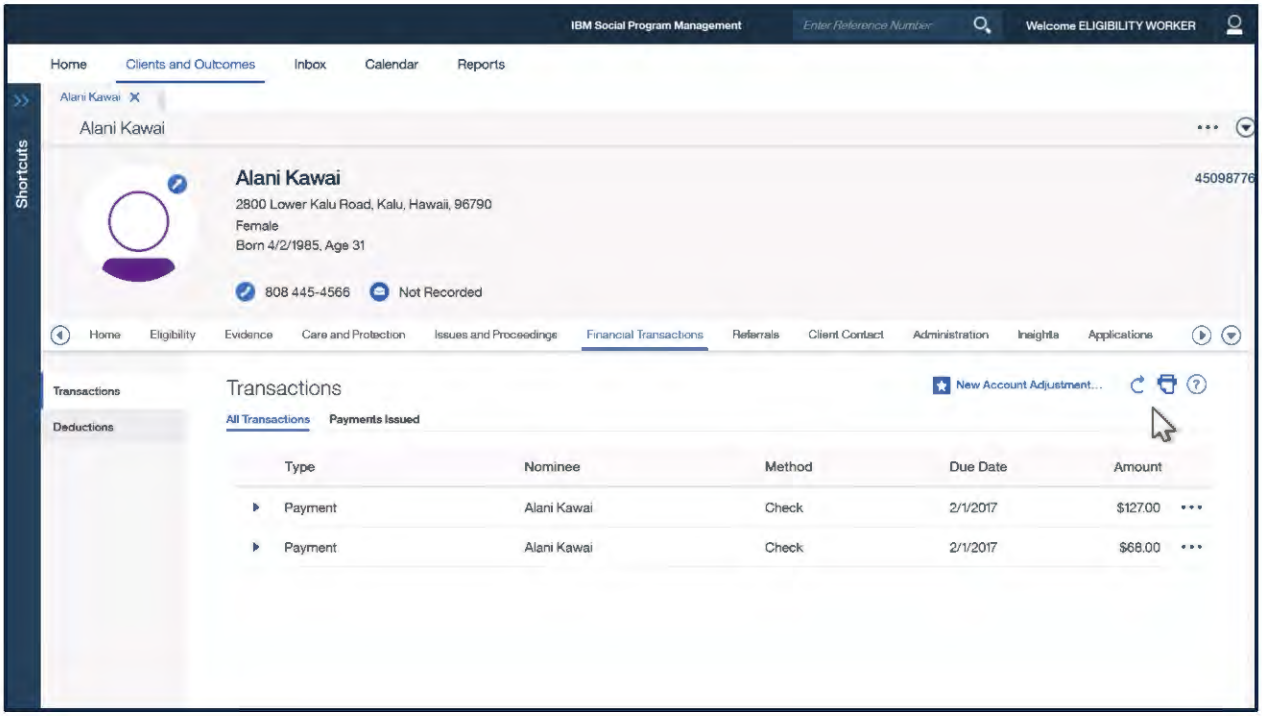


Figure 50: The IE-BM Solution provides detals of Client benefits.

Communicate with the EBT Vendor's System

The Solution will maintain details, ***sending benefit issuance information to the EBT vendor's system***, via a secure interface. In return, the EBT vendor will provide additional details back to the IE-BM Solution such as date issued, benefit amount, and EBT transactions details when updated with newly issued benefits. If the Client is receiving benefits from multiple programs, for example TANF/TEA and SNAP, the Solution will send program-specific details to the EBT vendor. If the benefit being issued spans multiple payment periods, the Solution will combine the benefit and submit a total, composite amount to the EBT vendor. For example, if a Client is determined eligible for a prior month's benefit, that amount will be added to the current month's benefit with the total benefit amount for that program sent to the EBT vendor. Additionally, the system will support the sending of emergency benefits issuance information to the EBT vendor outside of normally scheduled payment schedule. As the EBT system processes benefits, the EBT system will generate a notification that benefits have been loaded to the Client's EBT card. The IE-BM Solution will in turn notify the Client that funds are now available if the Client has provided an email address and indicated his or her preferred method of communication. **[FR7.4, FR7.5, FR7.6, FR7.8, FR7.10]**

SECTION HIGHLIGHT
IBM successfully developed a program for the State of North Carolina that interfaced through a batch process with the EFT Vendor for SNAP, Disaster SNAP, CASH, and Child Care benefit issuances. The system determines the financials, which are sent to the vendor for issuance.

Special attention was made to OOTB financial roll-up of transactions to issue by 'type' for accounting and tracking purposes. This allows for easy tracking of benefit issuances to clients. We plan to leverage this same feature for the State of Arkansas.

DHS can establish a maximum threshold for benefit amounts by program. If the calculated benefits owed to the Client and issued in a single payment exceed this amount, designated DHS staff will be notified. Assigned staff will be required to review and authorize benefit payments exceeding the established threshold. For example, when determining eligibility for prior periods the IE-BM Solution will determine benefit levels or allotments for each period. Prior to transmitting benefit details to the EBT, the IE-BM Solution will compute a total amount due by program based on approval status and issuing date (for recurring payments). The Solution, prior to submitting details to the EBT system will require that designated staff authorize payments exceeding the pre-determined threshold. Once authorized, benefit details will be transmitted. **[FR7.2, FR7.11]**

In addition to benefit amount(s), the IE-BM Solution will send the EBT vendor benefit issuance information including Client demographics as defined by the State for new accounts or accounts that have been updated and account or case information, program, benefit issuance amount, and period of eligibility for funds to be transferred. In return, as stated previously, the EBT vendor will provide the IE-BM Solution with issuance specific details that will be used to update the financial component of the case. **[FR7.3, FR7.9]**

Situations may arise that require manual issuance of benefits. This may occur, for example, in the case of lost or stolen benefits. The IE-BM Solution will support this manual process by providing the Eligibility Worker with the views necessary to collect required data including the method of issuance (manual) program, and benefit amount. Manually issued benefit details are saved to the case file and will also appear on case financial views. **[FR7.12]**

Notify the Client

Clients will be provided a notification of availability of funds to their email address, if one has been provided and indicated as their preferred communication channel. They can also access this notification as well as other case details by accessing their case via the Client Portal. The Solution will generate notices which include benefit issuance and benefit details for programs including SNAP and TANF/TEA.

The Solution incorporates extensive communications functionality designed to notify Applicants, Clients and others as specified by DHS of case events and milestones such as eligibility State's requirements and to keep Applicants, Clients and others fully informed. Taking stated communication method preferences into consideration, the IE-BM Solution will prepare and distribute communications via email, hard copy and other methods as determined by DHS. For example, Clients indicating email as a preferred method of communication will be notified of eligibility decisions and the distribution of benefits to their EBT via the email address on file. **[FR7.6]**

Automation of the Benefits Issuance process will benefit DHS in the following ways:

- Authomation of eligibility and benefit determinations will increase accuracy and decrease the time needed to complete these processes;

- Bi-directional interfaces with the State's EBT Vendor will be establihed to exchange benefit details at pre-determined intervals; benefit details received from the EBT Vendor will be used to update case financial data; and
- Communications to Applicants, Clients and others associated with the case will be automated and accessed to distributed communications accessible to those authorized.

In support of DHS's goal of an integrated eligibility and benefits management solution, the IE-BM will automate eligibility and entitlement processes and capture and maintain benefit details.

1.9 Approach to Redetermination/Semi-Annual Reporting

The Vendor should ensure that the responses to this section are in alignment with the requirements set forth in Template T-6 — Functional Requirements Traceability Matrix, Tab FR8 – Redetermination/Semi-Annual Reporting.

1.9.1 Redetermination/SAR or Annual Review Submitted Online/Paper

Significant System capabilities in this area include:

- Determining which redetermination the Client is scheduled to complete when a Client logs in to his/her account
- Providing a notification to the Client of receipt of the Eligibility Redetermination Application/Semi-Annual Report
- Providing the ability to generate a paper form pre-populated with the Client's information
- Reminding the Client to complete their eligibility redetermination application
- Processing the redetermination application separately from any Program specific application for which the Client is applying and is not currently enrolled
- Synchronizing the Semi-Annual Report and Redetermination/Recertification dates so that households with multiple Programs will receive a single semi-annual report and a single Eligibility Review

Instructions: The Vendor should describe its approach to addressing Redetermination/SAR or Annual Review Submitted Online/Paper requirements.

Our IBM team understands the importance that renewals, recertifications, and reviews play in managing Client eligibility and their satisfaction in their experience with the care and service they receive from you. Not to mention the importance it plays in helping to manage program spending and expand efficiencies. Our IE-BM Solution will build upon the IBM Cúram renewal and recertification processes within the product to deliver the experiences that the State requires to meet the needs of your Clients, Workers, and programs. Our proposed Solution provides the following capabilities as it relates to Redetermination/SAR or Annual Reviews:

- Track milestones associated with tasks,
- Automate actions based on program rules, and
- Auto-generate notifications, reminders and notices in the Client's preferred method of communication to explain outstanding actions.

The graphic below is a high level overview of the Redetermination/SAR Report process

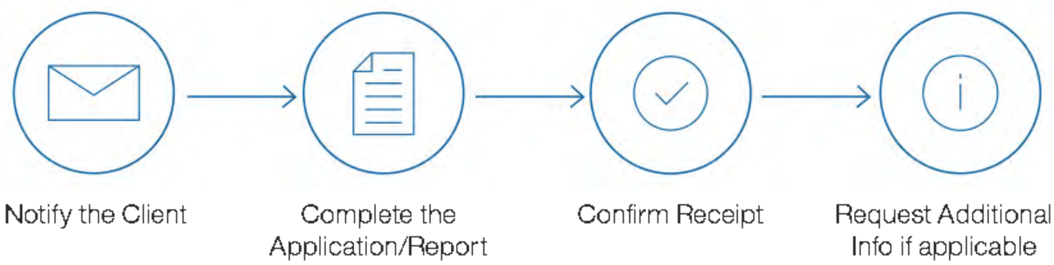


Figure 51: Our IE-BM Solution will track milestones so that Clients are automatically notified of outstanding actions promoting a timely turn around process for redeterminations.

This section will provide insight into the functionality and benefits aligned with the Redetermination and SAR Report process within the IE-BM Solution by discussing three (3) main topics:

- Notify the Client of Redetermination or SAR
- Complete the Redetermination Application or SAR Report Electronically or by Paper
- Confirm Receipt of the Redetermination Application or SAR Report

Notify the Client of Redetermination or Semi Annual Review

Our IE-BM Solution builds upon the self-service and account capabilities in the Client Portal to deliver the State requirements for Clients to receive, review, and submit updates to their information. These submissions can occur during their periodic program reviews and recertifications, or can be submitted by Clients as a life event.

When the Client accesses their personal and secure account, they are greeted by a personalized home page experience including messages tailored to their specific situation and needs. The figure below shows a variety of out-of-the box functions accessible from the Home Page including the top navigation panels and configurable tabs shown on the left.

Figure 52:The Client Portal facilitates secure access for Clients to view their case data, tasks, and activities.

Our proposed Solution uses the Cúram Predictive Response Manager (PRM) infrastructure to generate and display context sensitive messages on the Client Portal Home Page. For example, our proposed Solution will ***determine that the Client is due to complete an eligibility review task such as a redetermination application, annual review, or semi-annual review and notifies the Client of the type of review the Client is scheduled to complete and displays this notification on the home page when the Client logs into their account***. **[FR8.1]**

Review cycles for each program are governed by program-specific policies and take into consideration case type or household circumstances. The Solution is designed to synchronize review dates. For example TANF/TEA, SNAP, and Medicaid will adhere to the review cycles as they pertain to the TANF/TEA case. If, during the process of a redetermination, annual or semi-annual review, the Client or household opts to apply additional benefits and is subsequently determined eligible for those benefits, review dates will be synchronized so that the Client or household only receives one notification. ***The dates when redetermination applications and semi-annual reviews are due for Clients or households receiving benefits from multiple programs will be synced so that the Client only receives one eligibility review notification*** and that notification will include a link to the eligibility redetermination or SAR. **[FR8.19, FR8.39, FR8.40]**

For example, taking the Client's preferred method of communication into consideration, as the redetermination or review deadline approaches, passes, or is updated, the Solution will issue notifications at pre-determined intervals. These notifications will:

- Inform the Client of their responsibilities in order to complete the redetermination or review process and provide a link to take action.
- Provide the Client a list of outstanding verifications and documents required to process eligibility,
- Remind the Client of due dates including changes in the timeline or due date of the review,
- Immediately inform the Client that the redetermination or review application is partially complete and detail which information is missing to support simple, timely processing by limiting the need for Worker intervention
- Include information to schedule and attend an interview or request additional actions by program that are the required of the Client in order for the redetermination or review process to be considered complete. **[FR8.9, FR8.17, FR8.18, FR8.19, FR8.20, FR8.22, FR8.33]**

While notifications will be delivered informing the Client of information needed to process their review, they can also access a list of Verification Documentation Required by accessing their landing page. Timely, accurate case processing is crucial. Our IE-BM Solution will work to keep the Client well-informed of time sensitive events and their responsibilities. Additionally, the Solution will keep a detailed record of transactions on a case. These records can be accessed and tracked by authorized users as needed for quality control reviews, appeals and hearings, or other business needs. **[FR8.38]**

The IE-BM Solution is designed to track Client and Worker responsibilities as they apply to specific programs, aligning tasks such as redeterminations and reviews to the extent possible and in compliance with DHS program policies and procedures. In this case, the Client is informed that their continued eligibility is dependent on the completion of the redetermination, annual or semi-annual review process, depending on the type of assistance. Communications are designed to keep Clients informed of their responsibilities, provide case status details, and provide updates based on designated topics and at the frequency dictated by State policies and procedures. For example, the flexibility and robustness of the Solution allows the State to send notifications tailored to the submission of untimely redeterminations if the deadline is approaching or has already passed, per SNAP 10400. If, based on policy, an interview is a mandatory component of the redetermination, annual, or semi-annual review process, this is communicated to the Client. In these situations, the Client can schedule the meeting via their landing page. The Client will use the calendar function to request a preferred time and date. The Solution will generate a confirmation of the scheduled interview. The system will also notify the Client and the Eligibility Worker if a redetermination application has been submitted and the required interview or appointment has not occurred, requiring the Eligibility Worker to take the appropriate action(s) as dictated for each active program. **[FR8.10, FR8.37**, **FR8.17]**

Our IBM team will work with you to identify your preferred location for Clients to access their Redetermination Applications or Semi-Annual reports. For example, they can be added to the existing ‘My Updates’ tab or a new ‘My Renewals’ tab can be created. Thus, our proposed Solution will provide features allowing Clients to view previously submitted Redetermination Applications or Semi-Annual Reports. **[FR8.27]**

Complete the Redetermination Application or Semi-Annual Report

When a redetermination or renewal period is pending for a Client, they will have an option on their landing page to click the link to complete the redetermination eligibility application or semi-annual review report.

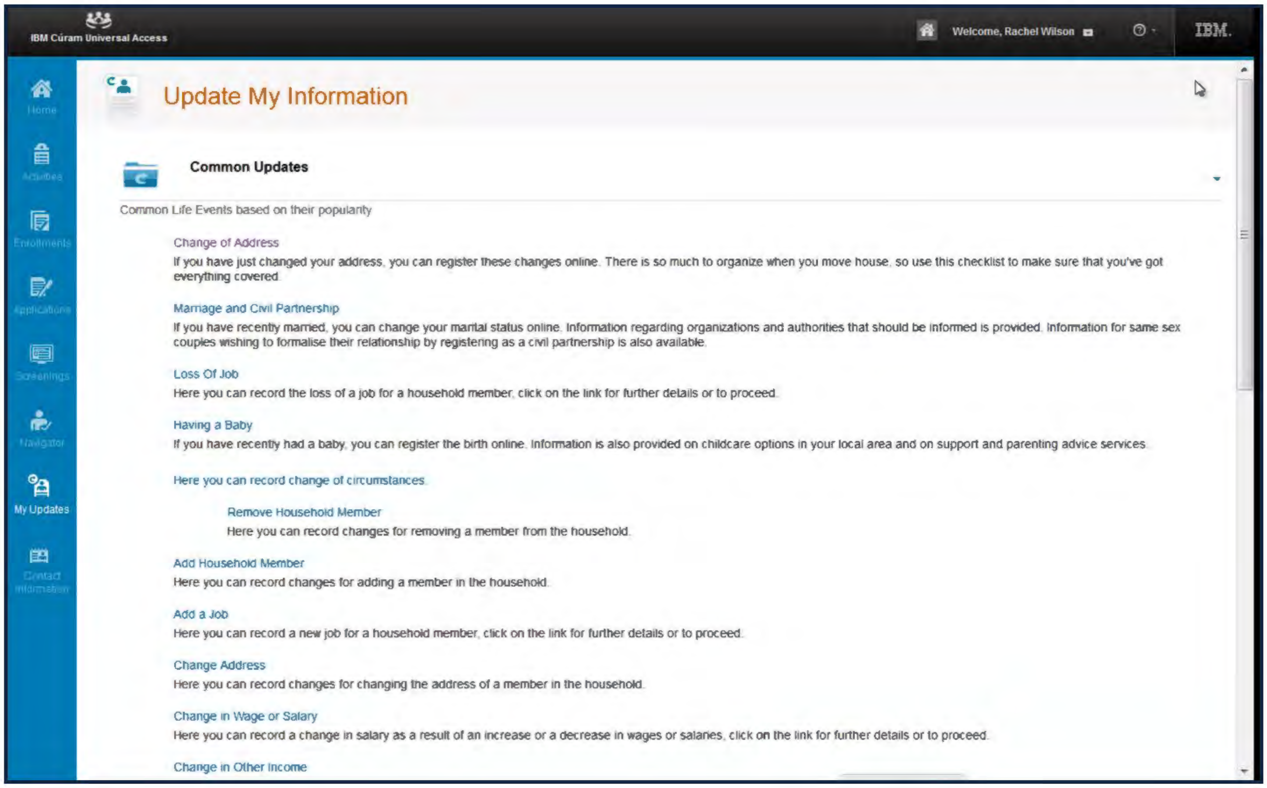


Figure 53: Clients can update Information, report changes, and complete their redetermination application or SAR electronically using the IE-BM Solution.

Electronic Submission

By accessing the IE-BM Solution via their portal, Clients gain secure access to their personal information. Our proposed Solution provides several options for completing the Redetermination Semi-Annual or Annual Review process:

- Begin a new Eligibility Redetermination Application or SAR;
- Complete the process in its entirety, complete with an electronic signature, and submit responses;
- Partially complete the process providing the State's minimum set of data, save data entered, and exit the process prior to final submission;
- Resume the process at a later time and date;
- Withdraw redetermination application;
- Continue a previous application, in this case a previously saved application or report; and
- Schedule an appointment required to complete the redetermination, annual, or semi-annual review process as required.

To begin the process, the Client selects the task they wish to complete (Redetermination, Annual Review, Semi-Annual Review). The Solution will have a link to the task that is due (Redetermination application or semi-annual review form) . The Solution will also list pending Redetermination Application or Semi-Annual Review Forms. The Client wil have the option to continue or withdraw an existing Redetermiantion Application or SAR form or begin a new one. The Solution will present current information that the Client must review and update to reflect current personal and household circumstances. The Client is guided through the review process with pre-populated data and questions presented in logical groupings and in the same sequence as it appears on the paper application though an application script that uses Intelligent Evidence Gathering (IEG) to obtain the infromation necessary to complete the redetermination application. The system will allow authorized users to determine what information in the IEG is pre-populated with existing available information and what information will require manual entry. As the Client completes each screen, on screen edits will be invoked to confirm that required data is entered, and that data entered is in the correct format. The Solution can also validate inputs in real-time, where data is available, by using stored data sources or external trusted sources based on policy and program rules. For data that has changed and is required, the system will display a step-by-step questionnaire collecting the data. The Solution will allow the Client to submit an incomplete Redetermination Application or SAR form as long as the minimum required data has been completed. If an incomplete Redetermination Application or SAR form is submitted, the system will send reminder notifications to the Client. The Client can save and exit the Redetermiantion Appplication or SAR form and return at a later time to complete as long as they return and submit within the specified deadline. **[FR8.2, FR8.3, FR8.4, FR8.11, FR8.16, FR8.21, FR8.22, FR8.23, FR8.35]**

It is the Client's responsibility to review and update data as appropriate. The Solution guides the Client through the screens providing the opportunity to update, delete, and add details to pre-populated responses to reflect their current circumstances. The Client has the option of completing the process in a single sitting; partially completing the process including the minimum amount of required data, saving the information, exiting and resuming at a later date or time; or, the Client may delete entered information and exit prior to their final submission. **[FR8.24, FR8.25]**

When resuming the process, the Client will access the review via their landing page and be directed to the last location on the redetermination form that the Client visited. As part of the process, the Client will be given the option of attaching scanned or electronic documents, such as verifications, to the case. Information will be validated based on available real-time and stored data sources. Regardless of the path chosen, the Client will have the option to determine when the reapplication is submitted and the programs that should be redetermined. Per policy, the Client's signature is required to confirm that the information provided is accurate and to acknowledge their rights and responsibilities. The IE-BM Solution will require electronic signatures, where required, during the review process. **[FR8.5, FR8.8, FR8.26, FR8.28]**

A summary of the data entered to complete the redetermination or review process is presented to the Client. This information will mirror the format of the application providing the Client the opportunity to review data entered and update as needed. The authorized user can request to generate a hardcopy of the form. This document can be produced at the beginning of the process reflecting data available on the system, or at the end of the process summarizing the Redetermination Application, Annual Review, or SAR details that will be submitted. **[FR8.6, FR8.13]**

The Solution monitors the completion of tasks for redeterminations, annual reviews, and semi-annual reviews. This feature governs the Client's ability to submit redetermination applications after the deadline specified by policy. For example, if the Client does not complete the SNAP recertification by the due date, the system will automatically close the SNAP case, generate the required notifications in the Client's preferred method of communication, and execute recalculation of other benefits, such as SNAP-based work supports, as required. If a SNAP recertification is not complete prior to the policy-defined deadline, the Client's landing page will not present the option of an online SNAP recertification. Communications to the Client will state that, per policy, a new pre-populated and integrated application for SNAP benefits is required in accordance with current policy. **[FR8.36]**

SECTION HIGHLIGHT
IBM successfully developed an automated review process in the State of North Carolina for SNAP, CASH, and Medicaid.

Clients have the option and ability to apply for benefits during their Redetermination or Review process. The Client may request to apply for benefits during a redetermination but for Medicaid an application form is required per policy. As the Client completes the required forms and once the system has adequate data to determine potential eligibility for additional programs or services, it will inform the Client of their options. If the Client opts to apply for additional benefits, the new application will be processed as a separate and distinct task. The Solution will provide the Client with a list of verifications and actions needed in order for the application(s) to be processed. This information, as well as processing timelines are based on program-specific rules. The Solution will track redetermination and new application processing separately and generate Worker and Client notifications for each application type under review. **[FR8.7, FR8.30]**

The system will not consider a Redetermination Application or SAR form to be competed until the Client provides the information necessary to redetermine eligibility. The system determines that the information has been provided by verifying the outstanding information needed to determine eligibility per rules has been provided. **[FR8.29]**

Paper Submission

The system will provide the ability to generate a paper form pre-populated with the Client's information. As discussed above, authorized users have the ability to print application information. Printed information will mirror the application format, presenting information based on the step in the process. For example, if printed prior to changes being saved, the Client will be presented with the information available in the system as allowed by DHS. **[FR8.13, FR8.16]**

The Client may complete and return the pre-populated review form by uploading the document within the Client Portal. The system will utilize bar coding and Optical Character Recognition (OCR) to read the completed redetermination application and populate information whenever possible. For fields that are populated from the uploaded form, the system will display the scanned application in order for the Intake Worker to confirm apopulated fields. **[FR8.14, FR8.15]**

Confirm Receipt of the Eligibility Redetermination Application or SAR

At the point the Redetermination Application, Annual or SAR document is submitted the Solution will perform the following:

- Develop a list of documentation and missing information that the Client must provide in order for the Redetermination, Annual or SAR process to move forward and send notification to Client to requesting information to determine continued eligibility for currently active benefits; **[FR8.20]**

- Develop a list of documentation that the Client has provided to date as applicable to the review process; and
- Determine the Client's and household's potential eligibility for additional programs and services, presenting them with the option of completing a pre-populated application seeking the additional information required for those programs. **[FR8.7]**

A system generated notification will be sent to the Client confirming the receipt of their Redetermination or SAR form. The notification will be sent using the Client's perferred communication method. The ***notification will be sent upon completion of the redetermination application or semi-annual review form*** in the Client's preferred method of communication stating that they have completed the redetermination or review process, along with a link to review their updated case file. **[FR8.12]**

1.9.2 Redetermination/SAR or Annual Review Completed by Intake Worker

Significant System capabilities in this area include:

- Providing a user interface for the Intake Worker to enter an Eligibility Redetermination application
- Allowing the Intake Worker to continue in process applications that the Client has previously saved but not submitted

Instructions: The Vendor should describe its approach to addressing Redetermination/SAR or Annual Review completed by Intake Worker requirements.

This section will desribe the IBM team's approact to addressing the Intake Worker completed Redetermination and SAR requirements.

The Worker will be ***provided a User Interface from the Worker Portal which allows them to enter a Redetermination Application or SAR form***. The User Interface will allow the Worker to enter information through an IEG script, which mirrors the IEG script in the Client Portal, to complete the Redetermination Application or SAR. **[FR8.41]**

The Intake Worker is authorized to assist Applicants and Clients in their efforts to complete the application and redetermination or review processes. The level of their involvement in this process is discussed below. In order to accurately determine eligibility for programs, the Intake Worker will review data provided both as part of the redetermination process as well as that provided by external sources, confirming, denying, or adding comments to the validity of this information.

The Solution supports the documentation of the Intake Worker's decision concerning the Redetermination or Review, including the confirmation or denial of information collected from external services and allows the Worker to confirm or deny information gathered through an external data source under the verifications tab of the Integrated Case Home page in the Worker Portal. Additionally, when taking individual case and Client circumstances into consideration and in compliance with policy, authorized Intake Workers may override redetermination or Client action deadlines. In the event that the Intake Worker does not have that authority, the Intake Worker will escalate the case to a Supervisor, documenting the circumstances that warrant the extension. **[FR8.32, FR8.47, FR8.48]**

Intake Workers completing Redetermination Applications or SAR forms will search for the Client's case. Once they click on the case, they can access a list of prior applications from the Applications Tab on the case Home. The system will display the scanned application for the Intake Worker to confirm populated fields. Additionally, the system will flag updates to the Client's information for the Eligibility Worker to verify when reviewing the application, conducting the appointment, or conducting the redetermination. The Intake Worker will review available data, comparing that data to information provided on the application form, reviewing data flagged by the system, and updating that data accordingly. In the course of reviewing verified data, the Intake Worker may discover discrepancies in information previously reported and used to determine the Client's eligibility and benefits. If the verified information indicates that an incorrect benefit has been issued, the Intake Worker must take the appropriate actions – updating the data and the effective date of that information. The Solution will then redetermine eligibility and benefits for prior periods, issue notices, and take appropriate corrective action to restore benefits in the case of an underpayment or recoup benefits in the case of an overpayment. **[FR8.15, FR8.34, FR8.41, FR8.42, FR8.44]**

Clients must report the existence and frequency of income as well as the existence and value of assets owned by members of the household. The process of verifying this information may be automated, for example through interfaces, or manually by the Intake Worker through communicating directly with a provider or an institution such as a bank. This information will subsequently be used to determine the Client's eligibility. **[FR8.46]**

SECTION HIGHLIGHT

IBM successfully implemented an automated review process in the State of Missouri for HCR Medicaid participants by allowing an automated certification date extension when sufficient information is provided as part of a change in income or household member in accordance with State policy. This simplifies the annual review process and aligns review dates for participants receiving multiple products (i.e. MAGI Medicaid and CHIP).

Intake Workers may also assist with the completion of the Redetermination or Review application and process when the Client has agreed to this assistance ***allowing the Intake Worker to continue to process applications the Client has previously saved but not submitted***. In these cases, the Intake Worker will search and access the partially completed application. The Solution will bring the Intake Worker to the last point or to the place the Client last entered data. The Intake Worker, using information provided by the Client, will complete the application or review form. **[FR8.31, FR8.43, FR8.45]**

Once the Intake Worker has completed the Redetermination Application or SAR form, the Solution will generate a notification to the Client indicating completion of the application portion of the process, the list of verifications and documents provided by the Client as well as a list of information and documentation required to complete the process. A Redetermination Application or SAR is not considered complete until the information necessary to redetermine eligibility has been provided.

1.10 Approach to Client Change

The Vendor should ensure that the responses to this section are in alignment with the requirements set forth in Template T-6 — Functional Requirements Traceability Matrix, Tab FR9 – Client Change.

Significant System capabilities in this area include:

- Prompting prompt the Client to indicate the information that requires an update
- Determining if documentation is required for the change to be considered submitted
- Determining whether the change requires an Eligibility Worker to review the information
- Providing the ability to create a paper Client Change Form pre-populated with a Client's information to be mailed at the Client's request
- Allowing authorized DHS Staff to implement a mass change
- Determining to which Programs the changes apply
- Notifying appropriate divisions of Client changes
- Continuously monitor cases for critical updates

Instructions: The Vendor should describe its approach to addressing Client Change requirements.

Our proposed approach addresses client change requirements by providing Clients a single point of access to submit changes that can, when appropriate, be applied across programs. Our proposed Solution will meet three (3) main objectives as it relates to client changes:

- Identify the programs to which the client changes apply and support timely redetermination across programs
- Provide consistent information across programs to provide your staff a more complete view of the Client and to promote accurate eligibility determinations
- Document, track and notify, and send reminders to both staff and Clients of outstanding action items such as required verifications and their due dates

By meeting these objectives, together the IBM team and the State will expand EEF to be a fully integrated, person-centered services delivery system. The graphic below provides a high-level overview of the Client change business process.

Figure 54: The IE-BM Solution's end-to-end client change functionality promotes Client self-services and accountability while improving data accuracy and reducing DHS workload.

Client changes can come into the IE-BM Solution from multiple channels:

- Self-reported by the Client via their Client Portal
- Self-reported reported via a paper change form
- Verbally communicated directly to the Intake or Eligibility Worker
- Received from verified data sources

Once the change is received, DHS policy will dictate whether the IE BM Solution applies the change, whether the change required verification and if so, what type, or if the change requires an Eligibility Worker's review. Once the change is applied, the system will automatically reassess eligibility for those programs and eligibility periods impacted by the change, and generate notices and notifications to the Client. Workers can then view the history of changes within case records.

As a leading systems integrator for Cúram-based Health and Human Services solutions, we will deliver a solution that simplifies and streamlines the above process by utilizing much of the existing EEF's architecture, maximizing the State's return on investment. The remainder of this section describes our approach to client changes through the following business functions:

- **Submit a Change Electronically** – Clients can easily log into their online account and self-report changes.
- **Read Paper Change Forms** – Clients will continue to maintain the flexibility of submitting a paper change form, which Clerical Workers will scan and use the IE-BM Solution to read and save the metadata as well as additional images.

- **Apply Client Changes** – Intake or Eligibility Workers can directly document changes within the Client's integrated case as well as review and apply changes received via external systems such as Social Security Administration System or Public Assistance Reporting Information System (PARIS).
- **Redetermine Eligibility** – Once a client change is applied, the IE-BM Solution will identify which programs the changes apply and automatically reassess eligibility according to DHS policy for active programs.
- **View Client Notices and Notifications** - The system will generate notices and notifications to be delivered to the Client using their preferred method of communication so Clients are engaged and up-to-date on their benefit status and responsibilities concerning eligibility.
- **Track Case History** – The system will maintain a history of client changes providing Workers detailed Client insight and supporting program compliance.

Submit a Change Electronically

A Client can log into their Client Portal and access a summary of their evidence, such as Social Security number (SSN), Address, Household Members, and Income. The data that is shown is the current information for each evidence type, specifically the recent active evidence. If the Client recently created an in-edit version of evidence by a previous change of circumstances that has not yet been verified, that in-edit version is displayed instead, the in-edit status reflected. The intuitive and user friendly interface allows Clients to clearly identify information pertinent to their individualized need. For example, as a current recipient of benefits, the My Updates link will allow Clients to review their evidence and easily submit updates reducing instances of Clients submitting new applications unnecessarily. After the Client reviews their current information, they can update evidence by clicking the Update My Information link. When the Client clicks the Update My Information link, the system will ***prompt the Client to indicate the information that requires an update.*** **[FR9.1, FR9.2]**

SECTION HIGHLIGHT

IBM has successfully implemented and streamlined the process for Client Changes for MAGI programs for the State of Missouri. By allowing the submission and processing of changes through multiple channels including in-person, drop-off, telephone, fax, and e-mail, MAGI recipients are benefiting from a reduction in processing time and Workers are seeing an increase in no touch cases as reported changes are compared against federal and state data sources. Workers are only notified if the system identifies a discrepancy in the reported changes that do not meet the State's definition of reasonable comparison.

Our proposed Solution will utilize Cúram IEG to design and configure both the questions on the Change Report Form (DCO-234) and the script execution path so that change reports can be utilized across programs based on program-specific requirements. The script presents the Client with a guided set of questions based on the type of change as well as other related changes that may have happened. The change report process is facilitated by opening the script with the data pre-populated with available client data. The Client can add, update, or end date particular pieces of information. The script can also validate inputs in real-time, where data is available, by using stored data sources or external trusted sources such as Social Security Administration System based on policy and program rules. **[FR9.3, FR9.4]**

The guided set of questions can take into account multiple program requirements so that a single submission of information by a Client can be shared across programs, even those whose eligibility is not determined by the IE-BM Solution. The script can also ***determine if documentation is required for the change to be considered submitted*** as well as the type of acceptable documentation. Once the Client submits, the system will determine if verifications are required. If so, the system can require the Client to upload documentation within the same session as well as subsequently notifies the Applicant or Client of their responsibility to provide verification by sending generating notices listing the verification documents and their due dates according to State and Federal policy. **[FR9.5, FR9.6]**

Once the Client saves a draft or completes the script, they are given an opportunity to review their answers and make changes. When the Client submits the script, the system will use rules to determine to which programs the changes apply and ***whether the change requires an Eligibility Worker to review the information***. For programs managed by DHS, the Solution will utilize workflow and work queues configurations to automatically generate tasks for staff based on the organizational structure if needed. The IE-BM Solution's notifications will be reflected on the Worker's landing page and be delivered via the Worker's notification preferences. In addition, the system will ***notify appropriate divisions and external agencies (Department of Health, Department of Workforce Services, etc.) of client changes*** by configuring workflow and alerts functionality. However, a major benefit to the rules functionality is the automation of reviews and application of client change information to the appropriate programs. This will support no-touch by reducing the need for staff intervention. **[FR9.7]**

Read Paper Change Forms

We anticipate that even with the added feature of submitting client changes electronically, many Arkansans will continue to submit client changes using the paper change form. As discussed in T-7 Section 1.6.2. Paper Documentation Requirements, the IE-BM Solution will leverage the State's investments in Xerox DocuShare and its corresponding add-ons, to support optical character recognition (OCR) and bar coding to streamline paper-based processing.

Our proposed Solution will ***provide the ability to create a paper Client Change Form pre-populated with available client data to be mailed at the Client's request***. Change forms generated by the vendor that maintains Xerox DocuShare will include a bar code. The bar codes will then be used to identify the Client's case and type of case. Correspondence sent from DHS to Clients can include a cover page with a bar code that the Client can use for correspondence submission. For incoming documents received from Clients where bar codes are not available, the documents can be manually associated to the case or placed in a non-indexed queue. **[FR9.12]**

Once a paper Change Report Form (DCO-234) is received via mail, Document Processing Staff will scan the document at their workstation. Once the change report is scanned or received electronically via fax or email, the assigned staff can OCR the file. By using OCR, the legible data on the form will be read and applied as client data. Metadata read from the change report using OCR can be utilized across programs. The system will also save an image of the actual document and associated to the Client by utilizing the form's bar code or manually associating it if no bar code is available. **[FR9.13]**

Based on individual program requirements and configured rules, the system can automatically create tasks to review received changes if suitable. For example, verification documentation that is saved as images may require a review. Once the scanned change report is saved, Intake Workers can then view the image as well as the submitted change report to validate the data. The system will populate the data read from the paper change report form and display it to the Intake Worker in the same sequence as the paper form. The Intake Worker will also have access to the scanned form so that the Intake Worker can compare populated data to the scanned image and review and verify the data with ease. **[FR9.14, FR9.15]**

Apply Client Changes

In some cases, an Intake Worker will search for a Client or application and apply a change to the person or case record based on information received via phone, email, or other sources. The Intake Worker will review current individual or household information and update the applicable pieces of information though the person and case records. The Worker will capture that this is a self-reported change from the Client that is keyed directly by the Worker. The IE-BM Solution tracks case activity recording the date, user, and type of activity. **[FR9.10, FR9.11]**

We recognize that client changes will also be received from external data sources such as the Social Security Administration System for benefit amounts or Department of Labor System for reported wages or work status. Data from external systems can be received in real-time or by using batches scheduled at a pre-defined interval. For example, the IE-BM Solution, through an interface with ADH WIC System, will receive and record information concerning a Client's participation in the WIC program, which can be used to populate reports to identify WIC participants. Our proposed Solution will use deterministic and probabilistic algorithms using MDM to identify Clients and cases. Deterministic matching will look for an exact match, but may not be accurate if the data is not clean or standardized. Probabilistic matching is often times more complicated but provides a larger pool of statistically relevant matches. Depending on the State's confidence in the data, we can configure our proposed Solution to use either method in matching Clients and cases. Then depending on State policies and the specific external source, we can configure rules to automatically update the applicable cases or alert Eligibility Workers when changes are received so that the information can be reviewed and confirmed, when necessary. Inaccuracies with the Client matching such as a Client appearing on an external database in error, can be identified by a Worker and marked as an error to avoid future false positives. Interfaces are further described in Template T-9 Technical Requirements Approach. **[FR9.16, FR9.17, FR9.28, FR9.30, FR9.31, FR9.34]**

SECTION HIGHLIGHT
IBM has successfully integrated Cúram and MDM for the County of San Diego. The successful implementation has allowed the County to benefit from a single consistent data model that provides Workers confidence in data quality.

Redetermine Eligibility

Depending on the change and program rules, the IE-BM Solution will be able to automatically reassess eligibility or require intervention from an Eligibility Worker. Once a client change is received, the system updates the reported information which may include household composition, changes in income or employment, or education level so that it is consistently referenced across programs. Client changes can also be updated across Clients such as the case with a household address change. The system then ***determines to which programs the***

changes apply and, based on program policies and rules, will either automatically reassess eligibility or alert an Eligibility Worker that a review is required; appropriate Divisions of the Client's change will also be notified. For example, the death of a Client reported by a family member or a facility and confirmed via an interface with the State's vital statistics bureau or availability of a death certificate will automatically trigger the IE-BM Solution to redetermine and terminate eligibility for the deceased party. **[FR9.24, FR9.29, FR9.32]**

As discussed in detail in T-7 Section 1.9 Approach to Redetermination/Semi-Annual Reporting, our proposed Solution will provide a consistent, efficient, flexible, and automated mechanism to address cross-program eligibility determination, program-independent change processing, and case re-assessment. It does so by determining to which programs the changes apply and assessing whether an applicant is eligible to receive a particular type of payment or service (or liability) based on the relevant program rules. As part of the determination process, the rules engine will automatically evaluate each applicable rule against a specific evidence item provided and verified by a Client. For example, in order to establish if a Client meets an income requirement, the rules engine evaluates the Client's income based on the verified paycheck and the limit set by the applicable program. The IE-BM Solution will generate worker notifications for situations that require review or action. These notifications will appear on the Worker's landing page, assigned the appropriate priority based on rules and tracked to confirm worker action. **[FR9.23]**

Due to the fact that the rules in the business rules engine are specified in an effective-dated manner, they can be executed across multiple time periods – past, present and future. This supports the development of a rules history and facilitates the automated retrospective determinations. In cases where a policy or benefit level change requires recalculation across cases, a batch will be developed, allowing authorized DHS staff to implement mass changes across the Clients' cases. An example of a mass change may include a cost-of-living adjustment (COLA) which impacts cases eligible to receive a specific type of benefit. **[FR9.19]**

The outputs from eligibility determination typically include a number of elements – one of which is a case decision – or eligibility determination. A sample eligibility results page is shown below.

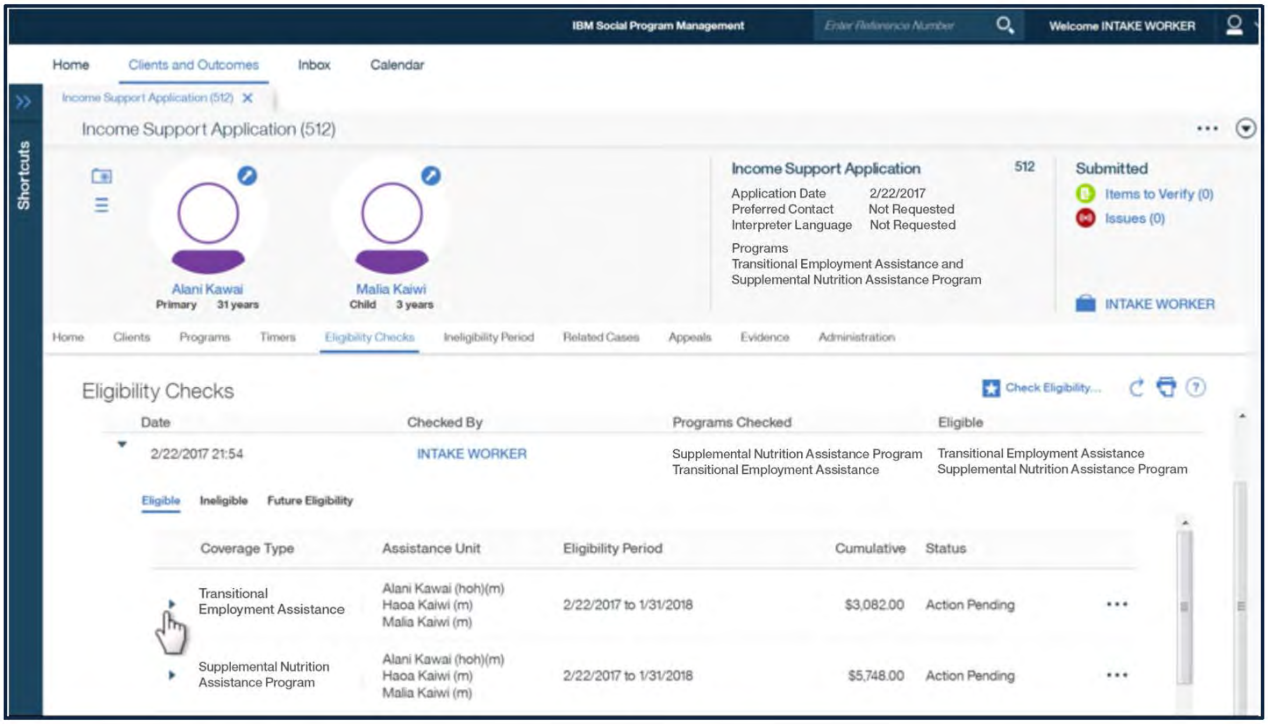


Figure 55: The IE-BM Solution will leverage verifications across programs, applying as required, promoting timeliness and a streamlined business process.

If evidence, such as income amounts or household composition changes, the household's eligibility may be impacted. The Eligibility Worker can then easily view the results of the assessment of the household, both before and after the new evidence was collected that adjusted their eligibility, coverage, or benefit amount. **[FR9.25]**

Due to the phased roll-out approach or in the case of non-DHS programs such as WIC, eligibility determinations may continue to be managed in external systems. Our proposed Solution will notify applicable external systems of the applicable Client data received, save the relevant information and make available to external systems for external systems to utilize our data for their own eligibility determinations. **[FR9.27]**

View Client Notices and Notifications

As discussed in T-7 Section 1.2.5 Alerts and Notifications Requirements, the IE-BM Solution will support multiple forms of communication including alerts, notifications, and forms. Clients can view a multitude of notifications pertaining to their personal case or general notifications while logged into their Client Portal. Notifications can include general context sensitive messages that display on the home page based on specific criteria such as enrolled programs, client demographics, or policy changes. Clients can also view user specific notifications based on actions that have been completed or are outstanding. For example, once a Client submits a change report, the notification will include a summary of changes and their impact. Follow-up notifications will inform the Client if documentation is needed, indicating the timeframe and implications if not received in accordance with program-specific State and Federal policy. We will work with you to utilize consolidated and simplified language so that Arkansans will have clear guidance on next steps and action items without having to call or visit DHS offices. As mentioned previously, changes to Client circumstances that impact benefits or services determination on external systems will be communicated to those agencies, for example WIC, ET&T Vendors, and DHS Staff addressing overpayment resolution, as appropriate. **[FR9.6, FR9.9, FR9.27]**

The Client Portal will provide electronic access for Client to view notices. For example, the system can generate a notice when a change is submitted through the portal or a paper application, received via an external source, or upon request by an Eligibility Worker. Notices will include the source of the reported change, the specific verifications necessary, and the due date by which the verification must be provided. In addition to the accessibility that the Client Portal provides, notices can also be generated by the IE-BM Solution to be electronically or physically mailed according to the client's preferred method of communication. The IE-BM Solution will be also configured to notify DAAS Client Providers for DAAS clients. By supporting multiple communication methods, client awareness and involvement increases, DHS postal or delivery expenses decrease, and DHS staff will experience an increase in the time available to focus on high need tasks. **[FR9.6, FR9.18, FR9.34, FR9.35]**

Track Case History

Authorized users have access to case information, including details of case stakeholders (such as clients, employers, and providers), referrals, appointments, notes, attachments, communications, eligibility decisions, evidence, financials, and other case related details. The system also maintains audit information so if a change comes into question, Workers or Supervisors can review the date and time a change was made, the user who submitted the change, and the case file record before and after the change was made. **[FR9.20, FR9.21, FR9.22]**

The IE-BM Solution will allow a defined case life cycle to be assigned to support the DHS preferred business processes. Management of the case by the appropriate user(s) is supported by the workflow and will automate specific processes and automatically trigger various actions. For example, when a client's evidence is changed, the system will determine whether the change requires an Eligibility Worker to review the information. In these situations, tasks can automatically be generated and directed to the applicable queue and flags are displayed on those cases. A batch will also be developed and scheduled to monitor cases for critical updates. The IE-BM Solution, for example, will monitor the age of the client to inform the Worker of potential eligibility for those turning age 65 or in the case of a student will monitor the age of a young adult turning 18, in order to determine continued TANF/TEA eligibility as well as work requirements if receiving SNAP or other benefits. The IE-BM Solution will also monitor household composition and eligibility periods in order to accurately determine eligibility for continued benefits, notifying assigned Workers if their attention and activity is required. The IE-BM Solution can then provide notifications, dashboards, or reports for staff to access and view affected cases. [**FR9.8, FR9.37]**

Depending on user access and security, Eligibility Workers can also confirm, add, or deny comments and ancillary information related to eligibility status. Authorized users can then view added comments to an individual or household evidence. Our proposed the IE-BM Solution presents DHS staff with a more complete picture of the client and case eliminating the need to access multiple systems with siloed information. Unlike hybrid systems that risk compromising data integrity or quality, the IE-BM Solution offers a single source for client and case data, preventing Workers from having to learn and operate in two or more different systems. **[FR9.26, FR9.33]**

In conclusion, our approach will continue to provide the flexibility of submitting and applying client changes through a multitude of channels, while still focusing on designing automated rules so that Workers will review and intervene only when deemed necessary by rules established by DHS. As described above, automation does not have to result in less informed staff. The case management functionality will provide Eligibility Workers a single source of truth where they will have increased access to information including case history, tasks, and comments.

1.11 Approach to Medical Review Team

The Vendor should ensure that the responses to this section are in alignment with the requirements set forth in Template T-6 — Functional Requirements Traceability Matrix, Tab FR10 – MRT.

Significant System capabilities in this area include:

- Determining that a medical review of disability is required
- Providing the ability for the Medical Reviewer to generate and issue requests for medical records electronically to the Provider(s)
- Allowing the MRT Supervisor to review the decision and the records for completeness and generate a notice to all appropriate parties
- Generating a notice to the Applicant when the Provider has not provided sufficient medical records

Instructions: The Vendor should describe its approach to addressing Medical Review Team requirements.

We recognize the significance of the Medical Review Team (MRT) and its role in reviewing an individual's medical records and rendering disability decisions that impact one's eligibility. The IE-BM Solution will support the MRT processes by:

- Providing MRT members (MRT Reviewer, Physician, Supervisor) with secure access to Applicant and Client cases via the internal Worker Portal;
- Coordinating the Medical Review Process through established workflows;
- Managing and tracking the requests for medical records;
- Supporting MRT documentation (medical records) pertaining to the Medical Review Process; and
- Facilitating communications.

The IE-BM Solution, in keeping with DHS's goal of an integrated eligibility solution, will incorporate the State's Medical Review Team (MRT) process. Data captured throughout the application and ongoing eligibility process will determine the need for MRT intervention. MRT members, DHS Staff, and Clients, depending on their assigned role, will have visibility into the status of and access to the documents used by the MRT to determine eligibility based on disabling conditions. The integration of the MRT process will automate the notification process and help to facilitate end-to-end tracking of responsibilities and tracking of milestones throughout the process eliminating the need for MRT members to manually track requests for information.

Using an online, multi-program application, individuals can begin the application process via the DHS online Client Portal as described in T-7 Section 1.4 Approach to Integrated Eligibility Application. Based on the program or programs selected, the IE-BM Solution presents the

Applicant with a guided set of questions that is used to capture significant and relevant information about the Applicant's current situation and their needs. Applicant responses will be processed and additional, follow-on questions will be presented to the Applicant. For example, if the Applicant indicates that a household member is disabled, the Solution will pose additional questions requesting details about the disability. Disability information is gathered at the individual level within the application process. The IE-BM Solution, based on DHS defined rule sets, will assess the information provided on the application and supplemented during the Intake interview to determine if a medical review of the disability is required.

Medical Review Team Members

Members of the Medical Review Team will be registered users of the IE-BM Solution. Similar to the concept used to register Workers, MRT members will have log-in credentials, be assigned roles, and workflows will support your MRT process.

MRT members will access the IE-BM Solution through the internal Worker Portal. Their user credentials will govern the cases they can access, the level of Applicant, Client, and case detail they can access and view, and the tasks and activities they can perform. Details concerning the level of access available to MRT members will be discussed and finalized during JAD sessions and the Solution configured to reflect decisions made during those sessions. MRT members will have access to their personal and the MRT Inbox and the activity completed by MRT members will be tracked by the Solution. **[FR10.3]**

The remainder of this section describes how your IE-BM Solution will facilitate the MRT process. Please keep in mind that the process is configurable to meet your business process and to supports the aim that Applicants and Clients receive the attention needed to determine eligibility based on a disability.

The Medical Review Process

As discussed above, the Solution supports an integrated application allowing individuals to apply for one or more programs in a single action. The Medical Review process is invoked when application or Client change data reports the existence of a medical condition. A sample of the programs that will typically trigger the Medical Review process includes AFDC MN, Workers with Disabilities, Aid to Disabled, Long Term Care, Autism Waiver, and Aid to the Blind. **[FR10.1]**

The IE-BM Solution assess applications to determine the need for MRT involvement. For example, an application that indicates that the Applicant or a member of the Applicant's household is blind or resides in Assisted Living will trigger an alert to the MRT. Process or workflow rules will determine whether or not a specific MRT member is notified or if the notification is distributed to the team. Specialized queues can be setup to route applications based on the age of the disabled person, the type or disability (physical, psychological, psychiatric) and the living arrangement of the person. An alert informing the MRT member or unit of the newly assigned case appear on the MRT member's or unit's landing page. By virtue of their role within the IE-BM Solution, the MRT member will be granted access to the Applicant's or Client's case and begin the review of available documentation as it pertains to the reported disability. If you recall, Applicants have the option and ability to provide documentation by attaching files to their case at the time of application or during the life of their case by accessing their Client Portal or providing documentation directly to the Worker or MRT member assigned to their case. [**FR10.2, FR10.3, FR10.7]**

A review of available medical information concerning a claimed disability may reveal the need for additional information or more recent medical information. We understand that the Medical

Review Team will need to work closely with the Applicant's Medical Provider to collaborate and review applicable medical documents to establish the disability condition. The IE-BM Solution establishes a process that encourages collaboration between MRT members and the Applicant's Medical Provider(s) ***and supports the ability for the Medical Reviewer to electronically generate and issue requests for medical records to Providers*** in order to obtain this information.

After confirming that the Applicant has completed the forms granting permission for their Medical Provider(s) to collaborate with the Agency, the MRT member can initiate request to obtain the needed medical information. This may involve multiple requests involving multiple Providers. The IE-BM Solution will support this process. The MRT member will complete a DHS request form which will be electronically submitted to the Provider(s). Because this request is initiated from the case file and sent electronically, the IE-BM Solution will track activity associated with each request, posting updates to the case activity log. To do so, the Solution will note the date of the request and track the receipt of the medical report attachment, including tracking the return timeframe requested by the MRT and the program-specific application processing deadline. This process will apply to requests for information including follow-on requests for additional details and new requests for records based on information received from a Medical Provider. **[FR10.4, FR10.6]**

As requested information is received from the Applicant's medical Provider(s) the Solution will first notify the assigned MRT Physician, that the medical information requested is available, simultaneously notifying the Applicant of the same. The IE-BM Solution notifications will comply with the stated communications method chosen by the MRT member and Applicant. The Solution will also update the case file indicating activity and generate notification to the Applicant detailing the name of the medical Provider and receipt of the medical information. If the ***medical information is not received by the due date specified by the MRT, this information will also be relayed to the Applicant*** in their preferred communication method. Likewise, the Applicant will be notified if the physician provided insufficient information as record by the MRT Reviewer and, therefore, causing a delay in the eligibility decision or denial of the application due to a lack of medical evidence. Notification of this communication to the Applicant is relayed to the MRT Physician as well. Constant communication with the Applicant keeps them informed and also provides the option of contacting their Medical Provider(s) for the requested information that has not been received within a specified timeframe. Authorized users can access communications sent to the Applicant. For example, the MRT has visibility into the notices sent to the Applicant informing them that medical information has or has not been received as requested. **[FR10.5, FR10.11, FR10.12, FR10.13, FR10.15, FR10.16]**

Once the requested information is submitted by the provider and received by the IE-BM Solution, a system generated notification is sent to the assigned MRT Physician and the Client. The assigned MRT Physician will review medical information received and update the case file. At this point, the medical data can be assessed and a decision approving or denying the Applicant's disability status as defined by the policy can be rendered. The MRT Physician can also issue a denial based on the Provider's failure to fulfill a request for medical documentation or the Provider's failure to provide adequate information needed to render a decision. The basis for this decision can be recorded in the form of case notes. **[FR10.8, FR10.14]**

Supervisory Review

The IE-BM Solution will notify MRT Supervisors that a decision has been issued. The case will be routed to the Supervisor for review and confirmation of the decision. Our proposed Solution will display if medical information has been received so that Supervisors can confirm that the required information is present and the proper details have been documented to support the

MRT Physician's decision. The Supervisor will indicate agreement with the MRT Physician's decision in the case file. Once documented, the IE-BM Solution will ***automatically generate notification to*** the Applicant, the Applicant's authorized representative, and other parties specified by the Applicant or the State detailing the results of the disability determination. If the Supervisor is not in agreement with the MRT Physician's decision the workflow can return the case to the MRT Physician for further review with the Supervisor's point of view stated within the file. This process encourages a more robust review and discussion between the Supervisor, the Physician, and possibly the Medical Provider(s), and Applicant. **[FR10.9, FR10.10]**

The Solution maintains a robust history of activity, including communications that occur throughout the process. MRT staff and those authorized to review sensitive medical information have the ability to access the case and details related to the disability decision as well as audit and assess the process in place.

The integration of the Medical Review Process supports the Agency's goal of a single source of information and the automation, to the extent possible, of eligibility-related tasks and processes. The MRT renders the decision which is then used by the Eligibility Worker and the IE-BM Solution to move forward and complete the application process by determining the Applicant's eligibility for requested programs.

1.12 Approach to Overpayment, Audits and Appeals

The Vendor should ensure that the responses to this section are in alignment with the requirements set forth in Template T-6 – Functional Requirements Traceability Matrix, Tab FR11 – Overpayment, Audits and Appeals.

1.12.1 Overpayments

Significant System capabilities in this area include:

- Generating an alert for the Overpayments Staff that a potential overpayment has been calculated
- Sending and receiving overpayment and recoupment information from the OASIS system
- Providing the ability to stop payment of benefits of the Clients who have not responded to the Demand Letter
- Notifying the Client of ongoing recoupments and established overpayments at all case action

Instructions: The Vendor should describe its approach to addressing Overpayments requirements.

We understand the importance of accuracy and integration when it comes to managing financial transactions on complex systems such as the IE-BM Solution. A key component of our proposed Solution is its out-of-the-box functionality to manage various types of financial cases and processes and the fact that it is designed to integrate with external financial solutions such as General Ledger, payment issuance, and billing processes.

By leveraging these features we can quickly deliver key State requirements such as:

- Overpayment Calculation

- Deductions Processing
- Integration with OASIS
- Suspension of Benefits
- Notices and Communications

These features allow us to deliver automatic calculation of overpayments when redetermination of eligibility occurs, integrated with workflows, notifications, and correspondence necessary to inform Workers and Clients of its impact.

Overpayment Calculations

Not only does the IE-BM Solution calculate payments for outgoing benefit cases, but it creates and manages liability cases where payments or recovery to DHS are required.

As discussed in T-7 Section 1.7 Approach to Eligibility Determination/Spend-Down, our proposed Solution's eligibility and entitlement functionality operates in conjunction with the integrated rules infrastructure to determine program and service eligibility and entitlement based on the relevant program rules and payment rates. When evidence associated with these determinations changes, the system automatically redetermines the eligibility and the case decisions. A history of decisions is available on our IE-BM Solution, so that the Worker can view the original and new amounts associated with the decisions.

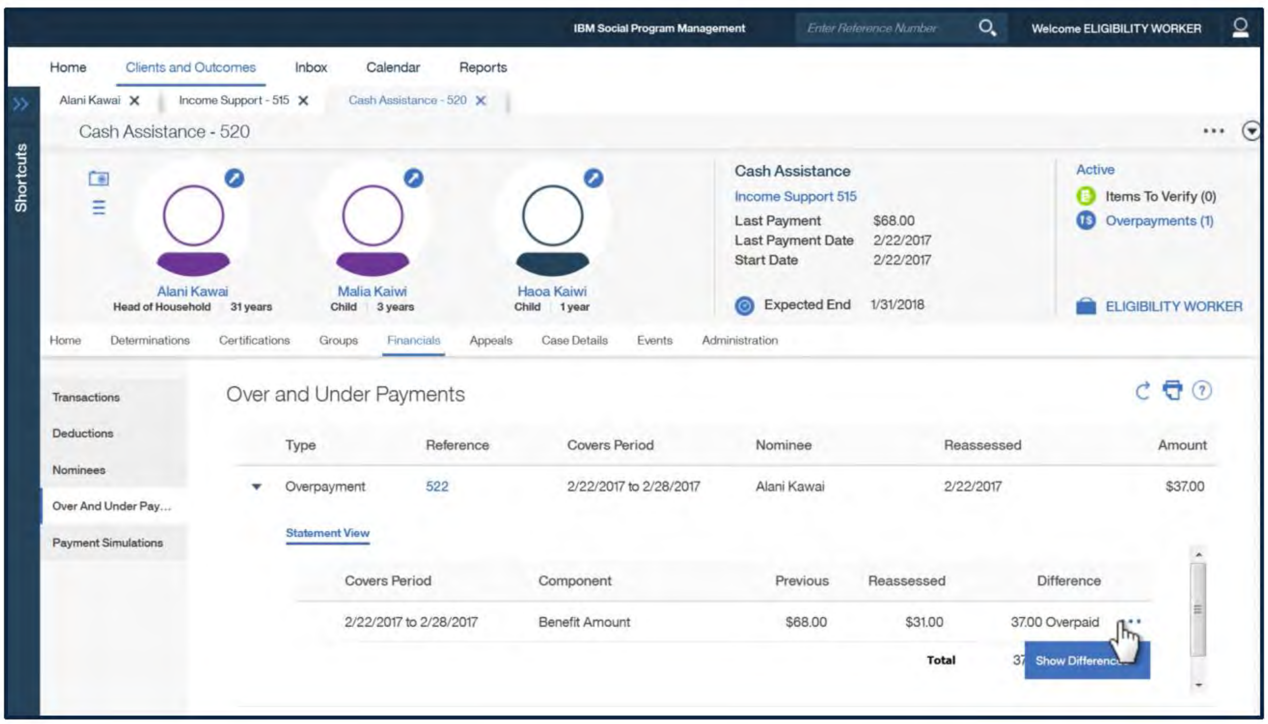


Figure 56: The IE-BM Solution will determine overpayments and associate them to an outgoing benefit case.

The new determination and payments that should have been issued are compared against those payments that were previously issued to identify resulting underpayments or overpayments. The Solution will auto-generate a communication informing them that based on a redetermination of eligibility and recalculation of benefits, an overpayment was discovered. The communication will detail old and new calculations; for example, original benefit amount and the net benefit amount resulting from the overpayment. A communication will also be sent concerning the discovery, the total amount of the overpayment or over issuance, the recovery or recoupment amount, and the recoupment or recovery period. Underpayments will be issued in accordance with the payment issuance configurations, but overpayments have unique configuration features which will allow DHS to specify whether the overpayment should be recouped as a deduction against outgoing benefits or managed as a separate liability which is collected by billing the payor. **[FR11.5]**

In addition to benefit management, our IE-BM Solution provides financial management of liabilities as part of the underlying financial capabilities. This allows our IE-BM Solution the flexibility to collect deductions against outgoing benefits and then to continue the collection as direct billing, should the benefit case close.

Our financial management of liabilities also allows our proposed Solution to identify existing overpayment liability cases for Clients who re-apply for benefits. The IBM team will work with you to identify the appropriate method for communicating these occurrences to the necessary Workers, such as ***generating an alert for the Overpayments Staff that a potential overpayment has been calculated***. Whether through raising an issue on the impacted application for Intake Workers, or generating tasks to Workers to review and establish deductions, or providing reports for fiscal tracking, the IE-BM Solution will help DHS facilitate recovery in these situations. As applicants reapply, outstanding liabilities linked to them will be addressed as eligibility is determined. For example, if a SNAP benefits were over issued and the client's case is closed, the over issuance balance will be applied to new benefits and deducted until the over issuance is paid in full. The Applicant's notification of SNAP eligibility will reflect this detail. **[FR11.1, FR11.4]**

SECTION HIGHLIGHT

IBM has successfully developed a process for overpayments in the State of North Carolina. OOTB redeterminations processing was configured to issue tasks to the Workers when overpayments occur. These tasks instruct the Worker to review the case circumstances and, when necessary, use the OOTB referral processing to notify EPICS, their fraud and recovery unit. By doing so, we were able to help NC streamline the process for notifying the fraud and recovery unit in the case of an overpayment.

Recouping Funds with Deductions

Our IE-BM Solution will utilize IBM Cúram deduction capabilities, such that an overpayment liability be deducted from outgoing payments where program requirements allow. Deductions are set up as part of case administration and a complete history of deductions, active and inactive, is maintained at the case level for viewing by authorized users.

Deductions can be prioritized in order of importance based on the State's criteria. For example, it may be more important to process a deduction that is used to pay housing costs than a deduction that is used to repay a liability owed to the Agency.

For applied deductions, the amount is deducted from the benefit and applied toward the Client's outstanding liability. For example, $10 of a person's weekly benefits can be applied toward paying off an overpayment that was previously issued to him or her.

For un-applied deductions, the amount is also deducted from the benefit but is not applied to a liability. Un-applied deductions are used to recoup monies previously paid out by the State. For example, if a person was previously issued money out of an emergency fund, deductions could be made from the person's benefit payments as a means of recouping the money for DHS.

Third-party deductions allow a portion of a person's benefit to be directed toward taxes, bills, charges, or debts owed to a third party. Third party payments are made to other participants registered on the system. For example, a Client can use a portion of a benefit to pay their utility provider, who is registered on the IE-BM Solution.

Interface with OASIS

Our IE-BM Solution will leverage and extend the Cúram Financials Management features ***to send and receive overpayment and recoupment information to and from the OASIS system***. Our proposed Solution will generate transactions to the OASIS system when potential overpayments are identified including information such as the date, the amount, the Client, and the program. It will then receive the confirmed overpayment transactions and collection method information from OASIS and use it to update the previously generated liability cases on our IE-BM Solution with the adjusted amount. The final overpayment amount will also be passed to the EBT vendor through the EBT interface. As payments against the liability are recouped, related transactions will be passed to the OASIS system with the required recoupment details. **[FR11.2, FR11.8]**

Suspension of Benefits

Our IE-BM Solution provides the benefit of managing both outgoing benefits and liability collections within the same case for a Client. This allows workflow to automatically suspend the case or outgoing payments when Overpayments Staff document that Clients have not responded to Demand Letters within the required timeframe. Our proposed Solution offers the capability to suspend the Client's benefit case or hold outgoing payments until such time as the Client responds. We will work with the State to configure this stop payment to meet State specific requirements to ***provide the ability to stop payment of benefits of the Clients who have not responded to the Demand Letter***. **[FR11.3]**

Notifications and Communications

The Solution's financial management component operates directly with case management to generate the required financials and trigger workflows required to issue notifications, including those to Workers and Clients. Instead of generating a payment and paystub, bills and notifications can be generated to inform the payor of the payment obligation in accordance with the specified delivery and billing patterns and taking into account the Client's preferred method of communication. **[FR11.1, FR11.7]**

Leveraging these features, our team will work with DHS to configure the correspondence and notifications necessary to ***notify the Client of ongoing recoupments and established overpayments at case actions*** required to keep them informed of ongoing recoupments and payment plans. For example, when benefits, associated with a recoupment, have expired or are about to expire before the recoupment is satisfied, our IE-BM Solution will generate configured notifications to Clients to inform them of their need to establish an ongoing payment plan. **[FR11.6, FR11.7]**

1.12.2 Conduct Audit/Review

Significant System capabilities in this area include:

- Providing the ability for the Quality Control Supervisor to develop and edit the Quality Control Sampling Plan
- Providing the ability for the Quality Control Supervisor to select one or more cases and assign them to a Quality Control Reviewer for audit/review
- Allowing the Quality Control Reviewer to review actions taken by Eligibility Workers in the sample month
- Allowing the Quality Control Reviewer to conduct the audit/review interview following the established questionnaire in the System and to record the results
- Providing a comparison of the information provided during the QC interview and/or verification activities with the information contained in the Client's electronic case file
- Providing the ability to recalculate the Client's eligibility based on the QC audit/review information
- Providing a Findings Report if the Quality Control Reviewer determines an error was made when eligibility and benefit amount was determined
- Allowing the Quality Control Reviewer to record the Findings Report as complete with no finding If no finding is identified
- Allowing the Eligibility Worker to create the recommended Corrective Action specifically addressing each error in the finding report
- Tracking all Corrective Action plans

Instructions: The Vendor should describe its approach to addressing Conduct Audit/Review requirements.

Our IE-BM Solution leverages the case audit capabilities of the IBM Cúram Social Program Management Platform to support audit and review features that will assess the success of programs carried out by Quality Control Reviewers and other employees

The IE-BM Solution provides case audit functionality to enable monitoring and quality assurance activities to be carried out as part of case processing and program delivery, including the ability to:

- Create a Quality Control Sampling Plan specifying the scheduling details, the purpose of the audit/review, and the selection criteria to use in generating a sample list of cases for quality control review purposes.
- Manage a Quality Control Sampling Plan including the functionality to assign selected cases to Quality Control Reviewers and document summary findings for the overall plan.
- Manage individual quality control reviews as part of a Quality Control Sampling Plan, including the documentation of findings for specific focus areas and a summary finding and the ability for designated individuals such as case owners and Supervisors to provide feedback on the quality control review.

- Search for existing Quality Control Sampling Plans and Reviews and view a list of assigned plans and reviews.

Quality Control Review Life Cycle

The IE-BM Solution provides an entire lifecycle of business processes around audits and reviews. In general, the quality control process includes the following life cycle steps:

- **Create Plan:** The Quality Control Supervisor creates a Quality Control Sampling Plan to define the expected scope, goals, and conduct of the review. The Quality Control Sampling Plan is then given a schedule and the set of potential Reviewers are assigned to the plan.
- **Produce Case Sample List:** A list of cases to be audited or reviewed can be generated randomly, or they can be selected manually.
- **Assign Reviewers:** Once a list of cases has been added to the plan, Reviewers are assigned to each individual case for audit or review.
- **Record Audit Findings:** Reviewers document their findings against the focus areas (i.e. aspects of a case to closely examine, such as benefit accuracy or verifications completion) as detailed in the Quality Control Sampling Plan.
- **Record Summary Findings and Recommendations:** Once the cases associated with the Quality Control Sampling Plan have been audited or reviewed and feedback has been provided, the Quality Control Supervisor reviews the documentation and produces summary findings detailing recommendations and action items.

As detailed in this section, we will leverage these features to deliver the State’s requirements around five (5) areas:

- Quality Control Roles
- Quality Control Sampling
- Quality Control Reviews
- Audit and Finding Reviews
- Corrective Action Plans

Quality Control Roles

Our IE-BM Solution leverages out-of-the-box Cúram features which allow for the configuration of secure user roles with defined business capabilities and user experiences. To meet quality control requirements, our IE-BM Solution will configure user roles to meet The State’s specific needs for Quality Control Administrators, Quality Control Supervisors, Quality Control Reviewers, and Federal Oversight Officers with appropriate online or electronic access to the audit or review features, files, and reports. Where required, roles will support Quality Control Reviewers who are third-parties, rather than State Workers. **[FR 11.34, FR11.44]**

Our proposed Solution provides pre-defined roles and functions which we will leverage to deliver the features required by your Quality Control Workers. In the IE-BM Solution, a **Quality Control (CQ) Supervisor** is responsible for the management and maintenance of the quality control sampling plans that are implemented. They CQ Supervisor also has the ability to contribute to the individual audit or review of cases. A QC Supervisor creates a Quality Control Sampling Plan which includes the purpose of the audit or review, the main focus areas, and the schedule. The QC Supervisor also produces a list of cases to be audited or reviewed, assigns the cases for audit or review, and provides summary findings for the plan as a whole. This role will form the basis for the Quality Control Administrator and the Quality Control Supervisor, each configured to meet the unique needs and differences for the two (2) roles. For example, while the Quality Control Supervisors oversee the individual Quality Control Sampling Plans, the Quality Control Administrator will have features to track the number of cases that have been audited or reviewed and the status of outstanding audits or reviews against the targeted number of cases to be reviewed in a year. The Quality Control Supervisor will also have capabilities specific to assigning and managing the work of Quality Control Reviewers. **[FR11.40]**

In our proposed Solution, a Quality Control Reviewer is responsible for examining and evaluating particular case records to which they have been assigned. They are responsible for providing summary findings on their individual case audits or reviews and examining feedback received from Workers and Supervisors. Quality Control Reviews can view case information for cases to which they have been assigned.

SECTION HIGHLIGHT

By leveraging your investment in Cúram, the IE-BM Solution will support quick and easy implementation of program, policy, and process changes in a single system.

Quality Control Sampling

Our IE-BM Solution builds upon abilities in Cúram to support two primary types of case audits; namely, quantitative and qualitative audits.

- A **quantitative audit** in Cúram is an audit that measures compliance with statutes and policy, and is based on available case data. For example, an audit may be conducted for the purpose of a compliance review to confirm that a household is receiving the correct allotment of benefits.
- A **qualitative audit** in Cúram is an audit that assesses case outcomes and is based on an auditor's assessment of case information. It can include interviews with clients and other parties involved in a case. This type of case audit is more adaptable and the focus of the audit will depend on what has emerged from a quantitative audit. It is also a way of measuring Worker performance. For example, a Quality Control Review audit may be conducted by an agency to evaluate the effectiveness of delivery of a specific benefit program, focusing on a review of the timeliness of actions and verifications completed.

Some Quality Control Reviews contain a combination of both quantitative and qualitative elements.

Our IE-BM Solution will provide the Quality Control Supervisors with the ability use a variety of tools to select cases for audit or review within Quality Control Plans.

- A <u>selection query</u> is used to generate a random sample of cases to be audited. Two types of selection query may be used. A dynamic query offers flexibility by allowing the QC Supervisor to enter selection criteria such as case status and a case start date range, which is then used to produce a list of cases. A fixed query provides a predefined set of selection criteria.
- An <u>audit algorithm</u> is the method or function run by the system in order to generate a random sample of cases based on the selection criteria specified by the user. A sample

algorithm has been provided which uses a starting point and an interval to determine the list of cases to be included in the Quality Control Sampling Plan. An organization may also define their own algorithms to be used for the audit or review of different types of cases as necessary.

- In addition to queries and algorithms, our IE-BM Solution will **allow the Quality Control Supervisor to <u>manually select</u> one or more cases and assign them to a Quality Control Reviewer for audit or review**. **[FR11.9]**

These tools ***provide the ability for the Quality Control Supervisor to develop and edit the Quality Control Sampling Plan***. They will allow Quality Control Supervisors to select a wide variety of cases from across programs (e.g. MAGI, Non-MAGI, SNAP, TANF/TEA), eligibility determinations and other characteristics for review within a Quality Control Plan and multiple plans can exist at once. Parties outside the authorized Quality Control team, such as other DHS/DWS staff, will not be able to identify which cases had been selected for review. **[FR11.33, FR11.37, FR11.38]**

In addition to selecting the cases which will comprise the Sampling Plan, the Quality Control Supervisor will define the focus areas of the review. Focus areas are the aspects or specific areas of a case that are to be examined by a reviewer when carrying out an audit or review, as specified and configured within the administration application. For example, the Quality Control Reviewer can be given access to case actions and review the actions taken by Eligibility Workers on cases selected in the sample month. **[FR11.11, FR11.36]**

The Quality Control Supervisor may then select as many of these focus areas as are appropriate for the specific audit or review being conducted when creating the Quality Control Plan. When completing a case audit or review and evaluating a particular case, a reviewer must then address the focus areas selected. The figure below provides a glimpse of the details of audit focus areas.

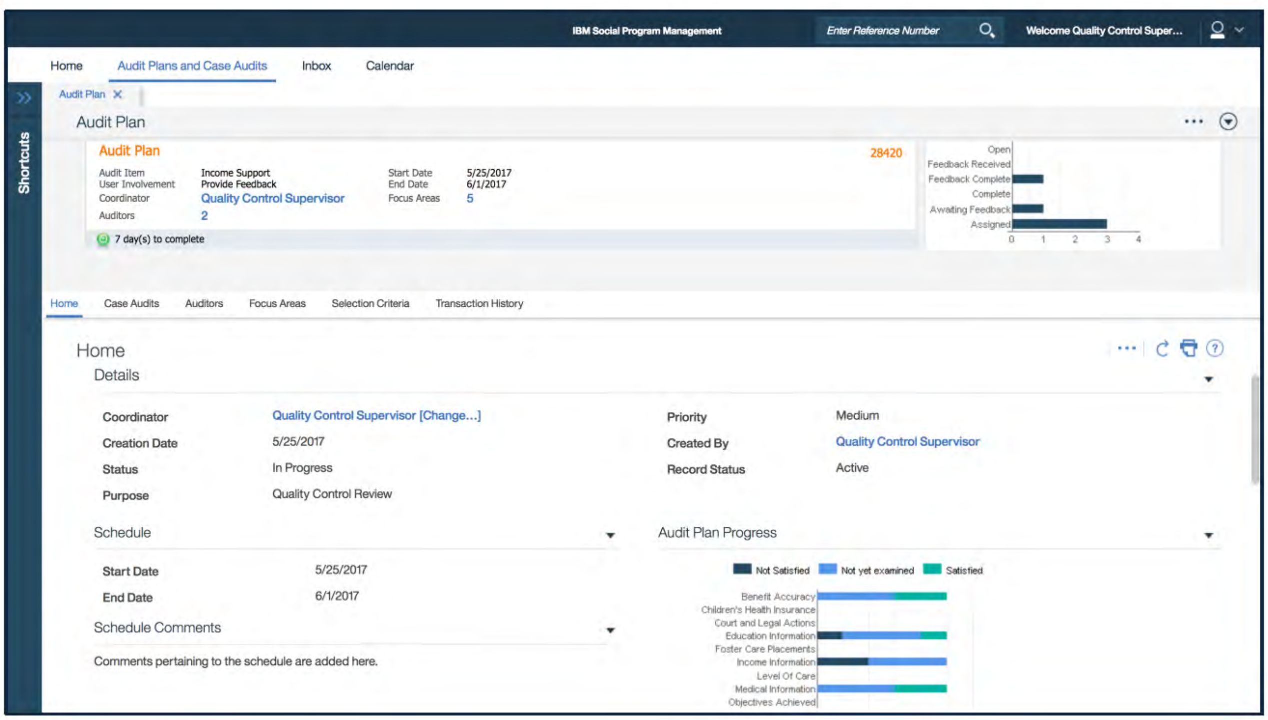


Figure 57: The IE-BM Solution's Audit Plans and Case Audits view displays audit details and progress timers.

Quality Control Reviews

Once the Quality Control Supervisor finalizes and activates the plan, our proposed Solution will trigger the appropriate work tasks and alerts to the assigned Quality Control Reviewers. From their landing pages, the Quality Control Reviewers can see and access the tasks and cases that have been assigned to them for review. These out-of-the-box workflows will be further extended to meet DHS specific requirements, such as generating appointment request notices to Clients when a Quality Control Interview is required based on business rules, and alert Eligibility Workers if Clients fail to respond to the interview appointment. **[FR11.10, FR11.12, FR11.14]**

The Quality Control Reviewer will have access to the entire case record as permitted by their security access, including historical actions taken against a case to which they have been assigned. This also includes the documents and notices sent to clients and associated to the client and case records, including the source documents in accordance with Federal guidelines. Thus our IE-BM Solution ***allows the Quality Control Reviewer to review actions taken by Eligibility Workers in the sample month***. **[FR11.32, FR11.42, FR11.43]**

Quality Control Interviews

Where client interviews are required as part of the Quality Control Review process, our IE-BM Solution will provide the QC Reviewer with tools to facilitate the interview process. Similar to the tools leveraged to facilitate Eligibility Worker interviews, Quality Control Reviewers will be provided with established questionnaires to follow and capture interview results and validations; thus, ***allowing the Quality Control Reviewer to conduct the audit or review interview following the established questionnaire in the System and to record the results.*** These questionnaires will be built using the Cúram Intelligent Evidence Gathering (IEG) features and will be defined for each program and review type. Interview and validation activities will be captured on a worksheet and features will also be extended to ***provide a comparison of the information provided during the QC interview and/or verification activities with the information contained in the Client's electronic case file***. **[FR11.13, FR11.15, FR11.16]**

Leveraging the robust management of evidence used in determinations within Cúram, our IE-BM system will store data captured from the interview questionnaires or worksheets and verifications as new evidence, maintaining the original information for historical purposes in keeping with State and Federal policies. When this updated evidence is activated on the client's record, the system will ***recalculate the client's eligibility based on the QC audit or review information*** in keeping with program policy rules. **[FR11.17, FR11.18]**

Quality Control Findings

The Quality Control Reviewer must address each focus area that is part of the case audit or review. Initially focus areas are 'not yet examined'. As one authorized to access and edit the Quality Review case, the Quality Control Reviewer documents findings in each focus area under examination indicating whether the focus area has been satisfied. Thus, our proposed Solution provides capabilities for reviewers to capture their findings – positive or negative – associated with the focus areas they are tasked with reviewing on their assigned cases. The reviewer will be able to document narrative of the case review to the case file, both if there were satisfactory or unsatisfactory findings. This allows the reviewer to record findings whether they identify an error in the eligibility and benefit amount determination or if no error was found. **[FR11.19, FR11.20, FR11.29]**

Additionally, attachments may be added to each focus area to supplement the findings entered. A Quality Control Reviewer iterates through this process for the focus areas in the quality control review until complete.

As previously stated, the Quality Control Reviewer can review and add findings to the case audit or review. The IE-BM Solution will further extend these finding capabilities to allow for the capture of error types for use in analyzing Quality Control findings and to enable continuous improvements. Findings are used by the reviewer to record a summary of the overall assessment of a review of the case. Once findings are entered, the reviewer will then indicate that the review is complete. ***It will allow the Quality Control Reviewer to record the Findings Report as complete with no finding, if no finding is identified.*** Our IE-BM Solution will further extend the findings capabilities to ***provide a Findings report if the Quality Control Reviewer determines an error was made when eligibility and benefit amount was determined***. The figure below shows a page listing audits based on applied filters. **[FR11.45]**

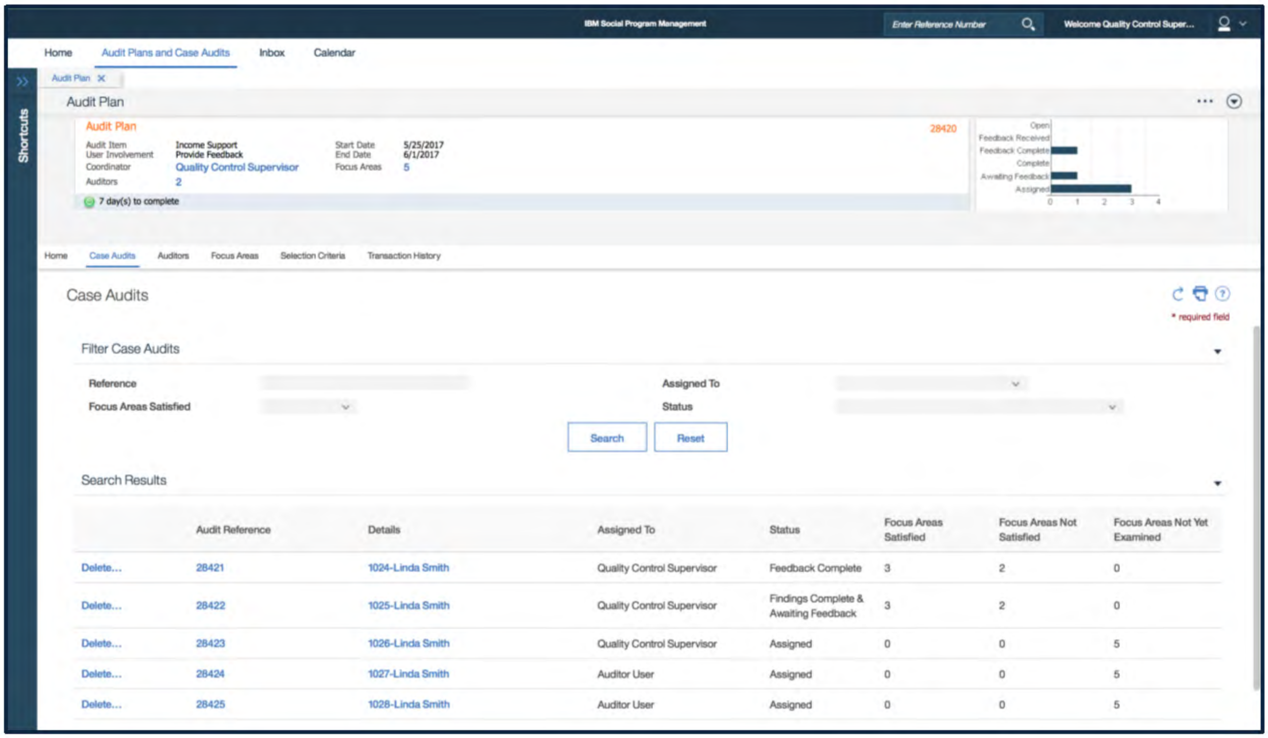


Figure 58: The Case Audit page provides a detailed ist of audits based on search criteria entered.

Plan Progress Monitoring

The Quality Control Supervisor and Administrator are provided with views from which to monitor the progress of the reviewers in completing their Quality Control Plan assignments. This includes dashboards providing plan and audit summaries. These features will be leveraged to provide the ability to track the status of the audit or review and can be extended to provide the tracking detail required by The State (e.g., progress made between the time a case is selected to be audit or reviewed and the time the audit or review is closed). **[FR11.39]**

When each case audit or review is completed by a QC Reviewer, a notification is sent to the Quality Control Supervisor. This notification can be used to quickly navigate to the case audit or review that was completed in order to view the findings of the review and feedback provided by the Eligibility Worker and Supervisor. When case audits or reviews are complete, a further notification is sent to the Quality Control Supervisor that can be used to navigate to the Quality Control Sampling Plan; the Quality Control Supervisor can then enter summary findings. Notifications will meet The State specific requirements and once summary findings have been added, and case audits or reviews within the plan are complete, then the Quality Control Supervisor will indicate that the plan is complete. The figure below presents a sample view of an Audit Coordinator's Landing Page, including dashboards of the Audit Unit's activities. **[FR11.21]**

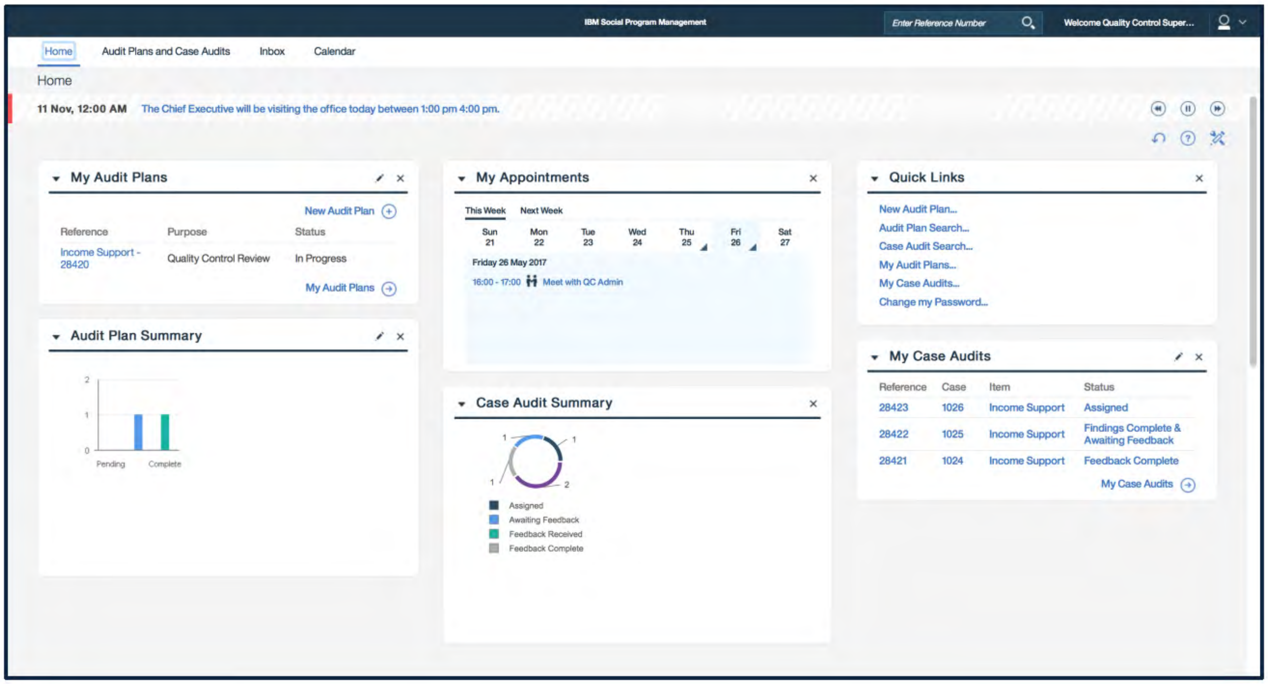


Figure 59: The IE-BM Solution provides Audit Coordinators a landing page, which includes a dashboard of unit activity.

Audit and Finding Reviews

Once the Reviewer issues their findings and, where policy requires, our IE-BM Solution will alert the Quality Control Supervisor that the findings require review. The Quality Control Supervisor will have the opportunity to confirm or rebut the findings of the Reviewer. When creating a Quality Control Sampling Plan, the level of involvement of the relevant Worker and Supervisor of each case that will be part of the plan must be specified. User involvement indicates what the case owner and Supervisor can view in relation to a case audit or review. The out-of-the-box options in Cúram include:

- *Provide Feedback* - The Worker and Supervisor will be notified when the audit or review is complete and that feedback is required. They will be allowed to view the findings and enter feedback.
- *Provide Feedback When Focus Area Not Satisfied* - The Worker and Supervisor will be alerted that feedback is required when the audit or review is complete and focus areas have not been satisfied. The information relayed includes the findings documented by the Quality Control Reviewer. The Worker and Supervisor can view the findings and provide feedback on the focus areas, not just those that have not been satisfied.
- *View Findings Only* - The Worker and Supervisor will be notified when the audit or review is complete, and will be allowed to view the findings. They will not be allowed to provide feedback.
- *No Access to Audit Information* - The Worker and Supervisor will not be able to view the findings or provide feedback. **[FR11.22]**

Where Eligibility Workers and Supervisors are permitted to view findings, security will restrict access Quality Control notes to members of the Quality Control organization. If during the audit or review the QC Reviewer obtains additional information and documentation that is used to determine review results, the QC Reviewer can forward that documentation to the QC Supervisor. **[FR11.33]**

Our IE-BM Solution will also extend the Cúram audit capabilities to allow a finding that removes or drops a case from the audit or review. Such as in the case when a selected case is already under investigation. **[FR11.41]**

Federal Oversight

We will also provide features to support the review and feedback of audits or reviews by Federal Oversight Officers. This will include configuring rules-based workflow to trigger reviews when required by policy, to add the audit or review to the file sent to the Federal Oversight Officer, and to notify Quality Control Supervisors of submitted feedback received from the officer, including whether errors were identified. **[FR 11.30, FR11.31, FR11.34, FR11.35]**

Corrective Action Plans

Our IE-BM Solution will leverage and extend Cúram audit capabilities, such that where the finding identified an error and the Quality Control Supervisor confirms and accepts the finding, the system will notify the appropriate DHS or DWS staff and enable features for ***Eligibility Workers to create Corrective Action Plan actions specifically addressing each error in the Finding Report,*** thus allowing them to define Corrective Action Plan actions specifying how they will address the error(s). **[FR11.23, FR11.24]**

Our IE-BM Solution will use Cúram workflows to configure the review and approval of Corrective Action Plans by authorized approvers based on business rules. The Solution will trigger notifications to the Overpayments Staff when corrective actions include findings indicating potential overpayments. In addition to workflows and tasks, plans and their corresponding actions will have statuses allowing for the ***tracking of Corrective Action plans***. **[FR11.25, FR11.26]**

Our proposed Solution will track the time taken to implement the tasks on the Corrective Action Plan and allow DHS/DWS staff with access to monitor ongoing process to completion. **[FR11.27, FR11.28]**

By using Cúram case audit functionality, our IE-BM Solution will provide Federal Oversight Officers and Quality Control staff with the functionality needed to:

- Create Quality Control Sampling Plans, based on numerous sampling options
- Conduct Quality Control Reviews, including options for Worker and Supervisor to provide feedback if desired,
- Manage overall Quality Control program, including tracking the number of cases audited or reviewed and comparing to the established targets.

1.12.3 Appeal Tracking

Significant System capabilities in this area include:

- Allowing authorized users to record that an appeal has been filed

- Providing checklists to the DHS Staff of the information/documentation to be gathered and provided to the Office of Appeals
- Providing the authorized DHS Staff all information/documents relevant to the appeal (based on the checklist available in the System) in order to defend the Appeal
- Allowing authorized DHS Staff to enter the ruling into the System and identifying where action is required
- Tracking all actions specified in the decision until completed

Instructions: The Vendor should describe its approach to addressing Appeal Tracking requirements.

Our IE-BM Solution leverages the robust support for legal actions, appeals, and fair hearing processes, provided by the IBM Cúram Social Program Management (SPM) Framework and Appeals module. IBM Cúram Appeals enables agencies to rapidly deploy a modern, functionally-rich application to manage the administration and resolution of appeals, as well as legal actions that may arise. It provides support for decision-making activities associated with multiple levels of internal and external appeals including hearings, hearing reviews, and judicial reviews. It also supports the tracking and management of appellants, witnesses, representatives, interpreters, and other participants involved in the appeals process, along with the correspondence and workflow required to support the processes involved. Using Cúram Appeals, we can deploy a flexible solution that supports the levels and types of appeal stages that are required by your appeals business process.

In this section, we will discuss how our IE-BM Solution supports a full appeals lifecycle and will leverage Cúram capabilities to deliver:

- Appeals Initiation
- Appeals Management
- Disposition
- Appeals Reporting

IBM Cúram Appeals operates seamlessly with many other components of the Solution that support generic appeals and legal actions requirements such as work allocation and work scheduling, notice generation, and evidence management. These components include case management, participant management, workflow, correspondence, and calendaring.

Key benefits delivered by our IE-BM Solution's approach to appeals include:

- Provides pre-built business processes for handling appeals and legal actions processes, in tandem with the Cúram-based case management system that has been proposed for our IE-BM Solution.
- Offers flexibility to enable agencies to configure their appeals management system based on their appeal process and levels of appeal.
- Built in workflow capabilities facilitate the efficient routing of information and work to agency staff involved in appeals and legal actions processes.
- Automated communications management, including dynamic document generation, informs appeal stakeholders of the progress of the appeal or legal action.

Appeals Lifecycle

In the IE-BM Solution, an appeal is, effectively, a request for a review of one or more decisions on a program or service delivery, assessment delivery, case issue, or a prior appeal case – whether generated by automated eligibility determination or by user or manual action. Cúram Appeals supports the appeals life-cycle including the common business processes and industry recognized practices for appeals, which typically consist of the following steps:

- Appellant requests appeal
- Appeal case is created
- Hearing is scheduled for appeal case
- Hearing is held and completed
- Decision is rendered for appeal case
- Decision is implemented or further appealed and moved to next appeals level
- Case is re-assessed (this may be automatic or may be requested on demand)

Our team will work with the State to tailor the Cúram Appeals lifecycle to support your specific requirements. Leveraging these pre-built features will expedite the time to implement appeals functionality within our IE-BM Solution.

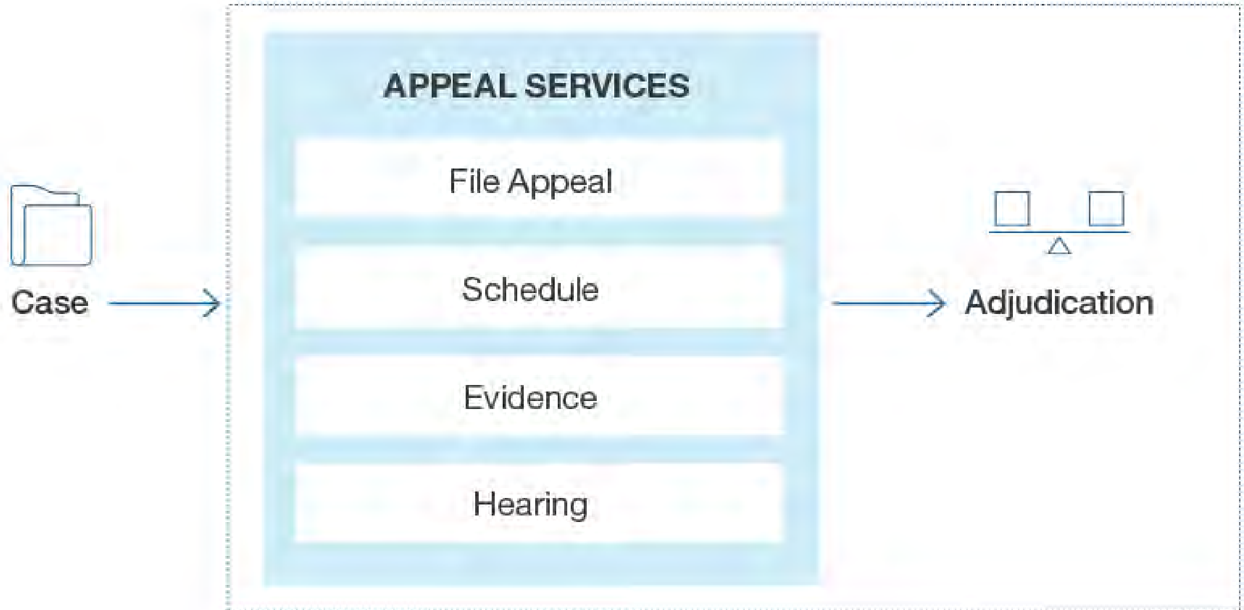


Figure 60: We will leverage the pre-built features of Cúram Appeals to expediate the time to time to implement your requirements..

Appeals Initiation

On receiving a notification of a request for an appeal from Appeals Staff, our proposed Solution allows authorized users to register an appeal case, which is automatically linked to the case being appealed against (also known as a lead case). Where actions are being appealed that are not linked to decisions on our system, stand-alone appeal cases will be utilized.

The IBM Cúram product underlying our IE-BM Solution provides a variety of data captured about appeals, such as information about the participants, items under appeal, contact information, hearings, tasks, related documents, user roles, and status. Our team will work with your staff to define the information recorded as part of the appeal request to meet the specified requirements, leveraging the out-of-the-box Cúram pre-defined data and ***allowing authorized users to record that an appeal has been filed***. The figure below, The Appeal Hearing Home Page, provides the Appeals staff with details including the decision under appeal and assigned Hearing Official. **[FR11.46]**

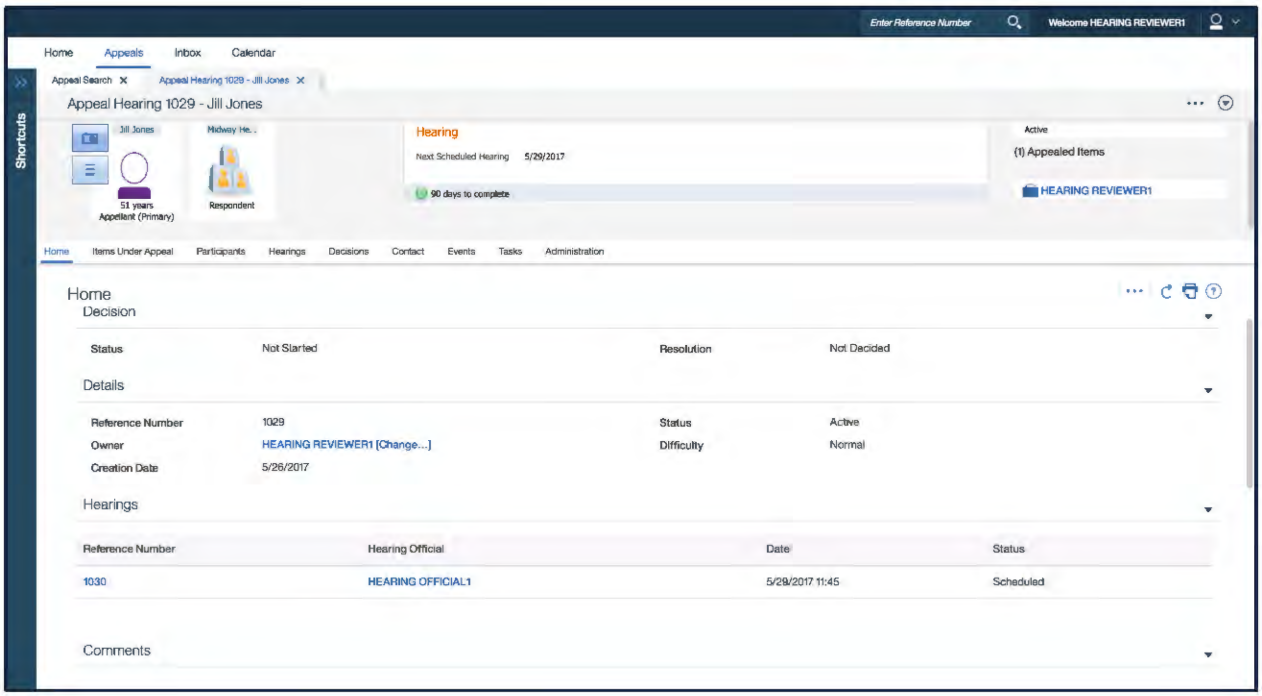


Figure 61: Appeal Hearing Home Page displaying appeal details

Based on the type of appeal and the program involved, our IE-BM Solution will ***provide a checklist to the authorized DHS staff of the information to be gathered and provided to the Office of Appeals***. The DHS staff members will have the appropriate secure access to gather the required information within the case or Client records on our proposed Solution, thus ***providing the authorized DHS Staff the information relevant to the appeal (based on the checklist available in the System) in order to defend the Appeal***. **[FR11.48, FR11.57]**

Appeals Management

Three appeals case types are configured out-of-the-box in Cúram, namely:

- Hearing Case – sometimes called a 'request for fair hearing', it provides appellants with the opportunity to challenge a decision made by the agency and to present their own evidence and arguments. This is usually conducted by the agency with a hearing official who typically has no involvement in in the original case decisions.
- Hearing Review – a second level appeal, used to review the decision of a hearing case.

- Judicial Review – a third level of appeal conducted by a court to overturn a decision on a case or a prior appeal (such as those filed with State Court). Cúram Appeals provides the ability to track the judicial review case and record the final decision. **[FR11.47]**

Our team will work with DHS to configure the different hearing types and related workflows as necessary to meet your specified appeal requirements. These cases leverage the underlying security configurations associated with Cúram, allowing for Worker roles to limit access to appeals records only to those assigned to the Appeal and their Supervisor. **[FR11.56]**

Documentation

Various documents such as petitions, statements, transcriptions, rulings and the recorded hearing, among others, can be associated with the hearing case using the Cúram Attachment capabilities and will be retained within the State's document management system. **[FR11.49]**

Payment Continuance and Payment Suspension

During the Appeals process, the Solution will allow authorized users to decide if benefits should continue to be issued at the same rate as at the time the appeal case was created or to discontinue the issuance of benefits for the duration of the appeal. Our proposed Solution provides the capability to define and configure the rules associated with the suspension of payments.

Notices

Notices of hearings can automatically be generated for the parties of the appeal. In addition, a range of appeals correspondence can be automatically generated as part of configured workflows.

Scheduling

The IE-BM Solution also provides capabilities, such as scheduling of hearings, to support both the full lifecycle management of appeals and the referral and tracking of appeals sent to external entities for adjudication. Our IE-BM Solution will support the specified DHS process where appeals are referred outside of DHS for adjudication and tracked to resolution.

Disposition

After a hearing has been held, the Worker has many options available to track the status of the appeal. Preconfigured statuses track appeals as completed, continued, rescheduled, remanded, adjourned, or sent back to an adjudicator for reconsideration. These statuses can be further configured or extended to meet your specific needs. Role-based access will ***allow authorized DHS Staff to enter the ruling into the System and identify where action is required.*** Once Worker records the ruling and documents required actions identifying responsible parties, the Solution will send the appropriate notifications and tasks to the case owner, Eligibility Worker, or other relevant agency personnel to implement the decision(s) and to take appropriate actions. In this way, the system can track the eligibility action(s) specified in the decision to completion. Our team will configure these features to allow authorized DHS Staff to enter the ruling into the System and identify where action is required. Tasks and Workflows will allow for the ***tracking of actions specified in the decision until completed***. **[FR11.49, FR11.50, FR11.51, FR11.53, FR11.55**]

Reporting

As part of the definition of appeal attributes described above, our IE-BM team will work with you to define the tracking of attributes to allow for analysis of appeals by authorized users. These attributes will include analyzing appeals by program type, appeal status, appeal reasons, program office, and other attributes as defined by the State. **[FR11.54]**

The IE-BM Solution, through the integration of Appeals processing, Over and Under payment discovery and adjustments, and an Audit feature, take full advantage of available Applicant and Client application and case data, transactions performed, supporting documentation, and communications. The IE-BM Solution will track each process and provides access to critical information (data, documentation) allowing Appeals Staff, QC Staff, and Eligibility Workers to correct information, monitor plans, and confirm accurate and timely Client Benefits. Combined this functionality will help to improve accuracy and program integrity as well.

1.13 Approach to Appointment and Caseload Management

The Vendor should ensure that the responses to this section are in alignment with the requirements set forth in Template T-6 — Functional Requirements Traceability Matrix, Tab FR12 – Appointment and Caseload Management.

1.13.1 Appointments

Significant System capabilities in this area include:

- Allowing the Applicant/Client to schedule an appointment
- Providing a list of appropriate appointment types, appointment settings, and appointment times that are available to the Client
- Updating the availability of resources to reflect when an appointment has been scheduled
- Allowing the Client to reschedule an appointment

Instructions: The Vendor should describe its approach to addressing Appointments requirements.

Our proposed Solution provides fully integrated and extensive calendaring functionality that will support various business processes associated with cases, Clients, and providers. Features and benefits of the IE-BM Solution's integrated calendaring functionality include:

- Appointment request functionality captures pertinent information from the Client such as language needs or accessibility requirements which helps prepare Eligibility Workers in advance of Client appointments.
- Configured workflow will provide notifications and reminders in the Client's preferred communication method so meetings will be attended or re-scheduled in a timely fashion.
- Integration with Microsoft Outlook sends appointment scheduled in Cúram to the staff's Outlook calendars, which prevents staff from double-bookings and missed meetings. This option will be explained in greater detail in T-7 Section 1.13.3 Establishing Calendars.

Not only do internal users have calendaring capabilities, but external users will have access to calendar management functions that traditionally required them to contact and interact with DHS staff. By providing Clients the ability to request appointments and reschedule appointments at their convenience via their personal Client Portal, Clients can independently manage interactions with Department of Human Services (DHS) Staff without taking up the time of Workers to perform these actions.

The IE-BM Solution will provide internal Workers and administrators with the ability to manage a schedule of worker availability. Thus, Clients will have the ability to schedule and reschedule appointments from their Client Portal by selecting from a range of appointment types and times based on availability of DHS Staff. The graphic below provides a high-level view of the system capability areas as it pertains to supporting the client appointment process.

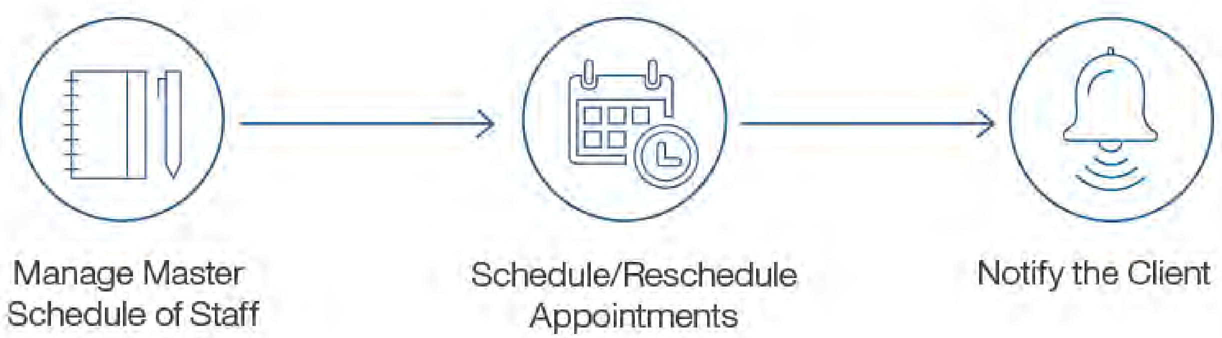


Figure 62: The IE=BM Soltion's integrated calendaring functionality allows Staff to effectively manage their workload.

Features and Benefits of the IE-BM Solution's integrated calendaring functionality:

- Calendaring functionality captures pertinent information from the Client such as language needs or accessibility requirements which helps prepare Eligibility Workers in advance of Client appointments.
- Configured workflow can provide notifications and reminders in the client's preferred communication method so meetings can be attended or re-scheduled in a timely fashion.
- Integration with Microsoft Outlook sends appointment scheduled in Cúram to the staff's Outlook calendars, which prevents staff from double-bookings and missed meetings. This option will be explained in greater detail in T-7 Section 1.13.3. Establishing Calendars

Manage Master Schedule of Staff

The IE-BM Solution will maintain a ***master schedule that is updated to accurately reflect the availability of staff resources***. For example, Eligibility Workers will determine days and times that they wish to make themselves available for Client appointments such as redetermination or review interviews. The master list will take into account staff schedules, including scheduled time away which may include sick time, vacations, jury duty, and training events. Time blocked for other work activities would also be reflected, so that Clients can only 'self-book' appointments during available periods. As staff are 'booked' or scheduled for an appointment or planned time away the master schedule is updated removing the staff person as an available option for other appointments during that period. The master staff schedule is also updated when an appointment is rescheduled – making the staff resource available for the date and time of the initial event and removing them from the list of available resources during the time of the newly or rescheduled event. **[FR12.7]**

Schedule and Reschedule Appointments

System administrators will be able to regulate and maintain a list of appointment types such as phone call or in-person and settings such as which types are available for which programs. Once a Client is logged into their Client Portal, the system will ***allow the Client to schedule an appointment.*** When the Client begins the task of scheduling an appointment, the system will ***provide a list of appropriate appointment types, appointment setting, and appointment times that are available to the client*** based on DHS approved business rules. The system does this according to the following process: **[FR12.2]**

1. When scheduling an appointment via their Client Portal, the Client will select the appointment type (phone call or in-person) from a pre-defined list and indicate special accommodations required such as a Worker fluent in a specific language, the need for a translator, or the need for a location that accommodates certain accessibility requirements. The IE-BM Solution will track special accommodation information (i.e. instances where translator services are needed) to provide the Worker with a reminder of the requirements identified allowing them to adequately prepare and schedule additional services as needed. [**FR12.3, FR12.9, FR12.40]**
2. The system will then present to the Client a list of available dates, times, and staff that meet the criteria established for that meeting based on the rules established for each individual staff member. This allows a one-to-one match with Client and staff. The system will also take into account program restrictions such as a redetermination or interview deadline, so as to avoid a negative impact on their eligibility**. [FR12.1, FR12.5]**
3. When the Client submits the appointment, the system will validate in real-time that the correct information is provided. For example, the system will require a Client to confirm or provide a contact phone number for those appointments with type “phone call”. This will help to prevent Eligibility Workers from scrambling at the last minute to identify these necessary details prior to a scheduled appointment. **[FR12.4]**
4. The IE-BM Solution will automatically generate notifications to interviewees when an appointment is scheduled and rescheduled. The notification will reflect the details of the appointment including date, time, and location. Notifications will be issued in accordance with the Client’s stated preferred method(s) of communication. **[FR12.8]**
5. In the event that a Client fails to participate in a scheduled event, the staff member can record the Client as a “no show”, which will notify the owner of the client’s case. The Eligibility Worker can then take the appropriate case action as dictated by policy. Notifications and actions taken to schedule and reschedule appointments will be maintained as part of the case history. **[FR12.12]**

Circumstances may necessitate the rescheduling of appointments. When this occurs, the Client has two options: 1) log into their personal account and complete the steps necessary to reschedule the appointment or 2) contact DHS so to obtain assistance in rescheduling their appointment. The process followed to reschedule an appointment via the self-service option is identical to the steps described above. As in the above situation, the Solution will allow the Client to reschedule an appointment, but will apply time constraints such as eligibility redetermination or review dates when presenting the Client with available schedule options. The IE-BM Solution will maintain a detailed history of actions taken to reschedule the event. **[FR12.10, FR12.13]**

Changes in DHS/DWS Staff availability may necessitate the rescheduling of an appointment. When rescheduling, Staff will consider time restrictions that may impact eligibility as well as special accommodations originally requested by the Client. **[FR12.11]**

Notify the Client

Once the appointment is submitted and confirmed, the system will ***update the availability of resources to reflect when an appointment has been scheduled*** on the Master Schedule and send the confirmed appointment to the staff member's Outlook calendar.

The IE-BM Solution will also automatically generate notifications confirming the details of scheduled and rescheduled appointments. Notifications will be issued in the Client's stated preferred method of communication; for example, text, email and USPS. The Client will also be able to view the scheduled appointments within their secure online account. Staff availability can change based on scheduled and unscheduled absences. If a staff member declines or cancels an appointment, the system will notify the Client and request the appointment be rescheduled. **[FR12.7, FR12.8, FR12.11, FR12.39]**

The IE-BM Solution's integrated calendaring function increases the Client's independence, responsibility and ability to control scheduling appointments with DHS Staff. Additionally, this feature supports the State's ability to improve case management by tracking case events, auto-generating notifications, and monitoring and coordinating staff schedules, which helps improve efficiency.

1.13.2 Caseload Management

Significant System capabilities in this area include:

- Initiating work effort requests through a variety of methods
- Identifying the skills required, based on the work effort request and constraints, and route the work effort to the correct queue
- Automatically route the work effort to the correct queue, based on a set of predefined rules, and then assign to an appropriate Worker or allow selection by the Worker to complete the entire process
- Tracking resource calendars/availability

Instructions: The Vendor should describe its approach to addressing Caseload Management requirements.

We know Health and Human Services (HHS) staff are increasingly being asked to do more with growing caseloads. Our knowledgeable team will work with DHS Staff to address the Caseload Management requirements by configuring features and workflows so that Workers and their Supervisors can better manage their caseload.

The IE-BM Solution's workflow management component is configurable allowing us to address and define your specific business needs. The main functions that will be utilized to manage workload are work effort request, work queues, and Supervisor functionality:

- **Work Effort Requests** - One of the functions of the Workflow Management system is to generate work effort requests or tasks. In the IE-BM Solution, tasks are used to assign and track the work of system users, for example Eligibility Workers. Tasks have deadlines and priorities, which will allow users to improve time management and

balance a busy workload. By focusing on those tasks with highest priority, Workers can complete their work by prescribed deadlines and improve performance metrics, such as timeliness ratings.
- **Work Queues** – Tasks or work effort requests can be sent to the inbox of specific individuals, roles or jobs, or assigned to work queues. A work queue is a subscription based list that can maintain a list of related work effort requests from which a user can pull tasks that need to be performed. For example, submission of online applications by Clients may trigger a task into an Online Application Work Queue if they require manual intervention. A Get-Next feature is provided to avoid workers selectively choosing the tasks on which to work and to help DHS manage tasks based on prioritization criteria when necessary. DHS can utilize Work Queues to effectively tackle tasks as a team so that no one staff member is overburdened and critical tasks can be worked immediately.
- **Supervisor Functionality** – Supervisors can manage work queues through a Work Queue Workspace. The Workspace provides summaries of work effort requests associated with their staff or organizational unit(s) as well as capabilities to drill down into details so that Supervisors can be actively engaged in employee productivity and proactively prevent bottlenecks or address concerns.

The remainder of this section will outline the details of how we will configure and use work effort requests, work queues, and Supervisor functionality in order to help DHS Staff complete work effectively and efficiently.

Work Effort Requests

Work effort requests can be requested through a variety of methods either manually by users such as receptionists, Clerical Staff, Eligibility Workers, or generated automatically by the system when events occur based on a set of predefined rules and workflows. Work effort requests will capture the type of request or action required. Our IBM team will work with DHS as part of the IE-BM solution design, to define necessary work effort requests and their related allocation strategies and workflows.

Requests can be initiated in a variety of ways; some examples may include:

- Receptionists at regional offices may manually log a work request to have an information packet mailed to a client which will trigger a correspondence workflow to complete the request;
- Applications received online via the Client Portal trigger an automated work request for review if manual intervention is required and assigns it to a work queue for processing.
- Receipt of a necessary verification document by fax or email can trigger a review workflow assigned to work queue when the receipt is logged into the system;
- The aging of a client or reaching a specified case review date, triggers the system to initiate a workflow to request renewals or a redetermination process. This process may have multiple steps and timers, including sending correspondence or notifications and timers to monitor for a client's response.

Once initiated on the system, work effort requests can be assigned manually or a work allocation rule can be invoked by the system determine whether the work should be assigned to a specific individual, job, organizational unit or work queue. Allocation rules used by the system can evaluate and ***track resource calendars, workload volumes and availability*** when assigning tasks directly to workers. They can also be used to assign work to those with specific skills. For example, if a task is created to conduct a case review for a client who prefers to speak Spanish, the system can be configured to assign the task to a worker with Spanish speaking skills.

In many cases the allocation strategy defined will route the work effort to the correct queue, based on a set of predefined rules, and then assign to the appropriate Worker or allow selection by the Worker to complete the process. For example, when a new application is received through the mail, certain tasks will need to be completed. The system can automatically trigger a workflow of activities, including creating triage tasks and system events (like waiting for worker to review the correspondence) based on pre-defined rules. The initial triage task can go to a central work queue where a Supervisor or Worker can review and perform initial triage and upon completion specify an appropriate intake work queue where an intake review task would be generated. An Intake Worker can then claim the work effort request from the work queue and act on the request. In some cases, DHS may also decide to manually or automatically route a work effort request to a specific person or a specific work queue. In this same example, the system can automatically send Intake work effort requests to a single Worker or allow the Worker conducting the triage to manually assign a request to an Intake Worker. **[FR12.14, FR12.15, FR12.17, FR12.18, FR12.19, FR12.22]**

When tasks are assigned to jobs or organizational units, users in that job or unit would see the task as available to them, until a worker reserved that task to actively work. Supervisors, have capabilities to directly reassign tasks between workers and to reallocate (invoke the associated work allocation rule) to reassign work. They also have the ability to mass reassign tasks or to block workers from being included in work allocation rules, such as in the case of an extended absence or pending termination. **[FR12.23]**

Users will have easy access to their work effort requests (tasks) through pods on their home pages as well as through their Inbox which is accessible from the top navigation options. The screen below represents the landing page. The pods are customizable and show the "My Tasks" quick view at the middle right of the page.

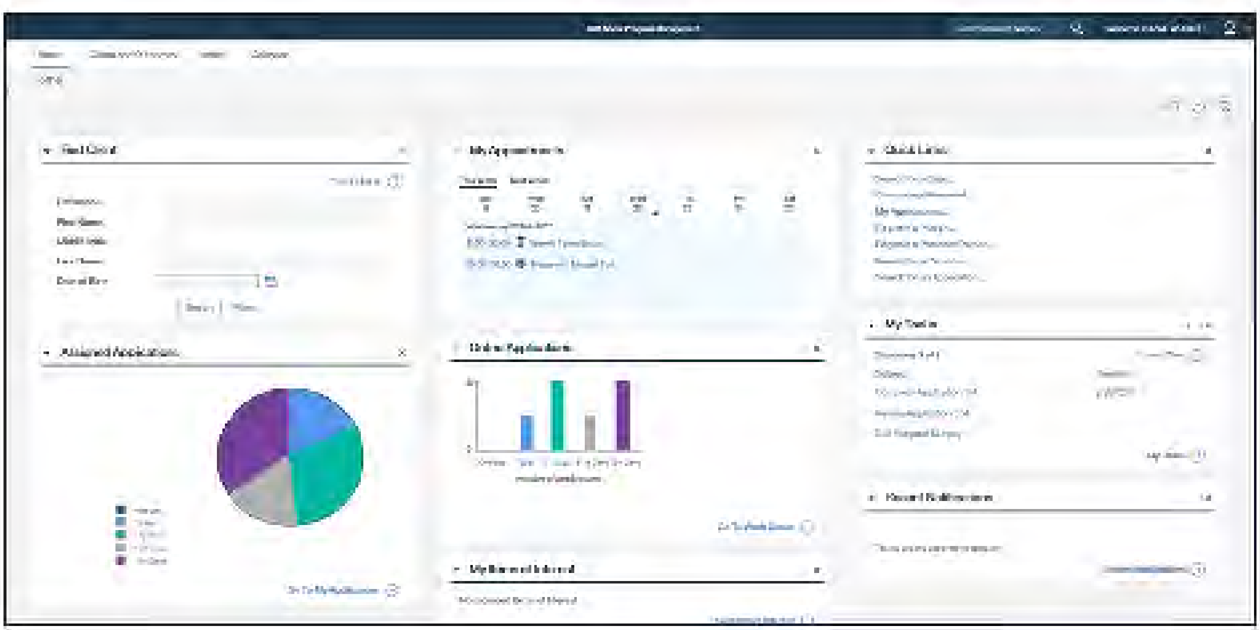


Figure 63: Our IE-BM Solution provides Workers a customizable landing page so when Workers login they will focus on the information thatt helps them to complete their tasks.

All users will manage work effort requests or tasks from their Inbox. The user's Inbox provides views to allow users to see the work effort requests they have accepted and are currently working and work effort requests that have been assigned to them (or to their job or organizational unit) and are available to them for work. Notifications (informational alerts that may be of interest to a user or set of users) are also presented to the user via their Inbox. Within the inbox, Users may also use the available search and sort tools to filter and manage the work effort requests that are available to them.

Work Queues

Within their Inbox, users also have views of the Work Queues to which they are subscribed. Some work queues may be defined as allowing workers to choose to subscribe, while others are supervisor managed and the subscription of a worker mandated. This view, called the Work Queue Workspace, contains key details about a work queue, including the owner of the work queue and the sensitivity level set for the work queue. The Work Queue Workspace also indicates whether users can subscribe themselves to a work queue. If the system administrator has allowed user subscription to the work queue, users can easily be added to the work queue using the Subscribe New User function. Similarly, users can be removed from the optional work queue using the unsubscribe function provided with the list of subscribers. Supervisors are able to manage the work queue sensitivity and subscription capabilities to restrict access to Workers with the appropriate access and the right skills can claim and work on the work effort requests.

The work queue can be used to assign work effort requests automatically based on a set of predefined rules. For example, when an applicant submits a new application electronically, the system can determine the type of work queue based on the skills needed for the work effort request. So if an Eligibility Worker will need to review the application, the system will route the work effort request to the work queue utilized by the appropriate Eligibility Workers. In essence, the system will be able to ***identify the skills required based on the work effort request and constraints, and route the work effort to the correct queue.*** **[FR12.16]**

The IE-BM Solution supports the definition of work queues, allowing for multiple work queues across specialized teams so that different Workers can action different work items within the client's case simultaneously. For example, a Clerical Worker can update verification information received, while an Eligibility Worker adds a note. The IE-BM Solution maintains a detailed history of actions including who performed an action and when the action occurred. **[FR12.21]**

Supervisor Functionality

Supervisors have additional functionality in order to manage work effort request assignments. This includes the ability to reassign and reallocate work and manage staff skills and availability. Graphs and overviews will be made available so that workloads will be monitored and re-distributed effectively. Examples include:

- A Supervisor can view tasks that have been reserved from the work queue via the Work Queue Reserved Tasks page. This page displays a graph that shows open and deferred tasks as a bar chart, broken down by user. A Supervisor can use the chart to drill down to lists of open or deferred tasks for each user. From these lists the Supervisor can drill down further to view the details of each task. This capability allows Supervisors to manage the list of outstanding tasks and review and re-assign as needed.
- A group schedule for the users subscribed to a work queue is available to the Supervisor, enabling an at-a-glance overview of the users' activities for the week. The page defaults to the current week, but it is possible to navigate back and forward in weekly intervals by using the Previous Week and Next Week links.

Lastly, task deadline strategies will also be created to confirm that the task is actioned by a user and completed by that user in a timely fashion. These deadline strategies can be defined to deal with tasks that exceed defined deadlines. Timers can trigger escalations so that Supervisors can be alerted when a task is not completed by the prescribed timeframe before a deadline. They can then evaluate the work effort request, staff workloads and choose to forward or reallocate the task as needed. The deadline strategies not only help Supervisors monitor and intervene as necessary, but also support Worker self-sufficiency by allowing them to monitor and track their assigned tasks' deadlines themselves. **[FR12.20]**

SECTION HIGHLIGHT

One of IBM's successful implementations of caseload management functionality is in the State of Missouri for MAGI programs. Work queues were used to assign and track tasks using a State-defined hierarchy. Less common verification and validation needs are assigned to task queues. Users completion and turn-around times are tracked and processes requiring additional review or approval are automatically elevated to a Supervisor. Supervisors also monitor their staff's work via the Supervisor Dashboard.

The IE-BM Solution's task management, work queues and supervisor functionality will enhance the ability for DHS Staff to track work effort requests and caseloads. The IE-BM Solution will serve as a single source for work needing to be completed as it relates to clients' benefits and services for the programs in the scope of the IE-BM Solution. Workers and Supervisors will be able to log into the IE-BM Solution and have a clear and easy view of tasks that must be completed, their owners, their priorities, and their deadlines so DHS can meet timeliness standards more efficiently.

1.13.3 Establishing Calendars

Significant System capabilities in this area include:

- Providing a structured and standard calendar form
- Providing access to user's calendar outside of the System

Instructions: The Vendor should describe its approach to addressing Establishing Calendar requirements.

We will address Establishing Calendar requirements by utilizing the IE-BM Solution's functionality, provided on a number of levels:

- Each user within DHS has access to their own calendar to manage their own appointments and events.
- DHS administrators can manage organization-wide calendar events as well as local-specific calendars.
- Case calendars allow authorized users to view and manage appointments, meetings, and events related to cases.

- Clients and their representative have views of assigned activities and appointments through their online accounts.

At each level, meetings, appointments, or events can be scheduled and maintained. The graphic below provides a summary calendar view, which displays to the user events and their start times in a calendar view. On this page, the user also has the ability to add a new activity, a new reoccurring activity, and a new meeting.

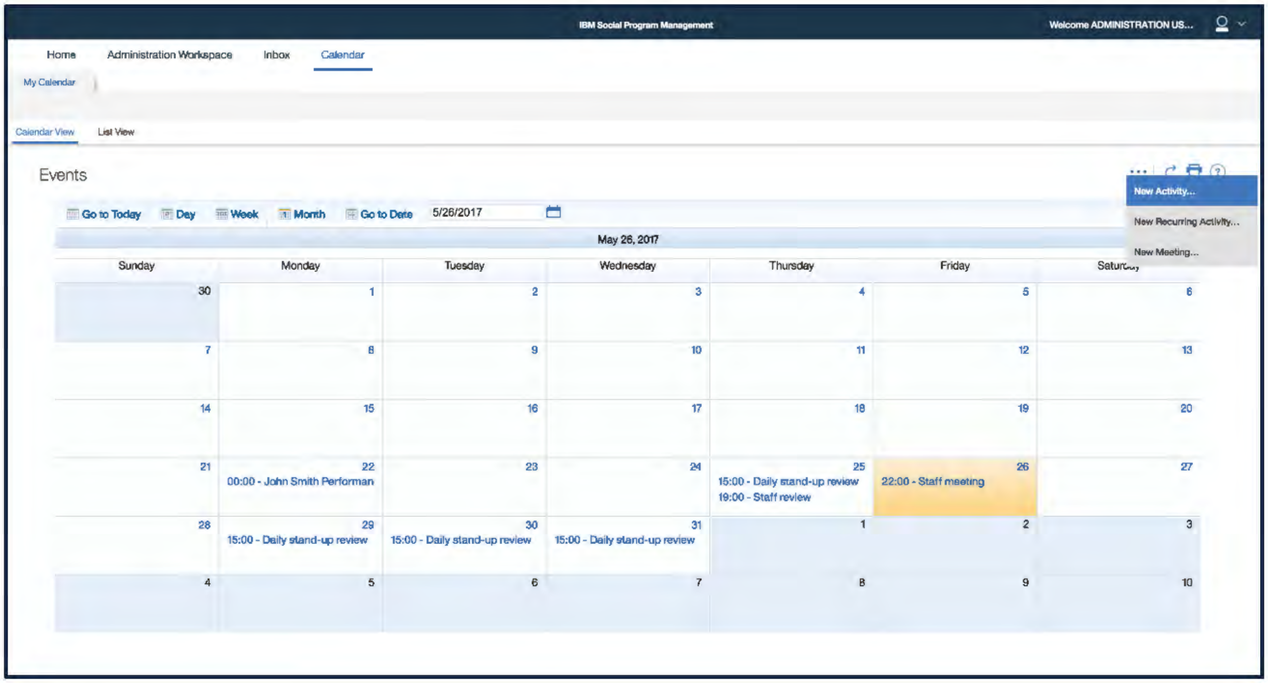


Figure 64: The IE-BM Solution's calendaring functionality will support a more organized schedule of staff and Client interactions so that outstanding items can be quickly and efficiently resolved.

The IE-BM Solution will provide Workers the ability to view and manage their calendar and appointments. The graphic below provides a high-level view of the functionality as it pertains to calendars.

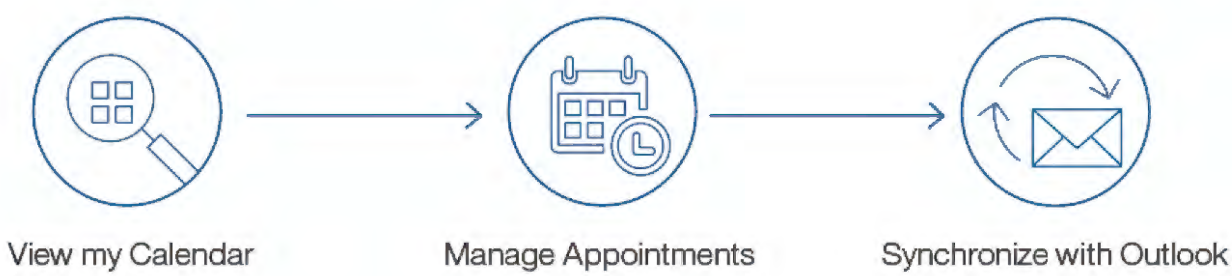


Figure 65: The IE-BM Solution will provide Workers an ability to manage their calendars and appointments efficiently.

View "My Calendar"

From every page in the Solution, Workers have access to their Calendar from the top navigation pane of the page. Additionally, when logging into the IE-BM Solution, DHS Staff will be presented with their landing page which can include a Calendar preview pod. The view below shows the Landing Page Calendar pod, which allows users to view at a quick glance their immediately upcoming appointments.

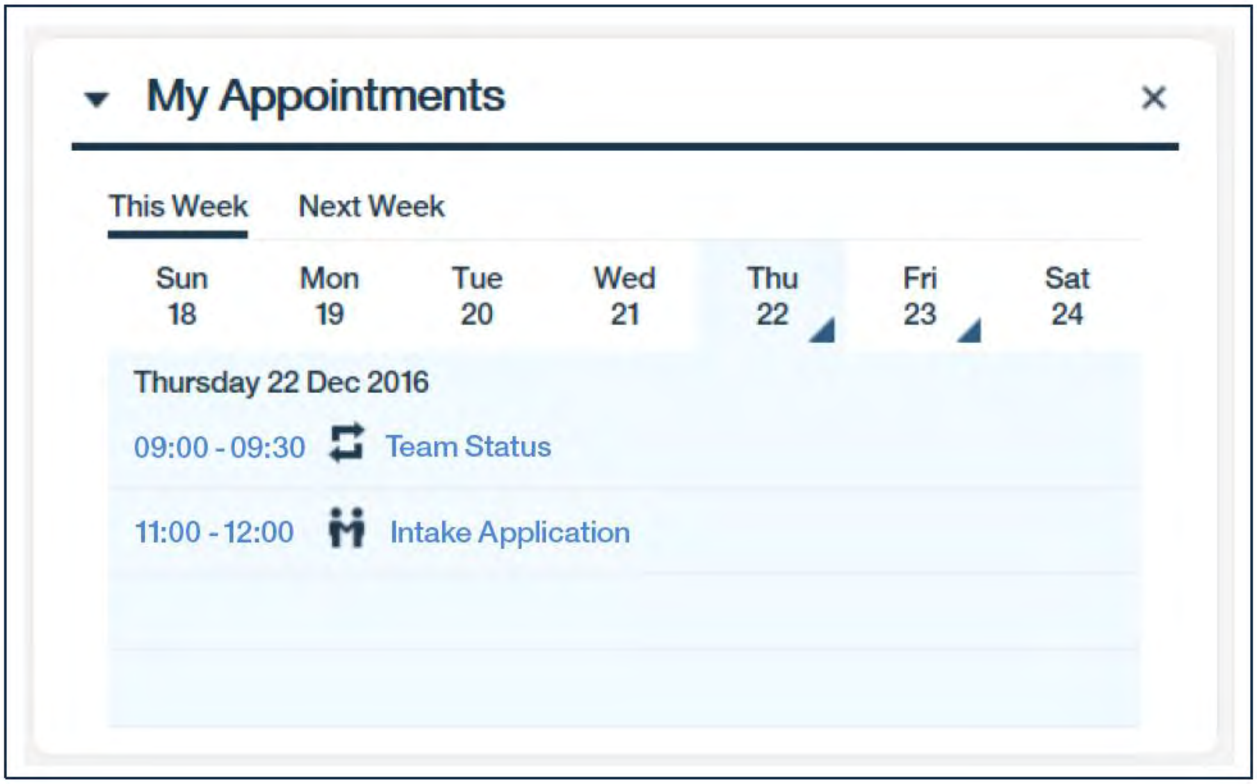


Figure 66: The Landing Page Calendar pod provides users with a quick preview of their upcomoing activites promoting efficient workload management.

The Landing Page Calendar Pod provides a snapshot of the user's current week and next week. Users can then click on an entry in order to view details about an activity to launch a view that will provide details of that activity. The figure below provides a view of Customer Contact Training activity details. As you can see, details available include subject, date, location, activity priority and the start and end times. This can be further built out to include appointment category and meeting type. **[FR12.25]**

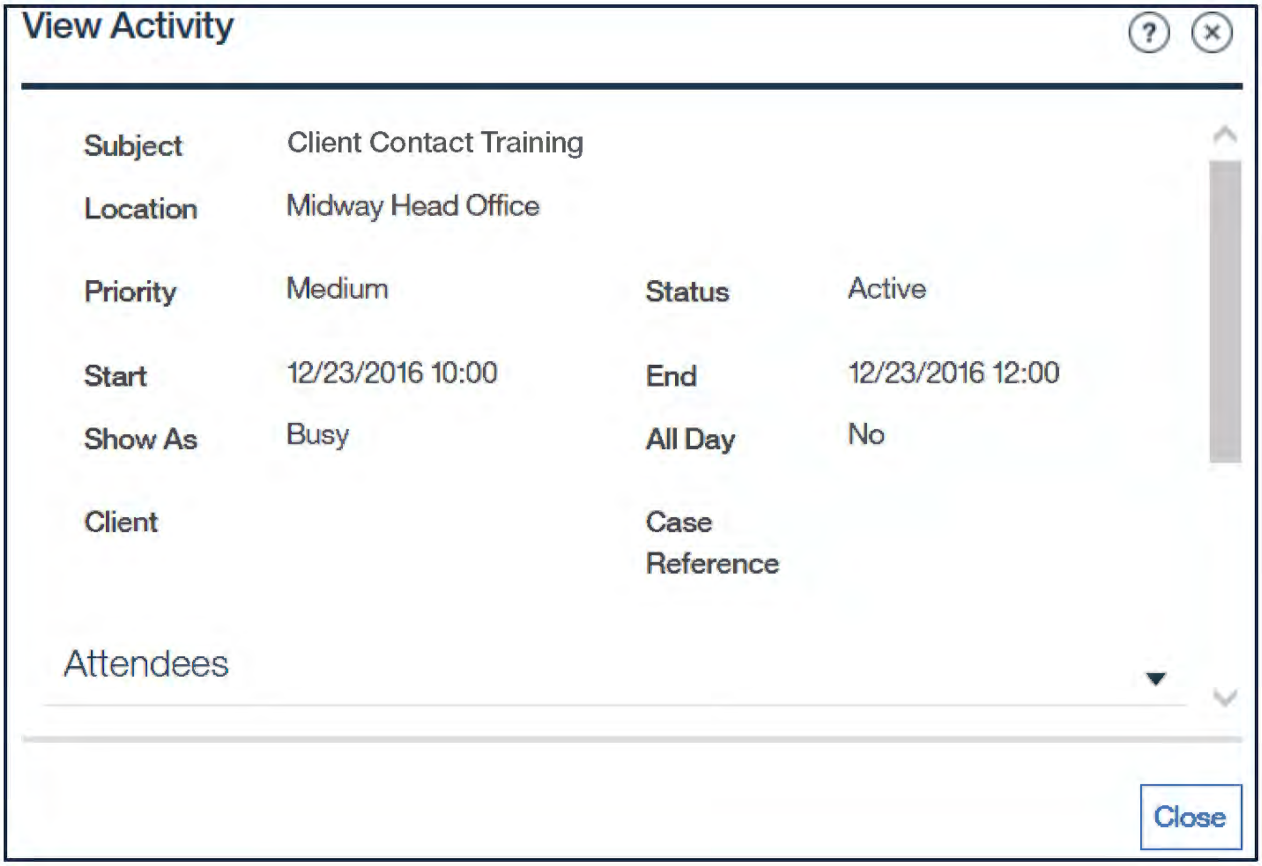


Figure 67: The Calendar Activity view deatila provide Workers references allowing them to prepare for events.

In addition, to the Home Page Calendar Pod, users can navigate to their My Calendar Page, which ***provides a structured and standard calendar form***. From the My Calendar page, users can choose to view their calendar by day, week or month. Users select a list view of appointments and meetings sorted by name, type or date. Users can also navigate directly to a specified date to check the activities or meetings for that date. **[FR12.24]**

Manage Appointments

The IE-BM Solution's integrated calendaring function supports the Worker's ability to schedule and save appointments from a within a case or directly from their calendar. When scheduling an appointment, the IE-BM Solution will present the schedule with a list of 'appointment types' approved by the DHS (e.g. Application Interview, Redetermination Interview). When creating an appointment, the appointment organizer will specify the location and start and end time of the meeting, add notes, invite attendees, and indicate whether this is a single or recurring event; recurring events require entry of begin and end dates that specify the period the events will repeat. Various individuals can be invited to appointments including clients, other staff, and other persons who play a role on a case, such as an authorized representative. Additional meeting attendees can be invited to the meeting after it has been created. Appointments scheduled with clients who have a registered account with the IE-BM Solution will view and access event details through their personal account established in the Solution. **[FR12.26, FR12.29, FR12.38, FR12.39, FR12.41]**

When individuals are invited to an appointment, the system automatically displays the appointment request in the calendar. Each user invited to the activity with a user account on the IE-BM Solution can accept or decline the invitation within their IE-BM calendar and include comments that will be delivered back to the creator. Conflicts between existing activities scheduled for a user and the planned activity are automatically displayed, so that the user has the option to resolve or ignore conflicts. The creator can also choose to cancel an appointment. When an appointment is cancelled, the system deletes the appointment from users' calendar and automatically sends a notification to attendees that an appointment has been cancelled. For external attendees, the notification will be sent using the attendee's preferred method(s) of communication reflecting available details of the cancelled event. The appointment creator can also grant access to other users so that they can modify or cancel the appointment on the creator's behalf. When an appointment is cancelled, the system will capture the time, date, and user ID of the user who cancelled the appointment. **[FR12.30, FR12.31, FR12.32, FR12.33, FR12.34, FR12.35, FR12.36, FR12.37]**

Synchronize with Microsoft Outlook

The IE-BM Solution provides an integrated, intuitive calendaring functionality. System users will perform scheduling activity by accessing this capability within the IE-BM Solution. These activities are then pushed to their Microsoft Outlook accounts. A distinct advantage of this integration is the Solution's ability to notify invitees of the initial invitation and subsequent cancellation or rescheduling of the event as well as reminders as the scheduled event approaches. Attendees can access event details through their IE-BM personal accounts or through Microsoft Outlook. We will work with your staff to determine what type of Client and case information related to the appointment will be passed to Microsoft Outlook so DHS privacy and data policies are followed.

As described in T-7 Section 1.13.1 Appointments, staff will identify days and times they are available for client appointments. The IE-BM Solution will then use these rules to schedule appointments during the available periods. When an appointment or meeting is scheduled within the system, the user will view the meeting request via their secure personal account registered in the IE-BM Solution. Once the attendee accepts or rejects the meeting invite using the IE-BM Solution's calendaring functionality, the meeting is updated with their acceptance or rejection and the appointment is synced to the user's Microsoft Outlook account. Meetings can also be rescheduled, updated, or cancelled using the Solution's calendaring functionality and the updates or changes made to a meeting are pushed ***to the user's calendar outside of the System*** so that these transactions are also equally reflected in the meeting organizer and the attendees' Outlook calendars. Events originating from the IE-BM calendaring functionality will be marked as such so users can view which meeting were created in the IE-BM Solution vs. Outlook. **[FR12.27, FR12.28]**

The integration of calendaring functionality will help to expedite appointment scheduling and case management. Client access to this feature removes the middleman. Clients can schedule and reschedule appointments based on the type of appointment, availability of the Intake or Eligibility Worker, and their personal schedule. This Client control will help to decrease the percentage of no shows saving valuable Staff time, which in turn will help decrease interruption to Client benefits. Automation of appoint tracking in line with Client eligibility, in addition to removing the need to manually track, will serve to notify Workers of the need to take action, such as in the event of a no show or Applicant or Client failure to comply with program interview requirements.

1.14 Approach to Reporting and Business Intelligence

The Vendor should ensure that the responses to this section are in alignment with the requirements set forth in Template T-6 – Functional Requirements Traceability Matrix, Tab FR13 – Reporting and Business Intelligence.

1.14.1 Reporting and Business Intelligence

Significant System capabilities in this area include:

- Providing static, parameter driven, dashboards, statistical and ad hoc reports
- Creating and saving reports in different file formats
- Providing the ability to upload external data sets for integrated reporting
- Providing a process by which reports may be delivered by email
- Providing the capability for reports to be automatically generated based on a predefined schedule and distributed to subscribed users on a periodic basis
- Saving and attaching reports to a Client's record
- Providing the ability to generate a listing of all standard on-line reports available and the description of each report
- Projecting future case actions and requirements
- Providing application processing reporting and analysis capabilities in real-time
- Providing different dashboards and reports by user type
- Providing the ability to generate Federally/State required reports

Instructions: The Vendor should describe its approach to addressing Reporting and Business Intelligence requirements

The IBM team understands the importance of information assets and using those assets to make timely, insightful decisions to manage social program in this climate of change. Deploying a highly capable and agile data warehouse allows the State of Arkansas to gain deep insight into performance and respond to changes in a person- and household-centric way. The increased decision making agility this platform brings to the State is important to driving efficiencies with the current MAGI Medicaid program, and will become increasingly important as additional programs are migrated to our IE-BM Solution from the legacy systems.

Our proposed Solution provides a range of capabilities to help those tasked with social program management to make key business decisions on a continuous basis. This includes decision support information for Workers, Supervisors, and senior managers. Our proposed Solution offers Business intelligence (BI) capabilities delivered though IBM Cognos Business Intelligence and Analytics include data warehousing, embedded analytics, and interactive dashboards and reports.

Powerful reporting and analytics provided by Cognos and the SPSS statistical analytics package, leveraging built-in Cúram–based functionality that supports ongoing State business processes and workflows, provide an integrated and flexible reporting structure to meet the needs of the State. These capabilities work together as one to satisfy the information needs of Workers, Supervisors, and Analysts alike.

Our Phased Implementation Approach

We understand that the State of Arkansas' Social Program systems are currently siloed and necessary reports are generated from the individual source systems to meet Federal Program guidelines and mandatory reporting requirements at the level of frequency demanded. The following figure graphically represents the siloed reporting approach which contributes to a lack of coherence in approaching social program delivery in a person-centric view across programs.

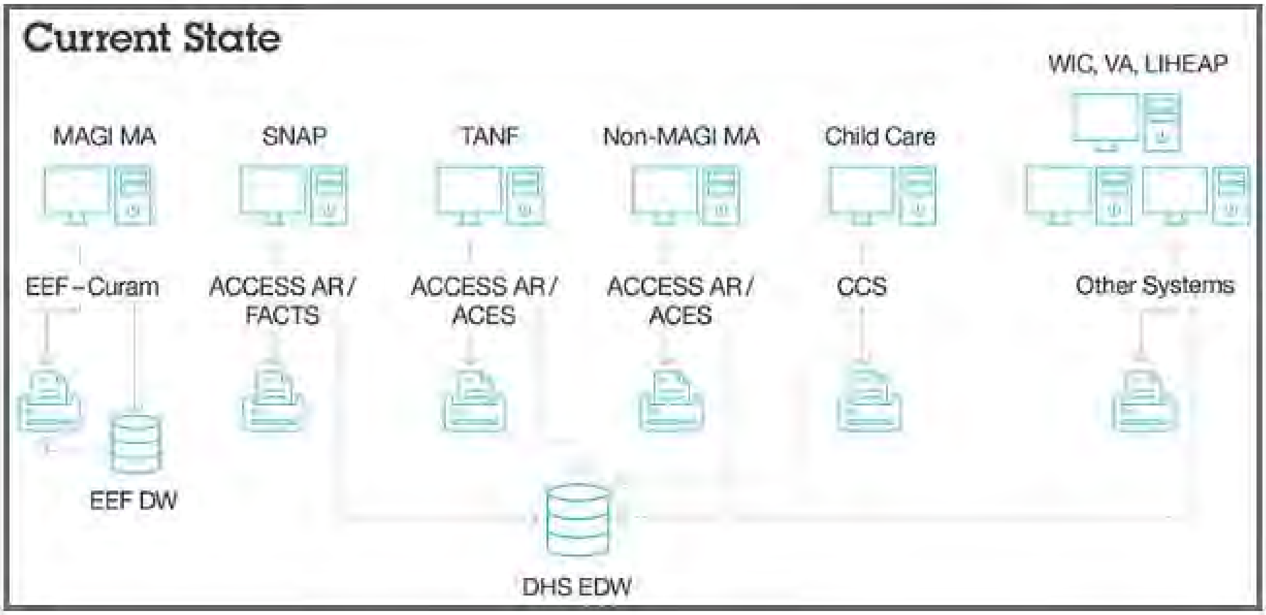


Figure 68: Your current state is based on a siloed reporting approach, which does not provide a person-centric cross-program view.

With our proposed phased implementation approach, we will implement a Master Data Management component which includes the Master Client Index in Phase Two. This will help DHS to improve data quality across the enterprise while also reducing duplication of efforts across State systems to create person clearance and matches by leveraging its probabilistic matching capabilities. This same MDM component has been effective for the City of San Diego, which is similar in size and complexity to the State of Arkansas, where it has significantly improved data quality and is at the center of their data governance program.

The MDM implementation permits Workers across the enterprise to access, update, and create meaningful analyses from the consistent and accurate data, supported by advanced search capabilities, to service the needs of the front-line Workers dealing with high call volumes and inconsistent information. We understand that Workers are at the critical point of data entry; and therefore, they are the enforcers and enablers of data quality and completeness. Those that have been working with Clients for years and are familiar with the families they serve play a vital role in maintaining data integrity and improving data quality. The use of the MDM will facilitate and help DHS staff to improve data quality which is critical to delivering accurate and useful reports to users at multiple levels.

With our phased implementation approach, as each program is migrated to the new IE-BM Solution the necessary program specific reports will be developed in the new Solution as well. Thus, there will be transitional period where reporting will be generated in both the legacy system and the new IE-BM Solution, especially to support CMS and FNS mandated reports and fiscal reports for State and Federal budgeting and planning purposes. We recommend that program specific reports continue to be generated from the legacy system until that program has been successfully assimilated within the IE-BM Solution and the associated appropriate legacy system is retired.

BI and Reporting Solution Development

The proposed development and implementation approach for the Data Warehousing and Business Intelligence portions includes Informatica as the Extract, Transform and Load (ETL) tool. Following IBM's proven BI methodology, ETL processes pull the data from source databases (i.e., Cúram and MDM database tables), apply business rules, and transform the data before loading to the data warehouse. This will occur during each phase of the IE-BM Solution development, and as new programs are migrated to Cúram and their data mastered by MDM, the totality of the data will be loaded into the IE-BM Data Warehouse. This Data Warehouse will provide a single place where identified DHS data needed for reports will reside. Cognos is then used to access, analyze, and investigate the data maintained in the data warehouse, to perform advanced analytics, and to configure, distribute, and manage the reports.

The approach to delivering the required BI capabilities sought by the State is one that has been used on numerous IBM BI engagements of similar scope and complexity. The major implementation steps are outlined in the below graphic:

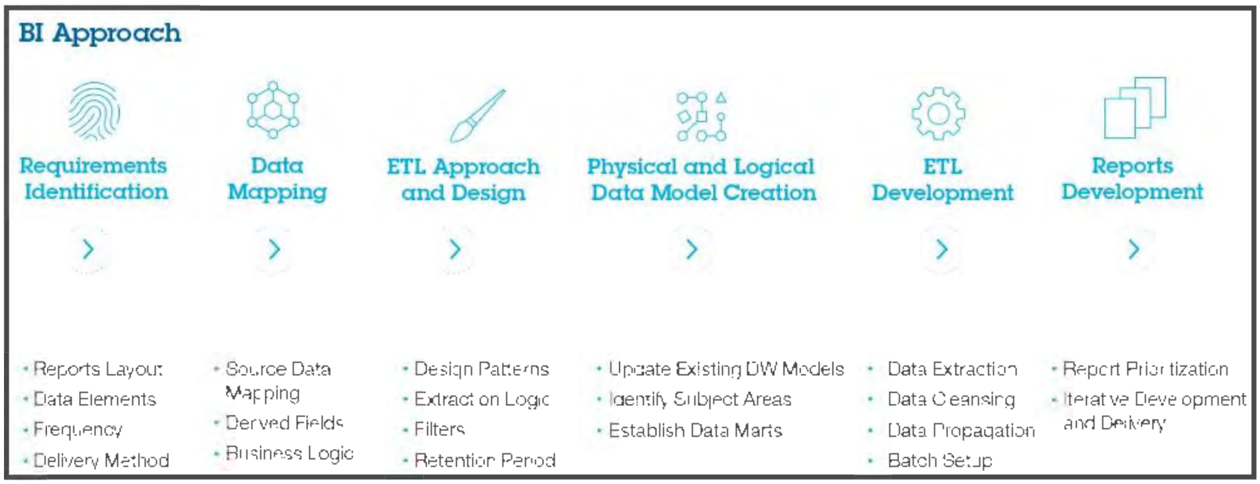


Figure 69: Our proven approach to Implementing Business Intelligence Capabilities will allow us to collaboratively work with DHS through the steps, meeting checkpoints along the way to validate and confirm reporting requirements.

The work performed within each of these steps is described in more detail below.

- **Requirements Identification** - In the requirements identification step, the reports and fields are defined along with their specific layouts. Per the RFP, know that as part of this IE-BM effort the state has identified 40 reports each under the category of Simple, Moderate, and Complex reports for a total of 120 reports. The purpose of each report, applicable business logic, and the detailed business requirements are documented, including such details as the frequency of each report and its delivery method such as email and shared folder. Prior to the completion of the requirements identification, the reporting requirements are reviewed, finalized, and approved by designated business stakeholders. Existing reports, State, and CMS and FNS reports will form the basis for this activity. Efforts to improve and modernize existing Agency reports will be made wherever appropriate.

- **Data Mapping -** The data mapping is a critical step in the process of the source data extraction requirements. Each required field in a report is mapped to a source system data field. For derived fields, the business logic used to derive the information is defined and documented. Prior to proceeding with the ETL design and implementation, the data mapping is reviewed and approved by designated business and IT stakeholders. This is a simplified activity for the Cúram source since IBM has significant experience in performing analysis on Cúram data and processes.
- **ETL Approach and Design** - Based on the requirements and data mapping, an Extract, Transform and Load, (ETL) approach is determined utilizing proven design patterns born of IBM's deep experience in reporting on Social Program sources. The design of the ETL includes such details as the data pull logic, the frequency of data pulls, filters that need to be applied, and staging data retention requirements.
- **Physical and Logical Data Model Creation** - Using both the documented reporting requirements and the data mappings, logical and physical data models are created from established warehouse data models. To enable efficient and effective reporting across the enterprise, the data warehouse tables are organized by subject area. Each subject area, while containing multiple tables of related information, will support the reporting requirements for their area. A few example subject areas are audit reports, enrollment reports, and web analytics reports. Note that the data model is able to be expanded to address future reporting needs, including the addition of new subject areas that can be added without impacting the existing set of reports and ETL process.
- **ETL Development** - The development of the Extract, Transform and Load (ETL) capabilities includes the following stages of work: data extraction, data standardization, data integration, data propagation and loading, and batch setup.
    - *Data Extraction* tasks include the retrieving of data and determining the incremental updates. A direct SQL query will be sent to the appropriate database based upon the update and insert system time stamp. The applicable data will be retrieved and loaded into a staging area until the next task begins.
    - *Data Standardization* includes technical data validation and null value checks using the defined formats and rules. In addition, the system is able to review and update, if permitted, for standardization of data forms, abbreviations, and common terms such as state or address abbreviations. This allows additional control and introduces the ability to check for compliance prior to completing steps in a workflow process.
    - *Data Propagation and Loading* involves the execution of the ETL scripts to populate the target tables in the data warehouse. Data from Cúram is extracted, cleansed, and integrated using the work defined in the three steps above in order to populate the target tables in the data warehouse. The act of loading the data is performed initially to establish a baseline and then to periodically update the data, as per the defined requirements.
    - *Batch Setup* is usually tied into the data loading process. Prior to the load, the data usually needs to be reviewed and mapped into logical workflows and target tables, sequenced, and automated so that it can be execute on a routine basis and track the success or failure of each load.
- **Reports Development** - Reports are created according to the approved requirements and using the data maintained in the data warehouse. An agile development approach is

utilized to deliver the reports across multiple iterations sequenced according to the priorities established by the Agency.

Arkansas' Future BI Reporting – Our Vision

The below diagram represents our proposed approach for the requested BI and Reporting. It summarizes our proposed architecture and illustrates the capability to populate the reporting database from the IE-BM Solution's operational system or other data sources using ETL processes.

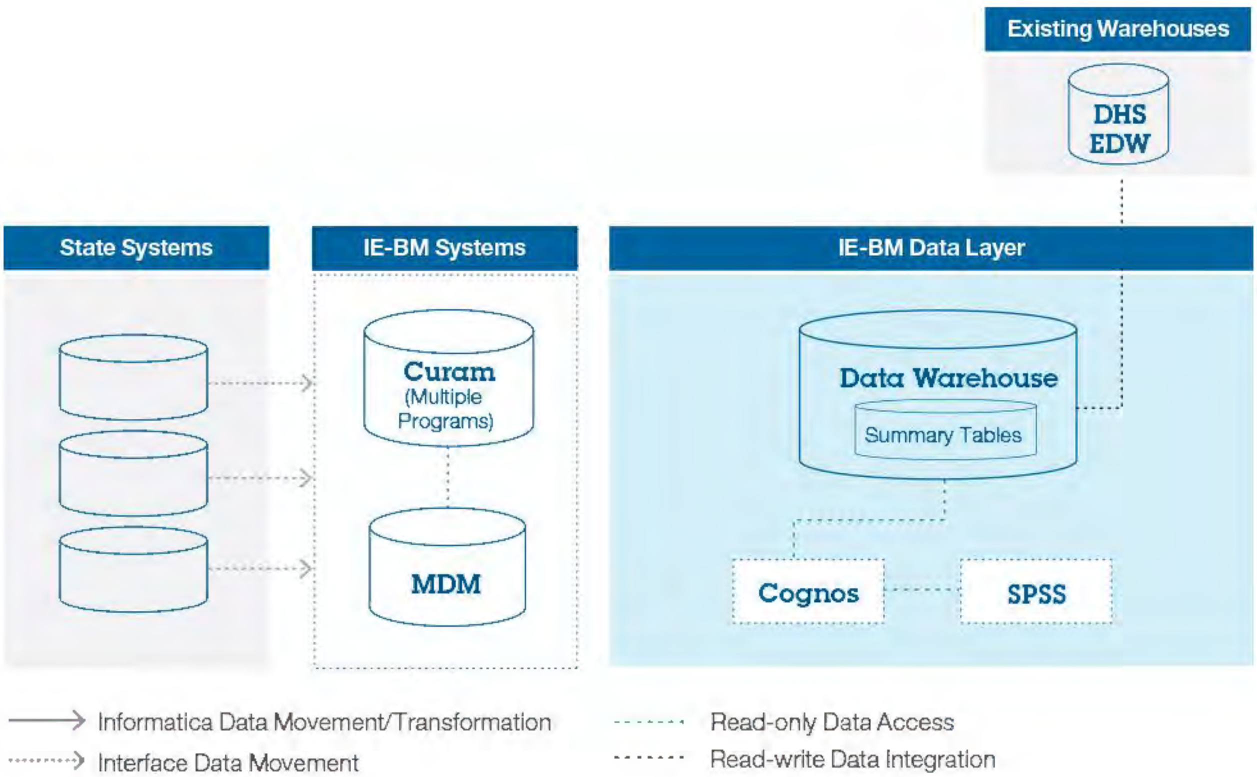


Figure 70: Our proposed approach will populate the reporting database from the IE-BM Solution's operational system or other data sources using ETL processes.

Our proposed Solution for your future reporting needs is built on an enterprise business intelligence platform that provides a broad range of BI capabilities, including managed reporting, ad hoc query, dash boarding, metrics, a unified user self–service workspace, collaboration, statistics, and events and alerts. It serves as the common foundation for data access, system management, and information delivery that the IE-BM Solution will provide.

Through our proposed Single Sign On (SSO) security solution, users can navigate seamlessly between the IE-BM Solution's transactional component and the Cognos reporting component. The screen shown below displays the section where a user can access links within our IE-BM Solution to views of operational and aggregate reports.

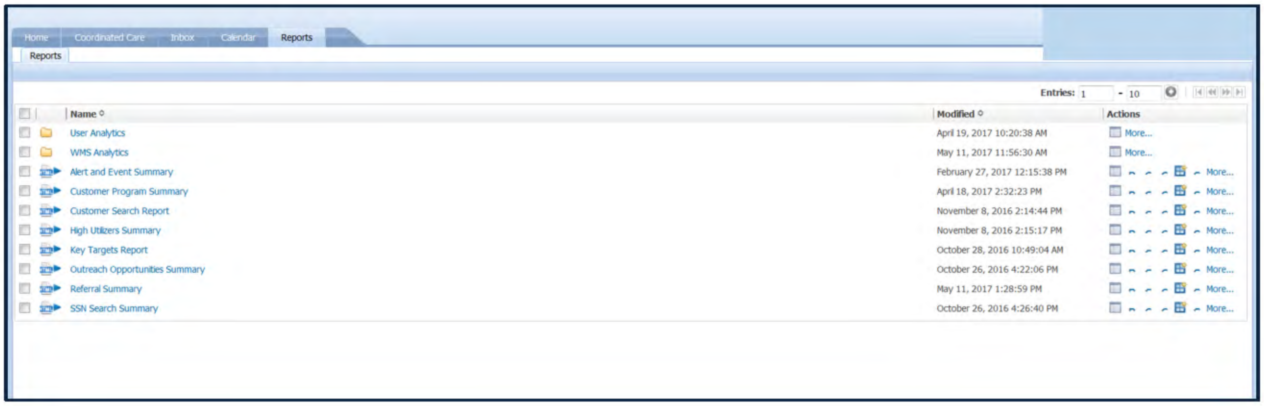


Figure 71: Users will be able to easily navigate between both Cúram and Cognos to a provide a seamless solution that allows users to complete transactiona nd view reports in a single session.

Upon reviewing the reports, the user can navigate back to the Cognos component without having to sign in and sign out thereby increasing the IE-BM Solution's efficiency and access to the information needed for decision making and future planning. Contextual reports within the IE-BM Solution allow the user to click and navigate between solution components (Cúram and Cognos) as part of their daily work process.

The IBM Cognos platform is designed to effectively scale for the broadest business analytics deployments. Cognos is used by organizations across the globe to gain insight into operations and produce reports for internal and external consumption. It is an effective and popular capabilities at state agencies that administer health and social programs. IBM Cognos Business Intelligence includes the following specific features:

- Drag–and–drop authoring in a zero–footprint user interface to give users the ability to simply search or create their own reports and queries.
- Visualizations, dashboards, and scorecards that communicate complex information quickly with visually rich presentations using gauges, maps, charts, and other graphical elements to show multiple results together. Tolerances can be highlighted to flag errors and create warnings for things that are out of balance or do not meet established goals.
- A unified user self–service workspace that gives users the freedom to search and assemble analytic content from multiple sources onto a single interface, uncluttered by menus so they can personalize the view and gain business insight quickly.
- The ability for users and report authors to employ statistical algorithms in their analysis to better understand the TANF/TEA 60-month time limits without having to be statisticians.
- The ability to configure agents which detect events within a data source and take actions such as generate an e–mail alert, update a data source, or configure tasks to be assigned to individual users or groups of users. An example may be the ABAWD clock expiring for a SNAP recipient.
- Access to a broad range of heterogeneous information sources including operational, analytical, internal, and external data to gauge application processing.
- Access to information sources whose latency runs from real time (streaming) to on time (transactional) to static warehouses.

- The ability to define a single metadata layer to describe and standardize data access to create 'one version of the truth' for program integrity and longitudinal reporting.
- Out–of–the–box integration with the other IBM software components comprising our integrated Solution.

IBM Cognos reports allow users to roll up the results and drill down into the details while maintaining the appropriate privacy and security rules. Reports can be emailed to others in the organization, and rendered into different formats such as PDF, Excel, XML, and HTML. It also supports multiple objects on a single report, various types of filters and prompts, conditional highlighting, and numerous additional features to address the DHS reporting requirements. To analyze program changes, the system allows user to create comparison reports. These reports may include comparisons in: caseload, processing metrics, payment, or by location. Furthermore, outreach reports may also be produced within the system to identify hot spotters by geography. Users can schedule batch reports or run them on demand. **[FR13.4, FR13.27, FR13.28, FR13.29, FR13.39]**

Cognos BI includes dashboards that users can view, interact with, and personalize in ways that support the distinct way DHS analyzes data and make decisions. The Solution will provide different dashboards and reports by user type, i.e., Supervisor or Eligibility Worker. With dashboard capabilities, you can expect the following benefits:

- Multi–tab and multi–portal dashboards that can be used by Supervisors and executives to plan appropriately. For example, based on the numbers from the previous year plan for the Open Enrollment period at the end of the year for Medicaid and for LIHEAP at the start of the season.
- Assemble, personalize, and interact with many kinds of BI content in your dashboard. For example, Arkansas children aging out of the ARKids First! Program and monitoring continuity of coverage and self-support mechanisms
- Analyze information on your dashboard and share the results of application processing
- Collaborate on your dashboards with annotations and comments
- Access and interact with dashboards regardless of office location
- Create interactive, disconnected dashboards and distribute them to a broad audience
- Create operational reports that can be used by Supervisors in the field and regional managers for resource planning and allocation at local and regional levels

  [FR13.31, FR13.33]

IBM Cognos self–service dashboards allow users to perform deeper analysis and report authoring. You can seamlessly graduate to ad hoc reporting where you can perform more advanced data exploration, such as adding additional measures, conditional formatting, and advanced calculations. The figure below is an example of a user-configured dashboard containing multiple types of visualizations, which show progress and trends. Data can be viewed in various forms of visualization including bar, pie, and line charts. **[FR13.5, FR13.10]**

Figure 72: Our proposed Solution has the capability to display views using multiple types of visualizations so that you can better understand business performance.

Our proposed Solution will turn data into accurate views of your organization's past, present, and future operations and performance so your decision makers can capitalize on opportunities and decrease risks. You can use these views to understand the immediate and downstream effects of decisions that span potentially complex interrelated factors. Consistent snapshots of business performance are provided in enterprise–class reports and independently assembled dashboards based on trusted information. As a result, non–technical and technical business intelligence (BI) users and Information Technology alike can respond quickly to rapidly changing business needs. Our proposed Solution will provide capabilities designed to provide:

- **Faster time to answers** about business from highly visual, interactive dashboards without lengthy delays
- **Easier access to game–changing insights** with interactive data visualizations that enable you to more easily identify performance issues and apply corrective actions
- **Smarter decisions that drive a better outcome** from snapshots of business performance
- **Trusted data for more consistent decisions**
- **More flexible deployment options** that can grow as your business grows and help you meet diverse organizational requirements **[FR13.5, FR13.10, FR13.39]**

Please refer to the following three sub-sections for a detailed description of core reporting functionality, as well as the types of reports and business intelligence that our proposed Solution will enable for DHS.

Core Functionality

Our reports, dashboards, and analytics, including federally and state required and other standard reports, can be ***created and saved in various file formats***, including HTML, PDF, Excel, CSV, and XML. Examples of federally required reports include the quarterly CMS report and a variety of FNS reports. Standard client-facing reports might include a summary of their eligibility across programs or a list of recent actions on their account. Different formats will be used for different business purposes. HTML will be used for interactive reporting including drill-down and roll-up. PDF will be used when reports need to be printed, emailed, or have data arranged in a precise manner. Excel and CSV formats lend themselves to data exporting so that users can perform additional analysis locally, while XML supports integration with outsides systems. HTML and XML outputs can be saved in these various formats within our proposed Solution, or in the case of PDF, Excel, or CSV, saved to a user's local machine. **[FR13.4, FR13.36, FR13.37]**

Users are able to ***email reports and report outputs in multiple ways***. Report files can be attached and sent via email, or links to the reports can be emailed so that recipients must login to the Solution in order to run and view the data. If data privacy requires that the attachment option be removed, our proposed Solution has the flexibility to meet such security needs. **[FR13.11]**

Each user is provided a personal 'My Folder' area within the Solution to which only they have access to. This area can be used to save copies of reports, save report outputs, create and save ad-hoc queries, and setup personal report schedules. **[FR13.22]**

Users are able to share their individual report output with other users. Additionally, custom folders be created where specialized reports, report outputs, and ad-hoc queries can be shared among approved individuals or specified user groups. **[FR13.23]**

Report authors have the ability to augment the core metadata model with ***an upload of external data that is joined to existing fields in support of an integrated reporting***. This is done within a single web-based tool named Report Studio. **[FR13.7]**

All ***reports***, dashboards, and queries can be ***set up by users and administrators, including DHS staff, to run automatically, on a predefined schedule***, and saved within the IE-BM Solution, distributed to subscribed users via email, or saved to a file system. Specialized reports that retrieve data for a relative time frame (i.e. last week, last month, or for the current year) can be created and scheduled to automate reports that are needed on a regular basis. **[FR13.13, FR13.21]**

Users can ***create and save reports to a Client record***. When working on a specific Client case, users will save reports they've been working with to their physical computer. From there, they upload or attach the report to the specific Client record. The IE-BM Solution also provides the ability to create links of the Client's home page to generate reports for that Client on-demand in real time with up-to-date data from the Data Layer. **[FR13.19]**

Report definitions and outputs can be moved to an archive folder structure within our proposed Solution or simply deleted by authorized users. The IE-BM Solution also has the ability to write backup files to a file system, so that if a report is accidentally deleted, it can be retrieved from these backups. **[FR13.14]**

Our proposed Solution will utilize built in auditing capabilities that track specific actions like logging in, running a report, or even what query was run. It can also ***show a listing of available online reports, along with a description of each report***, a listing of links to the last generated copy of each report, and information about the request that produced each report, including who requested it and the date and time the request was made. These actions are logged to a dedicated database upon which several pre-built audit reports can be run by administrators or other permissioned users. **[FR13.16, FR13.18, FR13.20]**

The number of concurrent reports that can be run interactively or in the background can be tuned based on the business environment. These thresholds can also be adjusted based on periods of high system utilization (the business day) and low system utilization (overnight), queuing up additional reports that cannot be processed at the time of request. **[FR13.17]**

The IE-BM security model will be leveraged in several of our reporting functional areas. Access to, and their distribution or assignment, reporting objects can be restricted by group, role, or even individual user account. These objects can be folders, reports, dashboards, or application functionality such as limited scheduling of reports to certain roles. In addition to securing objects, the data itself can be restricted using the same model. Full Client or program records can be restricted making them available to those authorized to receive this data. And specific fields can be masked to prevent data from being shown to users. This security is built into the Cognos metadata model, so that even users running ad-hoc queries have their data limited by the implemented security protocols. **[FR13.15, FR13.24, FR13.29]**

SECTION HIGHLIGHT
Our proposed Solution will create a single platform for case and client information with a robust data warehouse. As such, the IE-BM Solution offers not only access to data, but also actionable insights about Clients, Workers, and programs.

Reporting Capabilities

Our proposed Solution supports ***numerous types of business analytics and reports, including:***

- **Static Reports –** The system will provide for the delivery of static reports required by the business that are generated on specific schedules. For report submissions to outside entities (such as Federal Reports), some reports will be defined to have a 'draft' prior to submission of official reports via interfaces or other means. The state will have the ability to manage the status and submission of these phased report submissions.
- **Parameter Driven Reports** – Users will have the ability to generate canned reports as needed, while specifying certain parameters used to drive the report outputs.
- **Dashboards –** Users will have role-based reporting capabilities tailored to their specific role and work.
- **Statistical Reports –**Users will have role-based access to statistical reports detailing program and population analytics, providing the state will insight into case, demographic, financial, service and program specifics. As discussed below, this will include reports that incorporate predictive models to help Arkansas in addressing future program and population needs.
- **Ad hoc Reports –** Users will have the ability to define and generate reports specific to their queries and business needs using the data in the IE-BM data warehouse.

All of these types of reports are built using a common metadata model that removes the need for authors to manually join data together and has clearly labeled business field names. Most report types are developed in Cognos Report Studio, which allows for reports and queries contained within to be re-used in other reports. This accelerates report development time and gives authors a library of content to leverage. **[FR13.1]**

Cognos Report Studio tool has the ability to automatically generate template-like prompts for parameters within a report. Report authors can further customize the layout and type of prompt included in the report. **[FR13.6]**

Our reports and dashboards have the ability to create a variety of prompts and filters for parameters including date ranges, DCO County Offices, programs, and others. These filters are built into the analytics, populated with values contained within in the IE-BM Data Layer, and then applied to the resulting data set. With the parameter selections, users can take a more targeted approach to their analyses, as depicted in the figure below. **[FR13.2, FR13.3]**

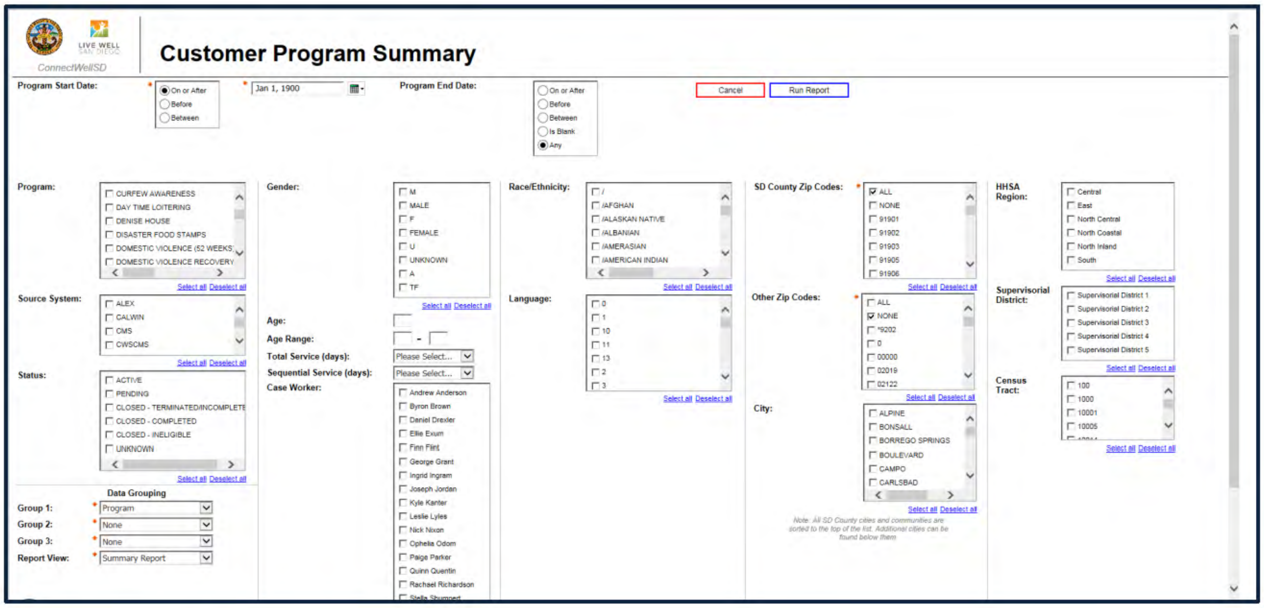


Figure 73: Our proposed Solution allows users to target specific parameters.

Our proposed Solution has a wide variety of chart and graph types to represent data visually including bar, line, pie, area, bubble, radar, and more. **[FR13.5, FR13.10]**

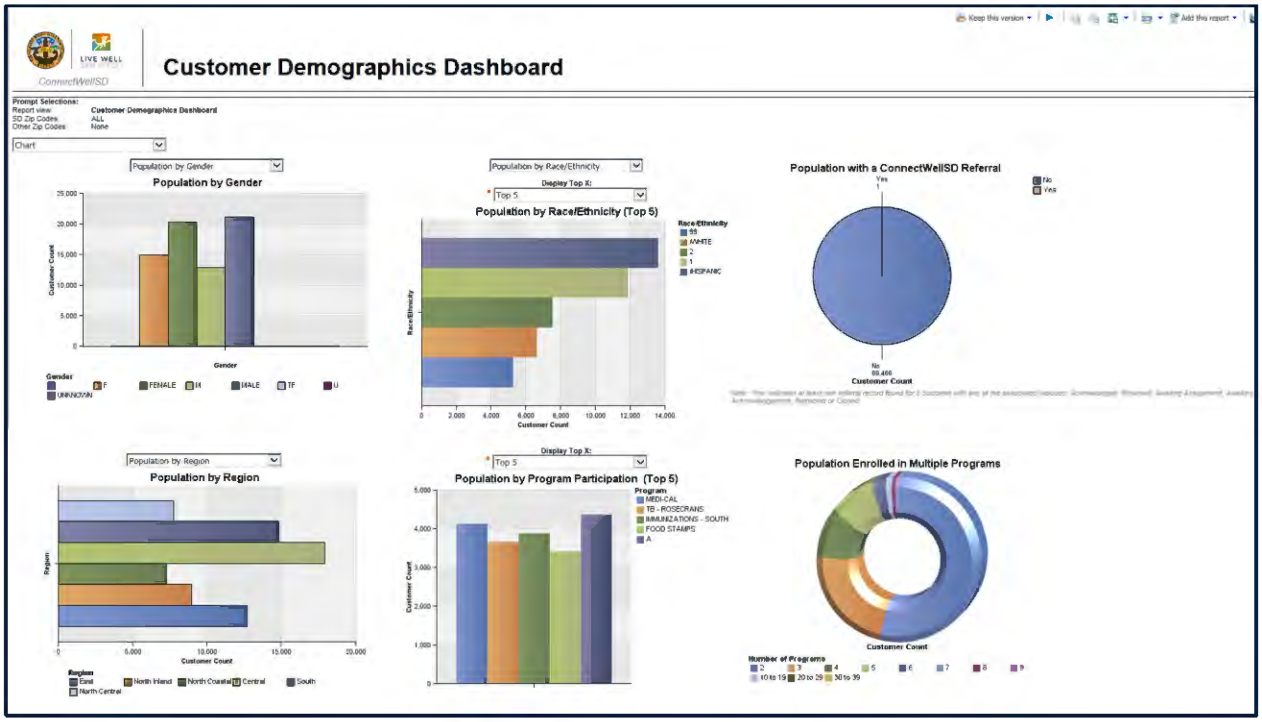


Figure 74: Our proposed Solution has a wide variety of chart and graph types to represent data visually.

Data in IE-BM Data Warehouse is modeled in support of drill-down and roll-up navigation. Our proposed Solution will provide the users an easy to use interface to roll up and down within a report or between reports. Additionally, data elements such as client and case details, payments and overpayments, actions taken on a case, case status, and others will be built out in the Data Layer and summarized to support reporting and dashboards. Attributes such as dates and addresses will be stored in singled dedicated tables, which means the same date table will be used whether the report is pulling payment dates, enrollment date, or interview dates, for example. The tables and columns will be modeled within Cognos and exposed to report authors for use in different types of analytics. This metadata model will pre-define the joins between these tables, and give the fields easy-to-understand business names. This enables users with a modicum of training to start building queries and reports in the interest of self-service. **[FR13.8, FR13.25, FR13.26]**

With web-based client tools, ad-hoc querying capabilities are available to users in same the group or role. These users have access to parts or the whole of the IE-BM Data Layer data in order to link and analyze data, look for correlations, and identify causal relationships. Users are able to save and share ad-hoc queries they create for re-use, or as templates. **[FR13.35]**

Reporting and Data Design

Dashboards are tailored to individual user roles and business purposes. By integrating the IE-BM security model with the underlying data, our reporting solution supports the creation of a single dashboard to display relevant, permissioned data for each individual user, based on their user group's security profile. This eliminates the need to recreate the same dashboard multiple times for each user group with a different security profile or set of permissions. This underlying security model only allows users to view, drill down, and roll up the data to which they have access. **[FR13.33]**

Dashboards will be designed with an alerts section that displays specific messages or notifications based on some pre-configured business rules or other criteria. Cognos Event Studio functionality allows actions to be taken if certain conditions are met. These actions include running a report, sending an email, or writing a record to a database. These events are built off the same metadata model as the reports and, therefore, can evaluate data contained within the IE-BM Data Layer. **[FR13.9]**

A custom date table is set up to support calendars that are used by DHS. Common calendars include the Federal Fiscal Year, State Fiscal Year, and calendar year. Date fields within those calendars can be further customized with short names, long names, abbreviations, Julian dates, and other formats. This will be used in the generation of reports for specific defined periods. **[FR13.12]**

The IE-BM Data Layer will have data modeled in a manner that supports historical and trend analysis. Data will key around dates that specific events occurred - enrollment date, processing date, payment date, etc. This, combined with a robust date table, will allow users and reports to view and compare data over time. **[FR13.27, FR13.28]**

SECTION HIGHLIGHT

DHS conducted a large surge effort, from August – December 2016, to complete thousands of Medicaid applications and case actions. As part of that effort, the EEF reporting team produced a weekly management report with a historical plot showing number of open, overdue applications each week. The goal of the team was to see that overdue applications were a) decreasing over time and b) being closed quickly enough to meet the December 31 deadline. These historical and current figures highlighted trends and allowed the executive team to make informed planning and staffing decisions.

Our proposed Solution will support predictive reporting and analytics through statistical models provided by SPSS. These models are built into the reports, so that a ***predictive formula***, when fed with the data from the IE-BM Data Layer, ***is used to project future case actions and requirements***. For example, a report could take data items from the Data Layer such as Client address, application type, and date. These values will be automatically plugged into the formula, and the report will project the upcoming case load for county offices. Similarly, DHS-developed statistical models could be built into the reports to predict volume of upcoming determinations, scheduled interviews, and projected payments and benefits. **[FR13.30]**

Our reporting solution will connect directly to the operational databases in order to build ***real-time reports and analyses***, such as volume of applications waiting for action to be taken; time spent processing application; application status, priority, or type; interviews scheduled; available capacity; historical performance metrics; or filters by office or Eligibility Worker and status. The IE-BM Data Layer is also designed so that some real-time requirements may be offloaded to data warehouse tables that are updated frequently; thereby, preserving the online system performance and user experience. **[FR13.31]**

Key user actions and dates are captured within the IE-BM Solution. These data points give Supervisors and administrators insight into the work being performed by individual Workers and how long that work is taking. Combined with the DHS organizational structure, this data can then be rolled up by geography, organizational unit, application and program type, or other common structures to report on performance metrics such as average interview length, average application processing time, Worker overtime, performance by type of application or task, and annual and semi-annual reports. The system will create action history reports and display results immediately. These reports can provide insights on inquiries, case, Client, and other variables defined by DHS. **[FR13.32, FR13.34, FR13.40]**

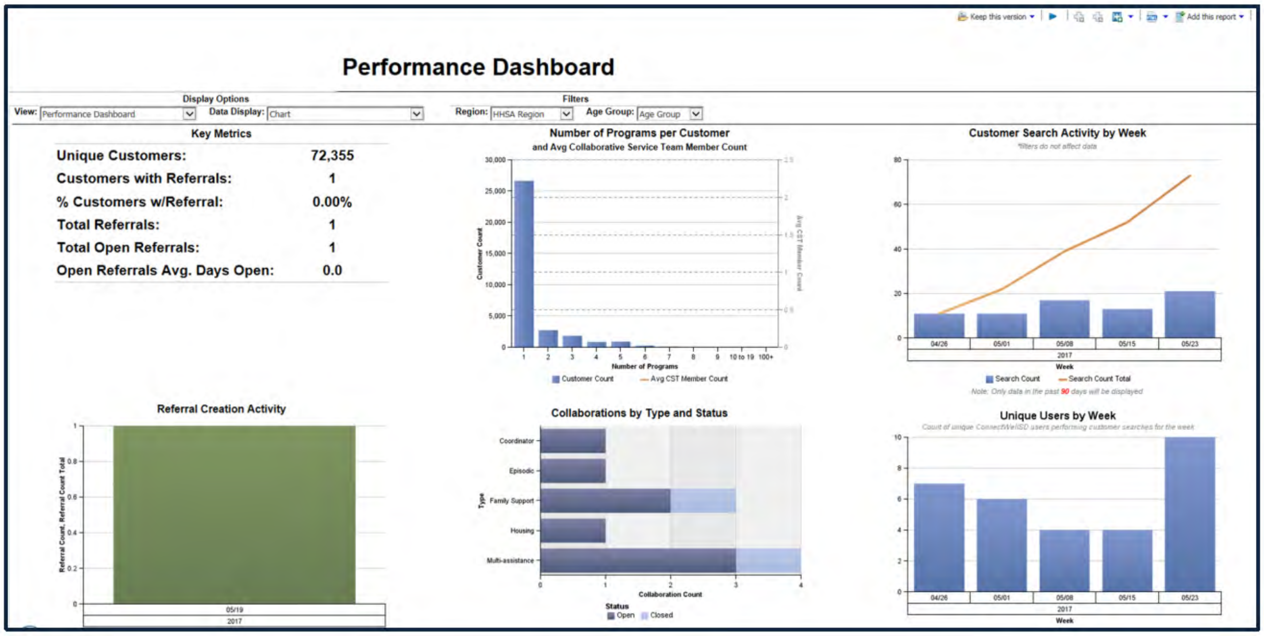


Figure 75: IBM successfully implemented a solution for the County of San Diego utilizing both Cúram and Cognos to meet the County's reporting requirements.

Filters included at the top of the report enable a more targeted analysis for the users. The figure above is the (ConnectWellSD) Performance Dashboard which gives a quick glance at how many unique Clients there are, the referral creation, and program participation. This also depicts user adoption, system utilization, and collaboration.

The geographical hierarchy of Arkansas used by DHS will be a key table within the IE-BM Data Layer. For example, our proposed Solution will count clients by county (service and residence), user actions by office, and data can be analyzed down to the zip code. See the illustrative example heat map below showing recipient counts by ZIP code. **[FR13.39]**

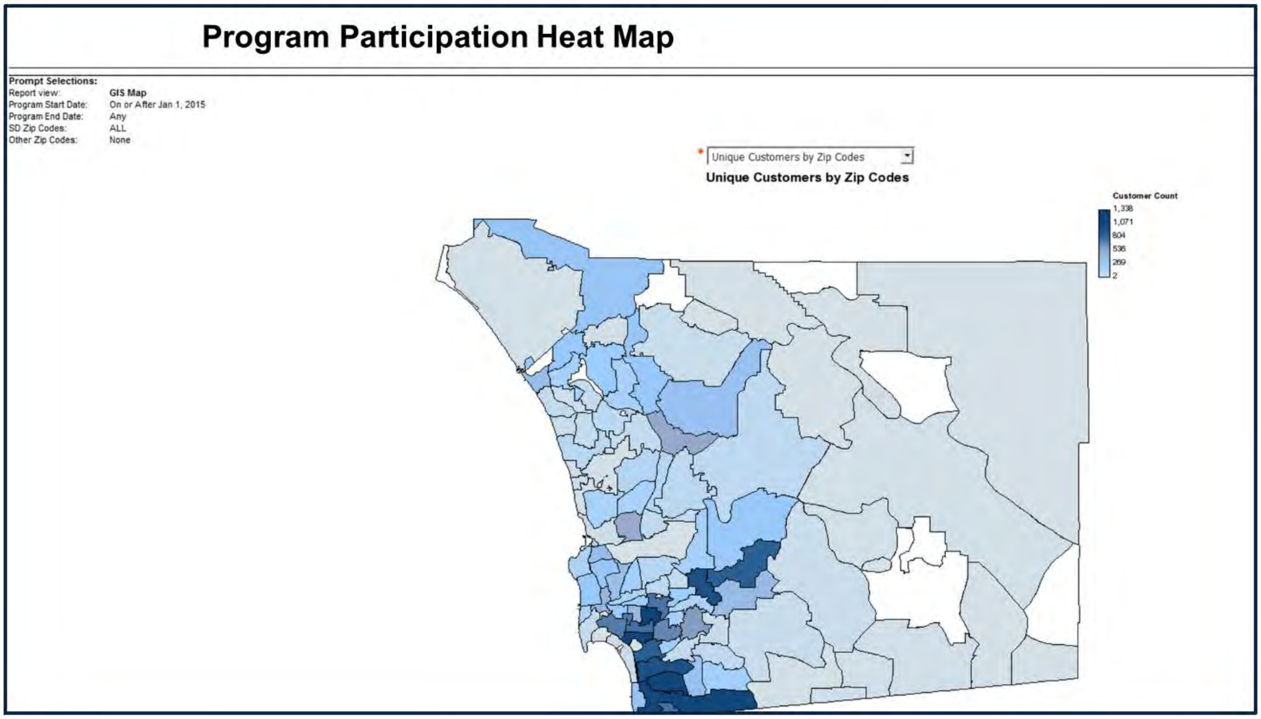


Figure 76: Our proposed Solution will be able to provide detailed level analysis on a geographical level for your users to monitor and track performance.

The IE-BM Data Layer is designed with multiple types of reporting in mind. Unadulterated data is used to produce statutory reports. Data around users and their actions is combined with organization and geographical hierarchies to generate performance analytics. Data from various programs and systems is stored within a common set of tables to facilitate cross-program reporting and predictive analytics. This data set is combined with Clients that have been mastered in MDM in order to understand the total number of unique Clients served by DHS, while enabling DHS's data to drive better client outcomes, better program performance, more effective allocation of resource, and anticipatory investments through evidence based decision making. **[FR13.38]**

Data around users and their actions within the IE-BM solution is captured and used to monitor staff performance metrics are being met. Staff action data is combined with organization and geographical hierarchies to generate performance analytics. Supervisors and analysts will have the ability to view individual tasks that are assigned to users by Organization or by Supervisor. A Supervisor can select their name and “Get Users for Supervisor” to view tasks assigned to their direct reports.

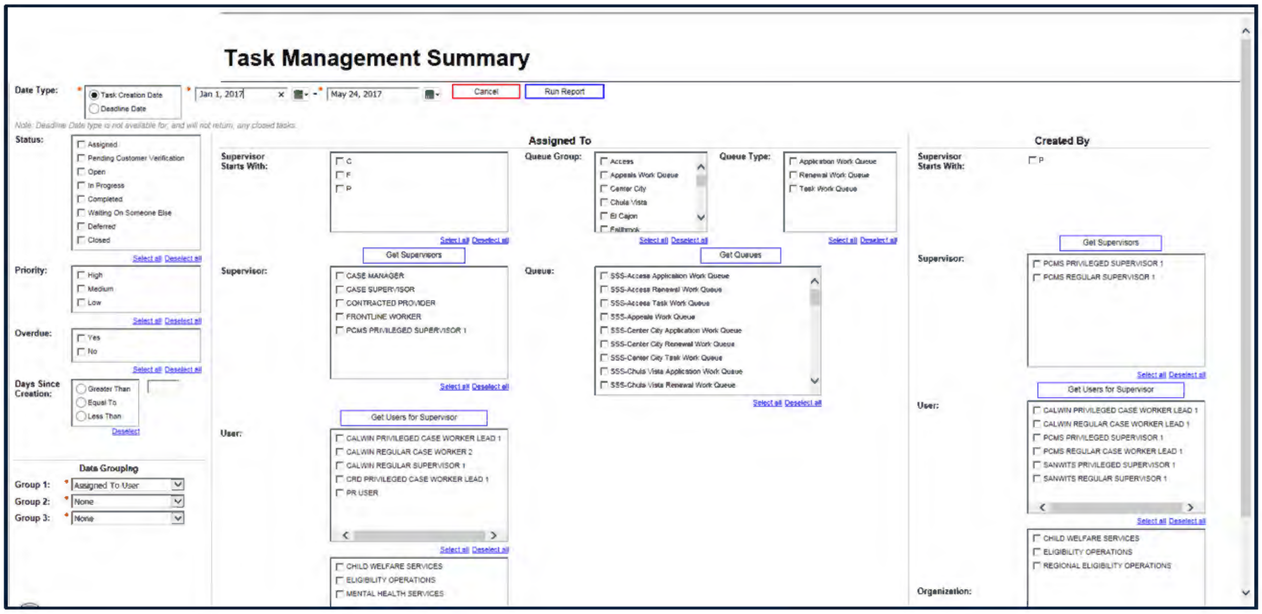


Figure 77: Supervisors will be able to utilize a Task Management Summary View to better manage the allocation of staff.

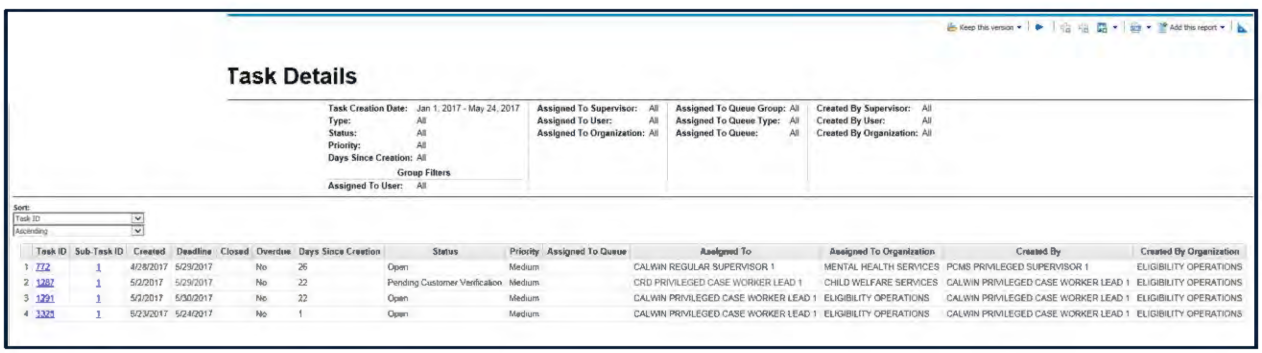
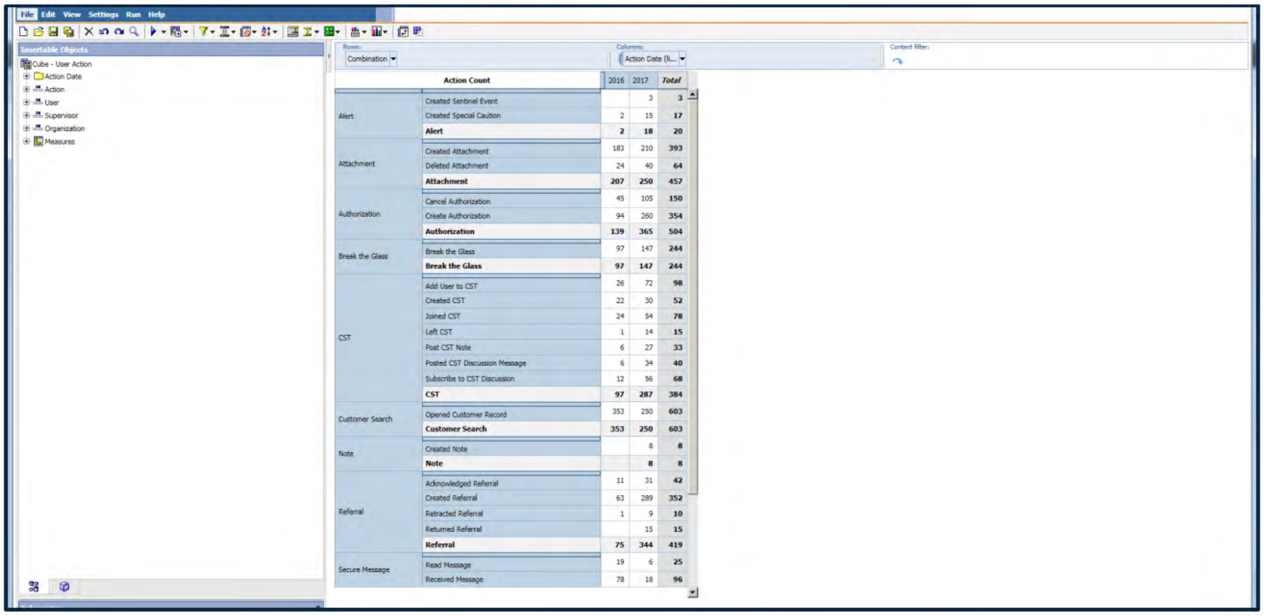


Figure 78: Supervisors can drill down to task details to evaluate workload, employee performance, and other factors.

In addition to monitoring staff productivity at an operational level, the IE-BM data layer will support analysts to view actions being performed in the aggregate. Below, the User Action Cube contains counts of many of the key Cúram activities users will be performing. This allows an analyst to group and filter this data to identify the frequency and type of actions by users. This data will also provide key metrics to executives on overall system use by staff.



Action Count		2016	2017	Total
Alert	Created Sentinel Event		3	3
	Created Special Caution	2	15	17
	Alert	**2**	**18**	**20**
Attachment	Created Attachment	183	210	393
	Deleted Attachment	24	40	64
	Attachment	**207**	**250**	**457**
Authorization	Cancel Authorization	45	105	150
	Create Authorization	94	260	354
	Authorization	**139**	**365**	**504**
Break the Glass	Break the Glass	97	147	244
	Break the Glass	**97**	**147**	**244**
CST	Add User to CST	26	72	98
	Created CST	22	30	52
	Joined CST	24	54	78
	Left CST	1	14	15
	Post CST Note	6	27	33
	Posted CST Discussion Message	6	34	40
	Subscribe to CST Discussion	12	56	68
	CST	**97**	**287**	**384**
Customer Search	Opened Customer Record	353	250	603
	Customer Search	**353**	**250**	**603**
Note	Created Note		8	8
	Note		**8**	**8**
Referral	Acknowledged Referral	11	31	42
	Created Referral	63	289	352
	Retracted Referral	1	9	10
	Returned Referral		15	15
	Referral	**75**	**344**	**419**
Secure Message	Read Message	19	6	25
	Received Message	78	18	96

Figure 79: Our proposed Solution provides easy-to-use features such as a User Action Cube View which allos drag and drop for dimensions.

Our data warehousing solution operates by extracting data from the transactional database, and where needed, transforming and summarizing that data to a set of 'line of business' tables for a given area of the application. Data from both the Cúram operational database and other data sources are processed for the purpose of business intelligence and analysis. Cognos and SPSS are then used in conjunction with the data warehouse to produce required reports, dashboards, and other forms of information analysis.

1.14.2 Mobile Reporting

Significant System capabilities in this area include:

- Providing real-time dashboards to DHS Executives via mobile devices
- Generating pre-populated forms and notices

Instructions: The Vendor should describe its approach to addressing Mobile Reporting requirements.

The IBM Cognos Mobile solution is a Business Intelligence solution for ***DHS executives and mobile Workers who require real-time, on the spot, wireless access to important, case sensitive and confidential information***. IBM Cognos Mobile extends the full value of Cognos 10 Business Intelligence to Agency administrators and staff requiring timely, personalized and secure information beyond their traditional office setting.

Mobile dashboards and reports are developed and accessed through multiple mobile channels depending on which suits your business need. Users access the entirety of the analytics built within the IE-BM Solution through a mobile browser. This channel opens the full suite of user-interaction that will be available via the desktop experience - parameterized reports, visualizations, drill-down and roll up, and executing reports in multiple formats. For example, DHS executives and managers will monitor office workload by geographic location, application volume and throughput, client wait time, timeliness, and other important metrics while in meetings or on the go. The other method of accessing IE-BM analytics will be through the IBM Cognos mobile app for iOS and Android. The application provides a user interface that was specifically designed for mobile devices, which includes specialized navigation controls and the ability to access data while offline. Both methods of mobile access and the regular desktop interface are built upon the single Cognos server installation; thus, reducing setup and administration effort. Building on the same infrastructure also means that the data available to desktop reporting is available to build into mobile reports and dashboards. Users have the full universe of data contained within the IE-BM Data Layer to display, filter, and visualize from their mobile device. **[FR13.41]**

Below is a graphic of a mobile report as viewed through a mobile form factor. The reports can be viewed on popular mobile platforms including iOS and Android.

Figure 80: Our proposed Solution will utilize Cognos Mobile so that users can drill down on metrics while on the go.

Accessing Cognos Mobile through a mobile browser provides a feature rich client experience that mirrors accessing the reports through a desktop computer. Users can interact with the data by drilling down, filtering, and sorting the data. The full range of visualizations including bar graphs, trending line charts, histograms, and others are available to bring the data alive. Prompts and filters are supported such that reports can be designed to be flexible and support the goal of self-service. The same types of prompts such as date ranges, radio buttons, pick lists, and free text entry are available through a user's mobile device. Time series reporting allows users to see data based on defined time intervals. The Solution will allow users to view their results geographically. **[FR13.42, FR13.43, FR13.44, FR13.45, FR13.46]**

Pre-populated forms and notices are generated with data stored in the IE-BM Data Layer and rendered in PDF format through a mobile browser for viewing, emailing, or saving. These forms leverage batch-loaded data within the IE-BM Data Layer or connect to the operational IE-BM Solution so that ***forms and notices are generated in real time***, using data entered or updated by the user moments before. This integration between the IE-BM operational system and the Cognos reporting application will reduce overhead and latency, while supporting accurate information is recorded and logged about clients. **[FR13.47, FR13.48]**

The Cognos Mobile app for iOS and Android enables the consumption of dashboards and data through an interface designed for a mobile device. Specialized visualizations and controls within the mobile app enable users to interact with the data more easily and in a more meaningful display. The intuitive app, combined with well-designed dashboards, engages users more quickly and empowers them to dig into the data, thus furthering the goal of key actors making data-driven decisions.

The IE-BM Solution also allows access to certain forms and notices from their mobile device when they access the Cúram Universal Access Portal. If the client is registered and has opted to receive mobile notices, they are sent a SMS text message to access their client portal either through their mobile device or by logging into their Cúram Universal Access account on a computer. When they log into their account, they go to their inbox to view system generated notices informing them of agency decisions or asking them for additional verification information needed for the Worker to complete their program eligibility determination. Periodic change forms, also accessible from their mobile device, needed for SNAP and TANF/TEA program compliance are made available on the Client Portal for the application to electronically complete and submit.

1.14.3 Statutory Reports and Notices

Significant System capabilities in this area include:

- Providing all notices/reports in required languages
- Providing mandatory SNAP reports
- Producing mandatory fiscal reports

Instructions: The Vendor should describe its approach to addressing Statutory Reports and Notices requirements.

IBM has worked with multiple states that have implemented eligibility solutions including North Carolina, South Carolina, Minnesota, and Missouri. We have helped these states produce necessary mandatory reports, including SNAP timeliness and accuracy reports similar to those identified in your list of requirements.

From our experience in generating the federally-required SNAP reports, we understand that different reports are for different reporting periods. Even if the reports are annual, the month in which they need to be submitted to FNS varies by report. As discussed above, our proposed Solution accommodates a Date table to include months and quarters along with Julian Calendar Year, Federal Fiscal Year, State Fiscal year to aggregate numbers to meet these reporting period specific FNS needs. This supports the ability to compare reports from previous submission periods and generating reports in advance for verifications, in support of industry practices. **[FR13.51]**

The table below lists our understanding of the SNAP reports identified by report number and name within the Functional requirements that are required by the IE-BM Solution. **[FR13.51, FR13.52]**

Table 3: SNAP reports as identified in T-6 Functional Requirements Matrix

Report Number	Report Name	Description	Frequency
FNS-292B	Disaster SNAP Operations	Includes: ▪ Number of new households issued benefits ▪ Number of new persons assisted ▪ Total Value of benefits issued	Within 45 days of completing the disaster SNAP operations
FNS-101	Participation in Food Programs by Race	Includes: ▪ Number of household contacts broken down by race ▪ Number of Hispanic /Latino household contacts by race	Yearly
FNS-366B	SNAP Program and Budget Summary Statement – Program Activity Statement	Includes: ▪ Number of Certifications broken down by Approvals, Denial and Overdues ▪ Number of Fair Hearings ▪ Number of Fraud Investigations ▪ Number of Disqualifications and Prosecutions	Yearly
FNS-388/388B	State Issuance and Participation Estimates	Includes: ▪ Issuance Dollar Amount ▪ Participating People broken down by Public Assistance and Non-assistance ▪ Participating Households broken down by Public	Monthly

Report Number	Report Name	Description	Frequency
		Assistance and Non -assistance	
FNS-759	SNAP Education Reporting Form	Includes: ▪ Number of SNAP recipients in SNAP-Ed broken down by Age groups, Gender, Race ▪ Number of all other participants in SNAP-Ed broken down by Age groups, Gender and Race ▪ Total Number of SNAP-Ed participants ▪ Actual Numbers and Estimated Numbers	Yearly
FNS-583	SNAP Employment and Training Program Activity Report	Includes: ▪ Number of work registrants ▪ Number of new registrants ▪ Number of ABAWD's ▪ Number of non ABAWD's ▪ Number of participants broken down by the work components	Quarterly
FNS-834	Direct Certification Rate Data Element Report	Includes: ▪ Number of SNAP Children Directly Certified for National School Lunch Program ▪ Number of Children in Special Provision Schools Operating in non- base year ▪ School Age Children in SNAP households during	Yearly

Report Number	Report Name	Description	Frequency
		the months of July, August, September	

We understand the importance of the Fiscal reports for State budgeting and planning purposes and also for Federal Financial Participation claiming. The following table lists our understanding of the Federal Reports included in the Functional Requirements Matrix that will be required by the IE-BM Solution. **[FR13.51, FR13.53]**

Table 4: Federal Reports as identified in T-6 Functional Requirements Matrix

Report Number	Report Name	Description	Frequency
SF-425	Federal Financial Report	This report is used for State projections of Federal funding needs for the upcoming Federal Fiscal Year. Includes: ▪ Federal Cash ▪ Federal Expenditures and Unobligated Balance ▪ State Share ▪ Program Income	Quarterly/Annual
FNS-778 /778A	Federal Financial Report (SNAP Operations)	This report is used for State projections of Federal funding needs for operating the SNAP Program for the upcoming Federal Fiscal Year. It includes costs associated with: ▪ Certification ▪ EBT Issuance ▪ Quality Control ▪ Management Evaluation ▪ Fraud Control ▪ ADP Development ▪ ADP Operations ▪ Fair Hearing ▪ Total Costs	Annual

Report Number	Report Name	Description	Frequency
FNS-366A	Program and Budget Summary Statement	It includes the breakdown of SNAP Operation budget costs requested and approved and is broken down by the functions ▪ Certification ▪ EBT Issuance ▪ Quality Control ▪ Management Evaluation ▪ Fraud Control ▪ ADP Development ▪ ADP Operations ▪ Fair Hearing ▪ Total Costs	Quarterly/Annual
FNS-46	Issuance Reconciliation Report	This report is used to report on SNAP benefits issued during the reporting month It includes: ▪ Federal Obligations ▪ Transaction Reconciliations broken down by Lost/Stolen, Altered/Counterfeit transactions, Out of State, Unassigned/Unstamped ▪ Other Liabilities ▪ Total Over issuance ▪ Total valid issuance	Monthly
FNS-209	Status of Claims Against Households	A quarterly report which documents the State of Arkansas' activities relating to recipient claims during the report quarter and the status of claims from previous quarters. Includes: ▪ Intentional Program Violation (IPV), aka Fraud ▪ Inadvertent Household Error (IHE)	Quarterly

Report Number	Report Name	Description	Frequency
		▪ State Agency Administrative Error (SAE)	

We have a wealth of experience working with CMS on both internal operations as well as on the collection of Medicaid and Children's Health Insurance Program (CHIP) enrollment data via multiple reporting vehicles. As a part of our proposed Solution, the IBM team will use this experience to create reports that satisfy demonstration waiver requirements for the Arkansas Works program. Our proposed Solution will provide data to CMS on a range of indicators related to application, eligibility, and enrollment processes for Medicaid programs, including initial open enrollment figures.

In addition to data collected for Arkansas Works, IBM will enable reporting to CMS through the Medicaid Budget and Expenditure System (MBES). The enrollment information will consist of a count of unduplicated individuals enrolled in the state's Medicaid program at a point in time, during each month, in the quarterly reporting period. The enrollment data will identify the total number of Medicaid enrollees and provide specific counts for the number of individuals enrolled in the new adult eligibility group included within Arkansas Works program, also referred to as the "VIII Group."

We have generated timely 1095-B tax forms from our Integrated Eligibility System Engagements in other states. We understand DHS' responsibility to provide this notice to applicants that received medical coverage during the calendar year so they can submit it along with their yearly tax returns. We have hands on experience in supporting this ACA requirement in several states including Missouri and Minnesota. Our proposed Solution can generate this notice and deliver it through the applicants preferred communication channel, where permitted by policy. If the applicant chose to receive electronic notifications, we can make this important 1095-B tax notice available for Print, download and eventual submission to the IRS through the IE-BM Client Portal. This provision allows for the download and the reprint of notices by the applicant and avoid expensive requests by the Applicant to the Agency requesting reprints and requests for this tax related document. **[FR13.54]**

Our team member, Northrop Grumman, developed and maintains DHS's Enterprise Data Warehouse which supports the agencies current reporting needs. The IBM team is uniquely positioned to leverage your previous reporting investments to reach your desired state with minimum interruptions to your day to day operations – lowering the risk that the agency will fall out of Statutory reporting compliance. **[FR13.50]**

Our MDM solution along with checks and balances built in within every step of our ETL process will support data accuracy when it comes to reporting needs. We will also plan on piloting our reporting solution by running reports from our proposed Solution in parallel with your existing reports from legacy system before retiring those reports to validate our report content.

Notices can be generated in the preferred language including English, Spanish and Marshallese and distributed to the preferred address of the head of household or in some instances the Authorized Representative that is acting on behalf of the Applicant family. **[FR13.37, FR13.49]**

1.15 Work Requirements (DHS Optional Deliverable)

The State of Arkansas is considering legislation to require certain Medicaid recipients attest that they are meeting specific criteria (e.g. searching for work, training) required to continue receiving Medicaid benefits. The high level requirements include:

- Identifying clients who are receiving Medicaid who must provide information on a scheduled basis. This may include exempting a client from the reporting requirement, based on specific criteria such as:
  - Receiving income
  - Able bodied adults (e.g. ABAWDs)
  - Enrolled in E&T or TANF/TEA
  - Type of program (e.g. long term care)
- Provide a self-service mechanism for clients to report specific information confirming their participation in activities required to meet the work requirements
- Provide the ability for DHS to review and approve the client provided information
- Track when clients have not reported and proceed with required actions to terminate Medicaid benefits if they do not meet the pre-defined criteria
- Provide DHS the ability to reinstate Medicaid benefits
- Provide notices, alerts and other communications to the clients regarding the requirements, the status and other criteria

The cost of meeting these requirements should not be included in the proposal.

Instructions: The Vendor should describe how their solution will be integrated into the overall IE-BM Solution and provide DHS with their core functionality which can be utilized to support these new requirements.

We believe our proposed IE-BM Solution has the capability and flexibility to support your future needs. Potential new work requirements can be supported via four (4) main components of the IBM Cúram product which underpins the IE-BM Solution:

- Work Requirements Processing
- Sanction Capabilities
- Work Activity Tracking
- Workflow and Correspondence

The following will discuss the capabilities of the IBM Cúram product and how it may be utilized to meet future work requirements.

Work Requirements Processing

The IBM Cúram provides OOTB functionality associated with tracking work requirements associated with Cash and Food Assistance programs, for example SNAP and TANF/TEA. This same functionality can be leveraged, extended, and incorporated into the rules and processing of the Medicaid program eligibility under a future effort if the State of Arkansas enacts legislation requiring recipients of medical assistance to meet work requirements to continue receiving assistance.

Through this functionality, evidence about the household member and their household are evaluated to determine if they are subject to work requirements or if they are exempt or have a valid non-participation reason. For example, exemption reasons for SNAP are based on evaluating evidence including the member's age, disability, or need to care for incapacitated persons or an underage child. Exemptions can also be based on factors such as existing employment, hours worked, income earned, unemployment details, or student status. Valid non-participation reasons include factors such as lack of adequate childcare, household emergencies, or illness of a household member. Factors such as enrollment in drug and alcohol treatment programs, domestic violence status and status as a migrant or seasonal worker are also considered. The screen below shows how IBM Cúram displays the results of SNAP work requirements determination. The Solution will assess mandatory work program participation for each case member, by program.

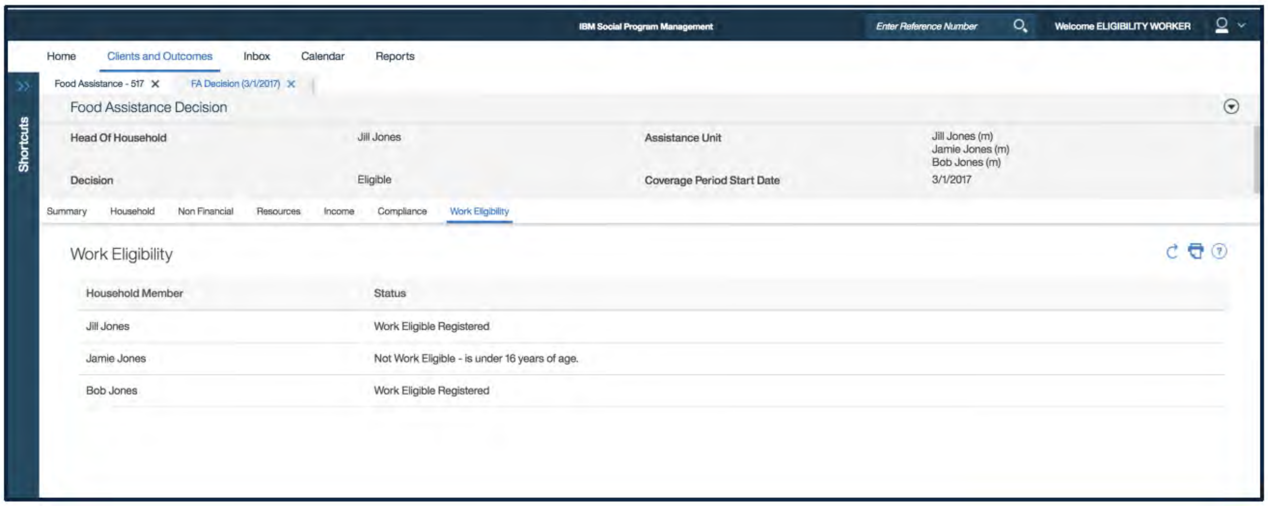


Figure 81: The IE-BM Solution assesses case members for mandatory work program involvement, by program.

Different programs can have different work requirement rules. Therefore, cash assistance participation can vary from food assistance participation rules. In this same way, the Medical Assistance work requirement rules in the IE-BM Solution can reuse rules that may apply across programs and have its own unique considerations evaluated as part of the Medical Assistance rules.

Another benefit of our IE-BM Solution is that the work requirement evidence and program eligibility determination results can be shared across programs. Thus, the Medical Assistance rules can exempt a client from participation requirements if they are already enrolled in TANF/TEA or E&T.

Sanctions

Our IE-BM Solution provides sanction assessment functionality that is integrated with work requirements and eligibility. Sanctions may be imposed for the failure of various rules, including work registration. The sanctions assessment is separate from the eligibility determination and identifies if an individual is subject to a sanction and the penalty that should be imposed. The below figure displays how a Worker can view sanctions for a Client.

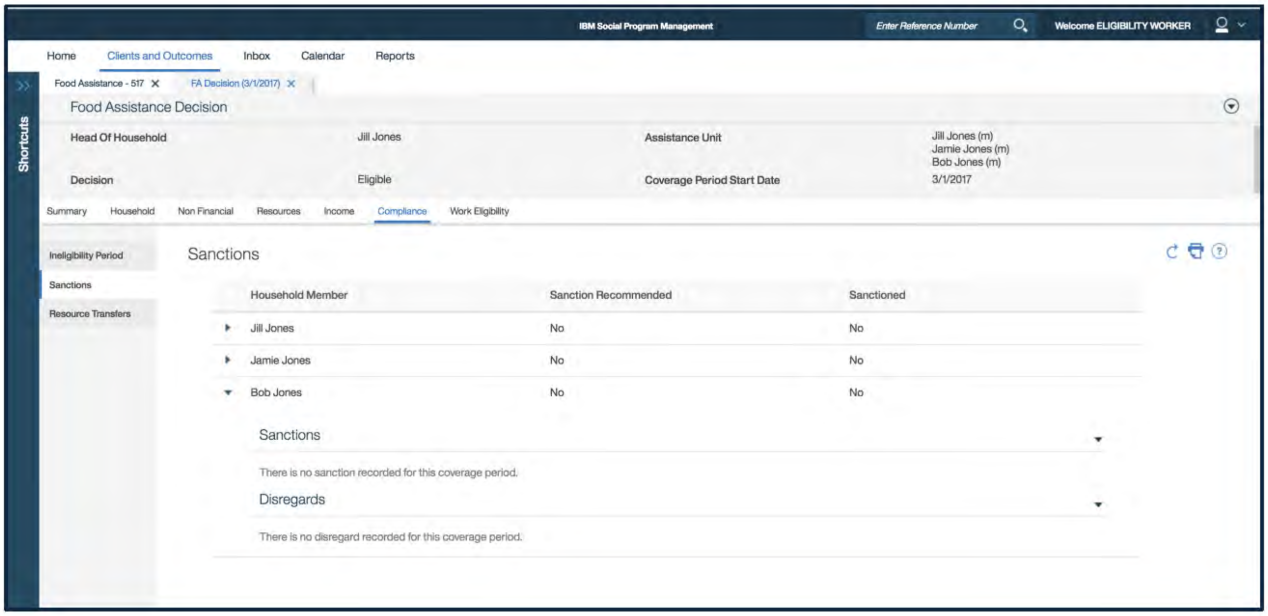


Figure 82: The IE-BM Solution will list case members and sanction results, by program.

IBM Cúram, a major component of our IE-BM Solution, does not create sanctions automatically. Instead it triggers a workflow where the Worker is alerted if the individual(s) fails the sanction assessment so the Worker can decide what action should be taken. The Worker may choose to sanction or override the sanction recommendation for the individual(s). The sanction assessment information displays the reason the individual(s) may be subject to a sanction and the recommended penalty that should be imposed.

The penalty which may be imposed as a result of failure of program requirements depends on a number of factors and can take into account escalating levels of sanctions if previous sanctions have been imposed. For example, in the IBM Cúram Food Assistance sanction processing the following levels are defined:

- **Level 1** – Individual is ineligible for 1 month if no previous sanction exists for the member
- **Level 2** – Individual is ineligible for 3 months if a previous Level 1 Work Non-compliance Sanction exists for the member
- **Level 3** – Individual is ineligible for Food Assistance Benefits for 6 months if a previous Level 2 or higher Work Non-Compliance Sanction exists for the member

In a similar way, different levels of sanctions and penalties can be defined for Medical Assistance cases who do not meet work requirements and have good cause not to do so.

Penalties may cause the individual to be ineligible for the sanctioned program, but in some circumstances a sanction imposed on an individual member of a household may make the entire household unit ineligible or may result in a reduction in benefit for the entire household unit.

Sanctions can be updated at a later date based on future assessments or Worker decisions, allowing the Worker to modify or end sanctions and reinstate benefits as appropriate.

Work Activity Tracking

Our IE-BM Solution continues to leverage the IBM Cúram Universal Access functionality, which provides the ability for Clients to report life events or changes in circumstances. This functionality can be further extended to meet future needs that the State might have to allow Clients to self-report on work activities. IBM Cúram Life Events and Evidence Broker functionality can be used to associate the Client provided information as incoming evidence on the Medical Assistance case and prompt the Worker via workflow to review and evaluate the information.

Additionally, IBM Cúram Income Support functionality allows work activities to be tracked on related Client Outcome Plans. For those activities authorized to be delivered by a Provider, such as employment or training, Providers can report hours, attendance, and participation via rosters which can be used to update work requirement evidence associated with the Client. This information is then utilized as part of sanction assessments as described above.

SECTION HIGHLIGHT

By proposing the IE-BM Solution underpinned by Cúram, a recognized industry COTS product, the State will capitalize on the maintainability and upgradability of a COTS product that will continue to support your business process as they may change.

Workflow and Correspondence

As discussed above, workflows are integrated with the work requirement and activity tracking processes that are provided with other programs in our IE-BM Solution. Medical Assistance can leverage these workflows or have their own unique workflows configured to meet Medical Assistance work requirement needs. Workflows are also integrated with alerts and document and correspondence generation, such that notices associated with provision of work requirement evidence, documentation, sanctions, or other events can be generated when needed.

In summary, we believe our proposed Solution has the capability and flexibility to accommodate future work requirements by providing the following functionalities:

- Work Requirements Processing
- Sanction Capabilities
- Work Activity Tracking
- Workflow and Correspondence

We look forward to working closely with your Staff to identify, confirm, and prioritize detailed requirements should the State of Arkansas decide to move forward with requiring certain Medicaid recipients attest that they are meeting specific criteria (e.g. searching for work, training) in order to continue receiving Medicaid benefits.

2.0 Value Added Services and Benefits

The Vendor may describe any services or deliverables that are not required by the RFP, and thus at no additional cost to DHS, but that the Vendor proposes to provide that will add value to the Project and further differentiate the Vendor from other bidders. The Vendor is not required to propose value-added benefits, but inclusion of such services may impact the Vendor's overall evaluation.

Instructions: Please describe any value added services or deliverables the Vendor is including as part of its Proposal that is at no additional cost to DHS.

A person-centered integrated eligibility system can improve the experience and value across the user community, if it includes the necessary components to promote data sharing and integration. Based on our experience with similar clients, the IBM team has included a few additional capabilities not required in the RFP to assist DHS to provide a person-centered experience to Workers, providers, and Clients. These capabilities include Consent Management and Authorization Management, Rule-Based Alerts and Single Sign-on.

Consent and Authorization Management

The IE-BM Solution will provide DHS a flexible platform for sharing data across many different stakeholders; such as providers, Workers, and users. To effectively share data across a diverse group of users, often role based access controls are not enough. Role based access permits data sharing only for those data elements that are necessary to the execution of a user's role. Supporting a more holistic view of the person, a 360-dgree view, often requires the addition of Consent and Authorization Management.

The IBM team has included this capability in the form of an asset we will reuse from the County of San Diego ConnectWellSD project. This component provides a layer of Attribute Based Access Control (ABAC) on top of the out-of-the-box Cúram Role Based Access Control (RBAC), thereby enabling very fine grained access control and compliance with regulations such as HIPAA and CFR 42 part 2.

The major aspects of this solution include:

- Collection, management, administration and implementation of Customer consent for sharing of data.
- Controlling of data display through buckets using attributes that are maintained at Cúram Organization Hierarchy levels like Organization Unit, Position and User
- Privileged data handling for example medical data that belongs to agency employees using Cúram sensitivity levels and other related attributes
- All of this data control seamlessly working the same way in Cúram and Cognos, the two User facing systems
- And finally, Break the Glass (BTG) functionality that allows a user to see the otherwise prohibited data based on emergency need and extensive auditing of such incidents to promote accountability and avoid misuse of the privilege

The inclusion of Consent and Authorization Management within the core solution provides the robust foundation DHS will need to take advantage of new service delivery models, more effectively leverage community providers, and transition from a transaction based view of performance management to an outcome based view.

Rule-based alerts

Rule-based alerts expand the value of the IE-BM Solution by providing users the information they need when they need it. The IE-BM Solution will integrate data across a number of programs. This provides a great deal of value to the users, but only if they can navigate the data to identify the information they need when they need it. The information can be included in reports, but we have found it is far more useful when it is embedded within the user's workflow so the information comes to the user instead of requiring the user to interrupt her activities to retrieve a report.

The IE-BM Solution includes functionality for alerting the Workers about potential issues or items that may be of interest to the client being served. Using the aggregated data in the Data Warehouse, Cognos drives the alerts based on the attribute values received from Cúram for the client information.

The concept is designed and implemented to separate event processing from event driven action. Event processing logic is implemented in Cognos Event Studio. The IE-BM Solution decides the presentation, including UI placement, Message text, Disable/enable at message level, Disable/enable at customer level, Alert Expiry.

To provision this as an enterprise service, this separation of concerns is critical. Our design and implementation at San Diego using this kind of separation of concern of allows the functionality to be used for other agencies thus making it an enterprise wise functionality.

Rule-based alerts will enable DHS to improve the Worker's ability to tailor services to the Client. Thus, improving the experience of both the Worker and the Client will increase productivity for the department.

Single Sign-on

Another asset that we are planning to bring from our San Diego project is the seamless integration between Cúram and Cognos and ease of hopping between them without signing out of one system and into another. Cognos functionality is presented through Cúram UI screen using iFrame technology. A user signed into Cúram will be seamlessly lead into Cognos with the same UI experience. Under the hood, Cúram is passing a token to Cognos indicating that the user is already authenticated. Cognos will then look up the user profile in Cúram to get the user role so that the user is allowed to see same kind of customer data in Cognos.

Single Sign-on improves the satisfaction across internal users by reducing the effort to access information. Users will have access to reports and the role based functionality of Cognos, simply by clicking on a tab within their Cúram portal.

3.0 Functional Requirements Approach Assumptions

Instructions: Document all assumptions related to this Response Template in the following Table. Add rows as necessary. Do not change any of the completed cells. Any changes to the completed cells could lead to the disqualification of the Proposal.

Table 5: Functional Requirements Assumptions:

ITEM #	REFERENCE (Section, Page, Paragraph)	DESCRIPTION	RATIONALE
1.	1.2.1	T-6 – Functional Requirements Traceability Matrix FR1.8 states: "The System will support Client access through multiple on-line channels including computers and mobile devices (e.g. tablets and smart phones)". We assume users do not require an app for their smart phones or tablets, but rather will access case information within the IE-BM Solution using browsers on these devices.	The IBM team will configure the IE-BM Solution so it renders on browsers accessed via mobile devices such as tablets and smart phones.
2.	1.2.1.	T-6 – Functional Requirements Traceability Matrix FR1.10 states: "The System will provide a mechanism to change the eligibility status for multiple Clients at once." We assume this is intended to mean changing the eligibility status for multiple clients on a single program case.	The IE-BM Solution will update eligibility determination results for household members as described in the example discussed in 1.2.1.
3.	1.2.1	T-6 – Functional Requirements Traceability Matrix FR1.13 states: "The System will support authorized external organizations' read-only access to the System." We assume that authorized external organizations will include organizations who require a view into data similar to DHS Workers. This will require these users to have access to the State's internal network, through a VPN for example.	The IE-BM team will configure defined external user roles to have read only access to the internal view of the IE-BM Solution.
4.	1.2.1	T-6 – Functional Requirements Traceability Matrix FR1.21 states: "The System will support communicating with Clients through a variety of methods including, but not limited to: a. Paper communications/mail b. Email c. Text" We assume that DHS has an existing print/mail infrastructure that will utilized for the IE-BM Solution but is out of	We assume that the State of Arkansas has an existing print/mail infrastructure that will continue to support the IE-BM business processes.

ITEM #	REFERENCE (Section, Page, Paragraph)	DESCRIPTION	RATIONALE
		scope for the defined responsibilities of the IBM team.	
5.	1.2.4	T-6 – Functional Requirements Traceability Matrix FR1.89 states: "The System will validate address information including address, zip code, census tract, etc. and provide the capability for users to update their information to the validated information." We assume the current EEF system is already utilizing GIS integration and will be available for the IBM team to leverage for the IE-BM Solution.	The IE-BM Solution will leverage the State's existing GIS integration for address validation.
6.	1.3	T-6 – Functional Requirements Traceability Matrix FR2.2 references: "programs [including]…others, as determined by the State". We assume this indicates a need for the functionality to add additional programs as the State may require. While the IE-BM Solution offers functionality out-of-the-box to add additional programs not listed within the RFP, the level of effort to configure program-specific rules will need to be evaluated as requested by the State.	The IBM team assumes the programs listed within the RFP are the programs in scope for the IE-BM Solution and have estimated accordingly. Should the State require additional programs to be added to the scope, the IBM team will utilize the change request process and evaluate the level of effort.
7.	1.2.4, 1.4.3, 1.7.3, 1.9.2, 1.10	T-6 – Functional Requirements Traceability Matrix has multiple requirements that reference "external database" queries and searches, including FR1.93, FR3.61, FR6.45, FR8.48, FR9.30, FR9.31, and FR9.33. In reference to these external databases, the IBM team assumes the scope is limited to providing access to data through the 22 interfaces that we will develop and no external database queries are needed for the IE-BM Solution that have not been referenced in the RFP. Work related to developing or configuring the interface on the external system side is considered	We have described functionality assuming data from proposed interfaces, listed in the RFP, will be brought into the IE-BM Solution via Cúram's Evidence Broker. If there is a need for data for external database queries and searches that was not referenced in the RFP is unknown and is not included as part of this proposal.

ITEM #	REFERENCE (Section, Page, Paragraph)	DESCRIPTION	RATIONALE
		outside of the IE-BM Solution and is the responsibility of the State.	
8.	1.4.4, 1.6.2, 1.10	The IBM team plans to leverage the State's existing Xerox DocuShare software. We assume the Document Processing Staff will continue to use the existing facilities and scanners used today to process a defined list of incoming documents for the IE-BM Solution.	It is our understanding that the EEF system uses DocuShare today and the equipment is already in place to support document management.
9.	1.4.4, 1.6.2, 1.10	The IBM team assumes responsibility for the development of integration between Cúram and DocuShare, but additional configuration and maintenance required for the DocuShare software will be done by the State and its vendor.	It is our understanding that the State of Arkansas has a contract in place with a vendor to support DocuShare software.
10.	1.6.1	The IE-BM Solution will leverage the existing DocuShare component to store Client documents to support eligibility processes. We assume by leveraging the existing document management software, document conversion is not required an activity.	
11.	1.6.1	The IBM team assumes that where FR5.5 references "The system will determine if the document(s) document(s) provided are readable..", readable means verifying an attachment is uploaded in an acceptable file format.	Our IE-BM Solution can determine if a document is readable by validating file format and file size. If the DocuShare OCR function can determine if the form is readable, our proposed Solution can provide a notification to the user.
12.	1.10	The IBM team assumes that the vendor that maintains the State's Xerox DocuShare will continue to be responsible for generating forms including the Change Report Form with the appropriate bar codes.	It is our understanding that the State of Arkansas has a contract in place with a vendor to support DocuShare software.
13.	1.10	T-6 — Functional Requirements Traceability Matrix, Tab FR9 – Client Change lists FR9.2 and FR9.12. Both reference a form of pre-population of	Clients managed outside of the IE-BM Solution may have updated information that will not be available to

ITEM #	REFERENCE (Section, Page, Paragraph)	DESCRIPTION	RATIONALE
		the Client's data in the Change Report Form (online or form generation). The IE-BM Solution will only pre-populate Client information for Clients where the IE-BM Solution is managing the case information.	the IE-BM Solution for pre-population.
14.	1.12.3	T-6 – Functional Requirements Traceability Matrix FR11.46 references: "information to be recorded will include… date and time of the appeal hearing…" The IBM team assumes the scheduling of hearings will occur outside of the IE-BM Solution and users will manually record this information.	The IBM team assumes the scheduling of hearings will be completed in an external system, maintained for example by a court.
15.	1.13.3	T-6 – Functional Requirements Traceability Matrix FR12.27 states: "The System will have access to User's calendar outside of the System (e.g., Microsoft Outlook) and sync appointments." The IBM team assumes calendar related transactions will be performed within the IE-BM Solution and then transmitted to the user's Microsoft Outlook.	The IE-BM Solution will not have a bi-directional feed between the IE-BM Solution and Microsoft Outlook.
16.	1.2.4.	T-6 – Functional Requirements Traceability Matrix FR1.94 states: "The System will have the capabilities to upload images from a variety of media including, but not limited to, CDs, flash drives and scanners." The IBM team assumes DHS has provided the appropriate equipment to the IE-BM users such as workstations that have USB ports, CD slots, and scanners.	The IE-BM Solution will support the storage of images, but users will require appropriate equipment to transfer the images to their local drives for upload.
17.	1.2, 1.4.5	The IBM team assumes that based on the Authorized Representative requirements listed in T-6 Functional Requirements Traceability Matrix, we will satisfy the requirements by extending the OOTB Cúram functionality, utilizing the Client Portal.	The IBM team will extend the Client Portal to be utilized by Authorized Representatives.

ITEM #	REFERENCE (Section, Page, Paragraph)	DESCRIPTION	RATIONALE
18.	1.2.2, 1.3, 1.4.1, 1.14.3	T-6 – Functional Requirements Traceability Matrix has multiple requirements that reference content in multiple languages (i.e. Spanish and Marshallese), including FR1.35, FR2.28, FR3.32, and FR13.49. The IBM team will enable this functionality by making necessary framework configuration and adding translated content. However, the State is responsible for providing the translations of English content into the supported languages (i.e. Spanish and Marshallese).	The IBM team assumes language translation is not part of the vendor's scope.
19.	1.10	T-6 – Functional Requirements Traceability Matrix FR9.19 states: "The System will allow authorized DHS Staff to implement a mass change (i.e. a policy or benefit level change) to all relevant Client records." While our proposed Solution does offer flexibility for the State to make updates, if IBM support is needed to make code or configuration changes to accommodate new scope as a result of policy changes, the IBM team will utilize the change request process.	Federal or State policy or legislative changes that require updates to IBM's scope of work as stated in the RFP will require the change request process.

Template T-8

Technical Requirements Traceability Matrix

Response Template RFP #: SP-17-0012

State of Arkansas Department of Human Services
Integrated Eligibility and Benefit Management Engagement (IE-BM) RFP
RFP #: SP-17-0012
Template T-8 - Technical Requirements Traceability Matrix

Introduction

This document captures the Technical Requirements for the State of Arkansas's IE-BM Engagement. This document should be read in conjunction with the Solution Overview section of the RFP, which documents the recommended Solution approach. Together, these requirements and the Solution Approach section must be used to create cost and schedule estimates for the design, development, implementation and ongoing support of the IE-BM System.

The Technical Requirements document contains the following sections:

1) Instructions
2) General System Behavior Requirements
3) Technology Requirements

Within the Technical Requirements, the requirements are categorized by area as detailed below. Each category has its own tab in this workbook.

ID	Section Title
G	**General System Behavior Requirements**
G1	Usability
G2	Audit and Compliance
G3	Performance and Availability
G4	Regulatory and Security
G5	Interoperability and Interfaces
G6	Scalability and Extensibility
G7	Interface List
G8	Solution Management and Administration
T	**Technology Platform Requirements**
T1	**Presentation Layer**
T1.1	Portal
T2	**Business Components Layer (Requirements for these are defined in the Functional RTMs)**
T2.1	Case Management Functionality

ID	Section Title
T2.2	Notifications and Alerts
T3	**Application Infrastructure Services Layer**
T3.1	Business Rules Management Engine / BRE
T3.2	Workflow, Business Process Management / BPM
T3.3	Enterprise Content Management / ECM
T3.4	Application Server
T4	**Integration Services Layer (Proposed State Hub Architectural Components)**
T4.1	Application Integration and Enterprise Service Bus (ESB)
T4.2	Data Integration, Quality and ETL Services
T4.3	MDM (Master Data Management)
T5	**Data Services Layer**
T5.1	DBMS (Database Management Systems)
T5.2	BI (Business Intelligence)
T6	**Security and Privacy Layer**
T6.1	IAM (Identity and Access Management)
T6.2	Privacy and Consent
T7	**Infrastructure Layer**
T7.1	Platform
T7.2	Virtualization
T7.3	Server Infrastructure
T7.4	Data Center / Hosting Infrastructure
T7.5	Network Infrastructure
T7.6	Development, Operations and Support Tools

State of Arkansas Department of Human Services
Integrated Eligibility and Benefit Management Engagement (IE-BM) RFP
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Template T-8 - Technical Requirements Traceability Matrix

Instructions (All Tabs)

This workbook contains Technical Requirements required by the State of Arkansas Department of Human Services for a IE-BM System.
The response codes below should be used by Vendors to indicate the fit of their Solution to the State Requirements specified in this workbook.
This template must be submitted as an Microsoft Excel file as part of the response to this RFP and should be thoroughly completed.

Field	Definition / Instructions
Req. #	**Requirement Identification Number:** This should be used to refer to requirements in correspondence. DO NOT EDIT THIS FIELD.
Requirement Description	**Requirement:** The detailed description of requirement. DO NOT EDIT THIS FIELD.
Requirement Met	**Vendor response to whether the Technical Requirement will be met by the Vendor solution**. Indicate whether the requirement, as currently written, will be met by the Vendor's proposal: Yes, Clarification. Some items on T0 must have a Yes, No response.
Solution Method	**Vendor response to how the Technical Requirement will be met by the Vendor solution. In**dicate how the requirement will be met by selecting one of: * *L everaged Functionality* - The State Requirement will be met by leveraging/enhancing the EEF Solution functionality already configured and implemented for MAGI Medicaid at DHS * *C onfiguration* - The State Requirement will be met by configuring the proposed Solution and/or any existing DHS Enterprise assets already in production * *T hird Party Product* - The State Requirement will be met by commercially available third-party software or hardware assets and is included in this proposal. Note: In the "Suggested Clarifying Comments" column, indicate the name of the proposed third-party software vendor and proposed components and indicate its compliance to DHS' technology or architecture standards. * *New D evelopment* - The State Requirement will be met through development of new software code to provide specific business or technical services where there are no leverageable off-the-shelf functionality or software assets. Note: This column is not included on the Sections (worksheets) where it does not apply
Proposed Phase	**The Vendor's response to which implementation phase the requirement will be met (if multiple implementation phases being proposed).** Provide the proposed phase for meeting each requirement. The Vendor must identify the phase number and schedule of proposed implementation phases within its detailed narrative response. Note: This is not included on the Sections (worksheets) where it does not apply
Suggested Clarifying Comments (for G1 to G8 and T0 to T7)	**If the Response Code is set to "Clarification" the Vendor must provide clarifying comments with appropriate justification.** To provide more detail regarding the approach for meeting a technical requirement or an overall section, use the Technical Requirements Approach template (Template T-9 - Technical Requirements Approach) and provide a reference to the appropriate RFP Req. #(s) in this template.

State of Arkansas Department of Human Services
Integrated Eligibility and Benefit Management Engagement (IE-BM) RFP
RFP #: SP-17-0012
Template T-8 - Technical Requirements Traceability Matrix

Defined Terms / Acronyms

Defined Term	Acronym (if used)	Description
American Recovery and Reinvestment Act	ARRA	American Recovery and Reinvestment Act of 2009, including any subsequent laws, rules, mandates, etc. derived from it.
Application Programming Interface	API	Application Programming Interface
Business Intelligence	BI	Business Intelligence
Business Process Execution Language	BPEL	Business Process Execution Language
Business to Business	B2B	Business to Business
Communications Management Plan		A plan that is included in overall Project Management Plan
Continuity of Care Document	CCD	An HL7 XML-based markup standard intended to specify the encoding, structure and semantics of a patient summary clinical document for exchange.
Data Dictionary		A centralized repository of information about data such as meaning, relationships to other data, origin, usage, and format.
Data Model		A form to explain the structure and relationships of data that is independent of its storage method.
Database Management System	DBMS	Database Management System to store transactional data
Demilitarized Zone	DMZ	Demilitarized Zone used for network partition
Electronic Data Interchange	EDI	Electronic Data Interchange
Enterprise Service Bus	ESB	Enterprise Service Bus
eXtensible HyperText Markup Language	XHTML	eXtensible HyperText Markup Language
eXtensible Markup Language	XML	eXtensible Markup Language
Extract-Transform-Load	ETL	Extract-Transform-Load
Graphical User Interface	GUI	

Defined Term	Acronym (if used)	Description
Health Information Technology for Economic and Clinical Health Act	HITECH Act	Health Information Technology for Economic and Clinical Health Act of 2009, including any subsequent laws, rules, mandates, etc. derived from it.
Health Insurance Portability and Accountability Act	HIPAA	Health Insurance Portability and Accountability Act (HIPAA) of 2009, including any subsequent laws, rules, mandates, etc. derived from it.
Health Level Seven	HL7	A not-for-profit, ANSI-accredited standards developing organization dedicated to providing a comprehensive framework and related standards for the exchange, integration, sharing, and retrieval of electronic health information that supports clinical practice and the management, delivery and evaluation of health services. In this document, this may also refer to the standards developed and/or managed by the organization.
Hypertext Markup Language	HTML	
Hypertext Transfer Protocol	HTTP	
Information Technology Infrastructure Library version 3	ITIL v3	A set of standards used in the industry to provide infrastructure based services
Information Technology	IT	
Integrating the Healthcare Enterprise	IHE	IHE is an initiative by healthcare professionals and industry to improve the way computer systems in healthcare share information. IHE promotes the coordinated use of established standards such as DICOM and HL7 to address specific clinical need in support of optimal patient care. Systems developed in accordance with IHE communicate with one another better, are easier to implement, and enable care providers to use information more effectively. In this document, this may also refer to the standards developed and/or managed by the organization.
Internet Inter-ORB Protocol	IIOP	Internet Inter-ORB Protocol
Internet Protocol Security	IPSec	Internet Protocol Security
Local Area Network	LAN	
Maintenance and Operations Plan		A plan that is included in overall Project Management Plan
Maintenance and Operations	M&O	Maintenance and Operations
Network Time Protocol	NTP	Network Time Protocol
Personally Identifiable Information	PII	Personally Identifiable Information
Production Release Plan		A plan that is included in overall Project Management Plan
Project Management Institute	PMI	Project Management Institute
Project Schedule		Project Schedule
Protected Health Information	PHI	Protected Health Information
Quality Management Plan		A plan that is included in overall Project Management Plan

Defined Term	Acronym (if used)	Description
Relational Database Management Solutions	RDBMS	Relational Database Management Solutions
Role-Based Access Controls	RBAC	Role-Based Access Controls
Secure Sockets Layer	SSL	Secure Sockets Layer
Service Level Agreement	SLA	Service Level Agreement
Service Oriented Architecture	SOA	Service Oriented Architecture
Simple Network Time Protocol	SNTP	Simple Network Time Protocol
Simple Object Access Protocol	SOAP	Simple Object Access Protocol
Software Development Life Cycle	SDLC	Software Development Life Cycle
Structured Query Language	SQL	Structured Query Language
Test Plan		Includes: a. Unit Testing b. Functional Testing c. Integration Testing d. Security Testing e. Regression Testing f. Stress/Load Testing g. Performance Testing
Transmission Control Protocol (TCP) / Internet Protocol (IP)	TCP/IP	Transmission Control Protocol (TCP) / Internet Protocol (IP)
Triple-DES	3DES	Triple-DES
User Acceptance Testing	UAT	User Acceptance Testing
Vendor		The Vendor, or one of the Vendors, selected and contracted to participate in planning, implementing, maintaining, enhancing, upgrading, operating, providing support, etc. of the Solution
Virtual Private Network	VPN	Virtual Private Network
Web Services	WS	Web Services
Wide Area Network	WAN	
Work Breakdown Structure	WBS	A document that is included in overall Project Management Plan

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Template T-8 - Technical Requirements Traceability Matrix

Usability

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
G1.1	The System will provide a user interface that will be simple and consistent throughout all areas and functions of the System.	Yes	L	Phase 1	
G1.2	The System will minimize the number of mouse clicks/user interactions to complete any action.	Yes	L	Phase 1	
G1.3	The System will use a Graphical User Interface (GUI) to help the user navigate to the next logical step in the workflow, or freely navigate to other parts of the System functionality, and then allow the user to return to complete the in-process task.	Yes	L	Phase 1	
G1.4	The System will speak the users' language, with words, phrases and concepts familiar to the user, rather than System-oriented terms.	Yes	L	Phase 1	
G1.5	The System will accommodate diverse populations of users including those with disabilities as per State and Federal regulations under the Rehabilitation Act of 1973. The system must be independently verified to be compliant with these regulations.	Yes	L	Phase 1	
G1.6	The System will accommodate diverse populations of users including those with Limited English Proficiency (LEP) as per State and Federal regulations. The system must be independently verified to be compliant with these regulations.	Yes	L	Phase 1	
G1.7	The System will follow real-world Arkansas DHS terminology and conventions, making information appear in a natural and logical order.	Yes	L	Phase 1	
G1.8	The System will allow the users to easily navigate to a variety of functions available to them without having to move sequentially through excessive menus and screens.	Yes	L	Phase 1	
G1.9	The System will include Drill down and Look up functionality to minimize time required for access to more detailed information.	Yes	L	Phase 1	
G1.10	The System will include Multi-tasking and Multiple window capability, including split screens. All windows will be closed and all sessions will be terminated when a logoff is pressed in one window or a session times out.	Yes	L	Phase 1	
G1.11	The System will include Search capabilities to allow retrieval by name, DOB, member ID, case number or others as defined by the State during the Joint Application development (JAD) sessions.	Yes	L	Phase 1	
G1.12	The System will include the ability to tab and mouse through data fields and screens and to change tab order.	Yes	L	Phase 1	
G1.13	The System will provide users with a clearly marked "emergency exit" for the instances when a user mistakenly chooses a function and such "emergency exit" must be simple with minimal dialogue.	Yes	L	Phase 1	
G1.14	The System will follow standardized conventions and limit the use of words, situations, or actions that have multiple meanings.	Yes	L	Phase 1	
G1.15	The System will eliminate error-prone conditions or check for them and present users with a confirmation option before they commit to the action.	Yes	L	Phase 1	
G1.16	The System will minimize the need for users to memorize by making options visible.	Yes	L	Phase 1	
G1.17	The System will provide the option to have rollover/tooltip help or context messages and provide the option to turn off this option in the user preferences profile.	Yes	L	Phase 1	

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
G1.18	The System will provide all user instructions in a visible or easily retrievable location, when appropriate.	Yes	L	Phase 1	
G1.19	The System will cater to both inexperienced and experienced users and will provide accelerators (e.g. onscreen short cuts, hot-keys, alternate workflows, etc.) to speed up the interaction for the expert user.	Yes	L	Phase 1	
G1.20	The System will allow users to create shortcuts (e.g. onscreen short cuts, hot-keys, etc.) for frequent actions.	Yes	L	Phase 1	
G1.21	The System will express its error messages in plain language, precisely indicate the problem, and constructively suggest a solution.	Yes	L	Phase 1	
G1.22	The System will use colors to enhance user experience and System usability while complying with all disability requirements notated elsewhere in these requirements.	Yes	L	Phase 1	
G1.23	The System will allow the user to navigate to any functional component from a client landing page.	Yes	L	Phase 1	
G1.24	The System will alert the user with information relevant to required next steps.	Yes	L	Phase 1	
G1.25	The System will provide drop down and list boxes for all key entry, and text entry will display existing values for selection (system based auto fill) (but specifically disallow client browser based auto fill).	Yes	L	Phase 1	
G1.26	The System will accommodate point and click selection and check box entry for all relevant data entries to ensure that the user does not have to enter textual data that may already be available to the System.	Yes	L	Phase 1	
G1.27	The System will facilitate data entry and will contain pop-up list boxes for all code fields in all processing windows and allow selection of the entry with use of hot keys.	Yes	L	Phase 1	
G1.28	The System will provide field level on-screen edits with limited user override capabilities.	Yes	L	Phase 1	
G1.29	The System will provide the ability to make fields visible/invisible depending on parameters, user rights, consent, and access controls.	Yes	L	Phase 1	
G1.30	The System will not show fields not accessible to a given user based on access rights, member consent, nor will the System show fields not in use.	Yes	L	Phase 1	
G1.31	The System will have a cursor that will automatically advance to the next logical input field when the maximum allowed numbers of characters have been entered for the keyed field or when the user presses the "Tab" key.	Yes	L	Phase 1	
G1.32	The System will provide the option of having a selection from the drop down boxes automatically and take the user to the next input field.	Yes	C	Phase 1	
G1.33	The System will provide validation checks at the time of each field entry as the default mechanism.	Yes	L	Phase 1	
G1.34	The System will identify invalid entries to the user as immediately as possible.	Yes	L	Phase 1	
G1.35	The System will provide the ability to suggest or automatically change entries that do not conform to data entry standards, to be defined in the detailed System design and meta data models in collaboration with the State.	Yes	L	Phase 1	
G1.36	The System will be designed to include only the necessary information and functionality on screens and will be based on the user's access level and the user's configuration.	Yes	L	Phase 1	
G1.37	The System will be designed to include logical transitions between screens and level of detail during navigation.	Yes	L	Phase 1	
G1.38	The System will provide templates for data entry with identified mandatory and optional data fields.	Yes	L	Phase 1	
G1.39	The System will allow incomplete data sets to be saved for completion of the workflow at a later time.	Yes	L	Phase 1	
G1.40	The System will highlight and flag required and incomplete data fields.	Yes	L	Phase 1	

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
G1.41	The System will include a graduated system of alert levels to allow users to determine urgency and relevancy.	Yes	L	Phase 1	
G1.42	The System will allow configuration of alerts by a user, for a user by a supervisor, and for a user by a System administrator.	Yes	L	Phase 1	
G1.43	The System will allow for the request or entry of data from external devices (e.g. tablets).	Yes	L	Phase 1	
G1.44	The System will notify the user when a source system is unavailable/inoperable and notify user that any available information about the subject being viewed is as of certain time and date.	Clarification	T	Phase 1	The system will provide notice of interface disruptions, and indicate "as-of datetime" for source data.
G1.45	The System will not require users to re-enter data due to validation errors if the system can auto-correct based on the entered data, or the user can navigate to the entry error to correct the entry.	Yes	L	Phase 1	
G1.46	The System will enable central workflow alerts and transactional status. The System will centralize pending work items in a centralized queues and allow grouping by attributes including, but not limited to, location, type (walk in, phone) and System defined priority.	Yes	L	Phase 1	
G1.47	The System will have the capability to push messages to the intended workers without requiring them to specifically inquire for the data.	Yes	L	Phase 1	
G1.48	The System will provide a mouse-over option over State-defined fields that temporarily displays a description of the data element for the user.	Yes	L	Phase 1	
G1.49	The System will provide linked access to help functions that contain the appropriate information and search of all help information from every window, based on user profiles.	Yes	L	Phase 1	
G1.50	The System will push or link alerts/notifications to mobile devices.	Clarification	T	Phase 2	The system will push SMS and email messages to mobile devices.
G1.51	The System will utilize standard web browser-based Thin-Client Technology that supports centralized software distribution and implementation. This must be available on commonly used browsers including, but not limited to, Chrome, Safari, Firefox and Microsoft Internet Explorer.	Yes	L	Phase 1	
G1.52	The System will maintain compatibility with the three (3) most current versions of each browser, provide data over a web browser interface (i.e., HTML over HTTP) and will include the capability to encrypt the data communicated over the network via SSL (HTML over HTTPS).	Yes	L	Phase 1	
G1.53	The System will provide the ability for on-line access by any site connected to the organization Wide Area Network (WAN).	Clarification	L	Phase 1	This will be met by leveraging the State's network and infrastructure, and attendant security policies.
G1.54	The System will provide the capability for remote access in compliance with existing State/Federal connectivity/security policies.	Clarification	L	Phase 1	This will be met by leveraging the State's network and infrastructure, and attendant security policies.

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
G1.55	The System will provide on-line system documentation that is accessible at all times including, but not limited to: a. On-line policy and procedures b. User guides c. System help	Yes	L	Phase 3	
G1.56	The System will allow an authorized user to modify/edit on-line system documentation	Yes	L	Phase 1	
G1.57	The System will provide office automation tools available based on user role. Tools include, but are not limited to: a. Word processing capabilities b. Ticklers c. Alerts/notifications d. Calendaring e. Electronic messaging f. System broadcast with ability to limit broadcast audience based on user roles	Yes	L	Phase 2	
G1.58	The System will support fuzzy search and display a match score/rating (e.g., %).	Clarification	T	Phase 2	
G1.59	The System will support uploading and attaching multiple file types to a Case record. File formats include, but is not limited to: a. jpg b. pdf c. doc d. xls e. csv f. tiff	Yes	L	Phase 2	
G1.60	The System will have no data leaks wherein a case worker who starts working on a new case will not encounter a scenario where data values from one case flow into subsequent cases.	Yes	L	Phase 1	
G1.61	The System design will accommodate rendering of the application in various form factors including Tablets and Mobile devices utilizing Microsoft, Android and Apple platforms	Yes	L	Phase 1	
G1.62	The System will be designed such that the user interface is automatically sized for an optimum view to the display dimensions of PC, tablet or mobile phone (e.g. a mobile phone user sees all information within their screen and does not need to scroll excessively to see content as the screen they are viewing was designed for a PC)	Yes	L	Phase 1	

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Audit and Compliance

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
G2.1	The System will maintain a record (e.g. audit trail) of all additions, changes and deletions made to data in the System. In addition, a log of query or view access to certain type of records and/or screens will be maintained for investigative purposes. This should be readily searchable by user ID or client ID. This must include, but is not limited to: a. The user ID of the person who made the change b. The date and time of the change c. The physical, software/hardware and network location (IP address) of the person while making the change d. The information that was changed e. The outcome of the event f. The data before and after it was changed, and which screens were accessed and used	Yes	L	Phase 3	
G2.2	The System will allow an authorized administrator to set the inclusion or exclusion of auditable events based on organizational policy and operating requirements/limits.	Yes	L	Phase 3	
G2.3	The System will support logging to a common audit engine.	Yes	L	Phase 3	
G2.4	The System will be able to detect security-relevant events (as defined in NIST 800-53 moderate baseline, rev 4) that it mediates and generate audit records for them. At a minimum the events will include, but not be limited to: a. Start/stop b. User login/logout c. Session timeout d. Account lockout e. Client record created/viewed/updated/deleted f. Scheduling g. Query h. Order i. Node-authentication failure j. Signature created/validated k. Personally Identifiable Information (PII) export l. PII import m. Security administration events n. Backup and restore o. Audit Event Types listed in IRS 1075	Yes	L	Phase 3	

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
G2.5	The System will provide authorized administrators with the capability to read all audit information from the audit records in the following two (2) ways: 1) The System will provide the audit records in a manner suitable for the user to interpret the information. The System will provide the capability to generate reports based on ranges of System date and time that audit records were collected. 2) The System will be able to export logs into text format in such a manner as to allow correlation based on time (e.g. Coordinated Universal Time [UTC] synchronization).	Yes	L	Phase 3	
G2.6	The System will be able to perform time synchronization using NTP/SNTP, and use this synchronized time in all security records of time.	Clarification	L	Phase 3	This requirement will be fulfilled by levaring the State's data center infrastructure.
G2.7	The System will have the ability to format for export recorded time stamps using UTC based on ISO 8601.	Clarification	L	Phase 3	This requirement will be fulfilled by levaring the State's data center infrastructure.
G2.8	The System will prohibit all users read access to the audit records, except those users that have been granted explicit read access.	Yes	L	Phase 3	
G2.9	The System will protect the stored audit records from unauthorized deletion.	Yes	L	Phase 3	
G2.10	The System will prevent modifications to the audit records.	Yes	L	Phase 3	
G2.11	The System will provide logging, reporting and accessing errors and exceptions.	Yes	L	Phase 3	
G2.12	The System will provide the capability for integrating consent audit trails and data access audit trails in a consolidated searchable system for search/report to support consent rule enforcement or investigation including audit trails based on deprecated rules or policies.	Yes	C	Phase 3	
G2.13	The System will generate and protect consent audit events at the same or better levels as other data access audit records.	Yes	T	Phase 3	
G2.14	The System will support the ability to expunge data, based on predetermined business rules and/or amendments to State/Federal regulations.	Clarification	T	Phase 3	This requirement will be met by the new Curam archiving module.
G2.15	The System will support audit trail functions with the ability to log every step in the process to a database for query and reporting purposes.	Yes	L	Phase 3	

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Performance and Availability

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
G3.1	The System will have the ability to support session replication and transparent failover using high-availability architectural options.	Yes	L	Phase 1	
G3.2	The System will be designed to support the planned Federally-compliant Solution and any anticipated expansion in scope of connectivity.	Yes	L	Phase 1	
G3.3	The System will be designed such that the System Administration staffing requirements and workload will be minimally impacted with expanded System usage.	Yes	L	Phase 1	
G3.4	The System will be built so that there is a near linear relationship between each additional server added, and the additional load that can be accommodated (load vs. capacity added), up to specified limit.	Yes	L	Phase 1	
G3.5	The System will leverage virtualization to expedite disaster recovery. Virtualization enables system owners to quickly reconfigure system platforms without having to acquire additional hardware.	Clarification	L	Phase 1	The State's data center infrastructure will be leveraged to meet this requirement. The VM images will be backed up to offline storage, for recovery in the secondary data center if needed.
G3.6	The System will provide the ability to recover from data loss due to end user error and end application error.	Yes	L	Phase 1	
G3.7	The System will provide the ability to perform archival/incremental backups and the ability to perform open/closed database backups.	Yes	L	Phase 1	
G3.8	The System will provide tools for managing an environment that supports both high availability and disaster recovery.	Yes	L	Phase 1	
G3.9	The System will have all necessary functionalities, such as transactional processing, database back-out capabilities, backup and restore capabilities, transaction log database (point-in-time) restores, to ensure data integrity.	Yes	L	Phase 1	
G3.10	The System must be architected to support replication of the virtual machines to a secondary site so DIS can recover the environment within RTOs and RPOs	Clarification	L	Phase 1	The State's data center infrastructure will be leveraged to meet this requirement. The VM images will be backed up to offline storage, for recovery in the secondary data center if needed.
G3.11	The System must be designed to support all batch processes and back-ups between the hours of 11pm and 7am	Clarification	T	Phase 1	Comprehensive batch management, scheduling and dependency resolution will be provided by the enterprise scheduler - Tivoli Workload Scheduler (TWS), The batch sequence will be optimized to run within the smallest window during the lightest workload.

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Performance and Availability

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
G3.12	The System must be designed so all releases can be performed between 7pm and 6am except critical releases	Clarification	L	Phase 1	This requirement will be met through the Release Management process. This is not a technical requirement.

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Interoperability / Interfaces

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
G4.1	The System's interfaces will secure and protect (encrypt) the data and the associated infrastructure from a confidentiality, integrity and availability perspective.	Yes	L	Phase 1	
G4.2	The System will be able to support Application to Application (A2A) synchronous and asynchronous messaging using web services. The messaging capabilities will be able to support a wide variety of A2A patterns including, but not limited to: a. Data look-up and retrieval b. Data look-up with services provided by other applications c. Simple bulk data transfer to/from other Systems	Yes	L	Phase 1	
G4.3	The System's design will allow for the System to continue to operate despite failure or unavailability of one or more individual technology Solution components.	Yes	L	Phase 1	
G4.4	The System will be scalable to accommodate changes in scale including changes in user population, transaction volume, throughput and geographical distribution. The System will be capable of making any changes to the interface data elements/layouts easily, and to test those changes.	Yes	C	Phase 1	
G4.5	The System will implement, at a minimum, interfaces (real-time and/or batch) with the applications and data sources as listed in the "Interface List".	Yes	D	Phase 1	
G4.6	The System will provide the capability to perform source to destination file integrity checks for exchange of data and alert appropriate parties with issues.	Yes	L	Phase 1	
G4.7	The System's components will be committed to an advanced approach to interoperability using web services and Service Oriented Architecture (SOA) aligned with DHS and industry standards and vision for interoperability.	Yes	D	Phase 1	
G4.8	The System will integrate with External Systems (State and Federal) using a SOA by using a State Hub (an Enterprise Service Bus), responsible to monitor and control routing of message exchange between services, resolve contention between communicating service components, control deployment and versioning of services and marshal use of redundant services.	Yes	T	Phase 1	
G4.9	The System will support creation and extension of service interfaces through the use of Web Services Description Language (WSDL).	Yes	L	Phase 1	
G4.10	The System will develop/integrate services using standardized Web Services formats.	Yes	L	Phase 1	
G4.11	The System will provide the ability to publish services and related data to be used by different types and classes of service consumers.	Yes	L	Phase 1	

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
G4.12	The System will provide the capabilities for a Real-Time (or near real-time) Integrated Enterprise where common data elements about the customers served (e.g., clients) and services rendered are easily shared across organizational units with appropriate adherence to State and Federal security and privacy restrictions.	Yes	T	Phase 1	
G4.13	The System will have the capability to implement synchronous and asynchronous program-to-program communication, moving messages between SOA service consumer modules and service provider modules at runtime. The ESB component may also move files, database rows and other data.	Yes	D	Phase 1	
G4.14	The System will have message and data formats that will be based on logical representations of business objects rather than native application data structures.	Yes	L	Phase 1	
G4.15	The System will have data transformations that will be to and from normalized formats. Normalized data formats facilitate composition and reduce the number of transformations that must be created and maintained. A canonical data representation that spans the enterprise can be used but is not required. A federated approach to data normalization is also possible.	Yes	T	Phase 1	
G4.16	The System will avoid point-to-point integrations. Application integration, both internal and external, will go through the Service Bus, either solution specific or enterprise.	Yes	T	Phase 1	
G4.17	All System services will be classified with one of the following values: Presentation, Process, Business, Data, Access, or Utility.	Yes	L	Phase 1	
G4.18	All System services will be reviewed, classified, and cataloged prior to use. The Documentation Artifacts will be modeled per ISO/IEC/IEEE 42010 Architecture Description Template.	Yes	L	Phase 1	
G4.19	All WSDLs developed for Arkansas will conform to the WSDL Development Standards.	Yes	L	Phase 1	
G4.20	The System's SOA-related messages will be formally defined with XSD (preferable) or DTDs. Use of a SOA Architecture Repository will be required.	Yes	L	Phase 1	
G4.21	The System's SOA-related services hosted will be implemented in Java.	Yes	L	Phase 1	
G4.22	The System's implemented services will rely on WS-Policy configurations for message reliability (WS-Reliable Messaging).	Yes	L	Phase 1	
G4.23	The following metadata attributes will be tracked for all services in the services catalog: {name, lifecycle status, class, description, owner, version, revision history, release frequency, versioning policy, deprecation policy, message exchange patterns, compensating transaction support, availability requirements, volume, max message size, security attributes, SLA, logging requirements}.	Yes	C	Phase 1	

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
G4.24	The System's SOA services will be attributed with one of the following SOA Lifecycle Status values: Candidate, Justified, Defined, Designed, Implemented, Operational, or Retired. The SOA Architecture Repository along with the Enterprise Repository is required to be hosted on the future State Hub.	Yes	T	Phase 1	
G4.25	The System will provide reliable, once-only delivery of messages (guarantee of reliable and non-repetitive delivery).	Yes	T	Phase 1	
G4.26	The System will have the capability to integrate with the State Data Hub to perform syntactic and semantic hub-based transformation of messages, including: a. Support of taxonomy b. Support of ontology c. Reusable transformation maps d. Built-in transformation functions e. Extending the transformation function with custom-coded logic f. Support for B2B project translation including Electronic Data Interchange (EDI), RosettaNet, HL7, etc.	Yes	D	Phase 1	
G4.27	The System will provide the functionality that provides reliability for applications, services or message flows: a. Load balancing b. High availability c. Fault tolerance d. Failover e. In-order delivery f. Transaction support g. Execution prioritization h. Message prioritization. Tests for High Availability and Failover must be completed prior to the release to UAT	Yes	T	Phase 1	
G4.28	The System will provide the technology that manages the metadata and provides the features needed to support the reliable operation of services. Examples include: a. Online catalog of services and associated artifacts such as WSDL files, XSDs, BPEL files b. A single point of controlled access for cataloging, promoting, publishing and searching for information about managed assets c. Metadata that enables an ESB to find, bind to and invoke the execution of a service implementation d. Support for extending existing asset types and defining and populating custom asset types	Yes	T	Phase 1	
G4.29	The System will provide support for integrating with applications with SOA and event-driven architectures in a manner that supports the following implementation strategies: a. Web Services: Web Services Interoperability (WS-I) Organization-compliant implementation of basic Web services standards, including SOAP, WSDL and Universal Description, Discovery and Integration (UDDI), as well as higher-level Web services standards, such as WS-Security b. Representational State Transfer (REST): Support for XML-based messages, processing and HTTP, and XHTML	Yes	D	Phase 1	

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
G4.30	The System will have the ability to track a message from its origin to its destination (inside a firewall), inquire on the status of that message and address exceptions (for example, resend the message if a target times out). Usually implemented via a warehouse for archiving messages together with the associated tracking and logging data.	Yes	L	Phase 1	
G4.31	The System will have the ability to use standards-based communication protocols, such as TCP/IP, HTTP, HTTP/S and SMTP. Protocol bridging: The ability to convert between the protocol native to the messaging platform and other protocols, such as Remote Method Invocation (RMI), IIOP and .NET remoting.	Yes	L	Phase 1	
G4.32	The System will seamlessly work with the technology and programs that act as glue, transforming among protocols, connecting to databases and linking pre-SOA Application Programming Interfaces (APIs) to the SOA backplane	Yes	L	Phase 1	
G4.33	The System will have the capability to work with security policy manager for Web services that allows for centrally defined security policies that govern Web services operations (such as access policy, logging policy, and load balancing).	Yes	T	Phase 1	
G4.34	The System will have the capability to integrate with MDM technology for Enterprise Master Person Index (EMPI) implemented as part of the "State Hub" in a centralized or registry style implementation.	Yes	D	Phase 1	
G4.35	The System will include the telephony integration required to satisfy the ability to dial a phone number directly from data within the System based on user request, and provide the capability to automatically bring up the caller's record upon the receipt of an incoming call.	Yes	D	Additional Phases	We plan to build this extension in Phase 5.
G4.36	The System will have access to User calendars outside of the System (Microsoft Outlook) and will automatically synch up.	Yes	D	Phase 1	
G4.37	The Solution will provide tools to support the Extract-Transform-Load (ETL) process to extract data into the State's DHS data warehouse or other analytical environments.	Yes	D	Phase 1	
G4.38	The Vendor will configure one environment solely dedicated to the testing of the interfaces with applicable interface test data.	Yes	L	Phase 1	
G4.39	The System will interface with the existing DHS Data Warehouse, which includes, but is not limited to, Tableau, SQL Server Analytic Services (SSAS), SQL Server Reporting Services (SSRS), and SQL Server Integration Services (SSIS).	Yes	D	Phase 1	
G4.40	The Mobile Friendly User Interface, pages will automatically be sized for an optimum view to the display dimensions of PC, Tablet or Mobile phone and redirect to the appropriate URL. The Mobile Friendly System is not a separate mobile Application.	Yes	D	Phase 1	

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Scalability and Extensibility

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
G5.1	The System will be designed for ease of maintenance and readily allow future functional enhancements. This will be accomplished through use of modern design principles for SOA, applying principles of modularity, interface abstraction, and loose coupling.	Yes	L	Phase 1	
G5.2	The System will be adequately flexible to keep up with ever changing technology and regulatory changes. This will be accomplished by separating workflow and business rules into their own separate tiers.	Yes	L	Phase 1	
G5.3	The System will be scalable and adaptable to meet future growth and expansion/contraction needs such that the System can be expanded on demand and be able to retain its performance levels when adding additional users, functions, and data.	Yes	L	Phase 1	
G5.4	The System will provide screens that are highly re-configurable, providing ability to reposition and rename field labels / data fields, remove or "turn-off" unused fields, maintain data, and allow addition of custom-defined fields.	Yes	L	Phase 1	
G5.5	The System will provide the ability to create and/or modify edits and business rules that determine the correctness/integrity of data.	Yes	L	Phase 1	
G5.6	The System will be able to externalize Safety and Risk determination business rules to a business rules engine.	Yes	L	Phase 1	
G5.7	The System will establish a life-cycle view of each case and have the ability to track and report on the status of each case through out the Life of the Case.	Yes	L	Phase 1	
G5.8	For each step in the life-cycle discussed above, the System will establish and track states, e.g., in process, missing data, complete, approved, disapproved, etc. and have the ability to report on the status/state of each Case.	Yes	L	Phase 1	

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Regulatory & Security

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
G6.1	The System will, at a minimum, provide a mechanism to comply with security requirements and safeguard requirements of the following Federal agencies / entities: a. Health & Human Services (HHS) Centers for Medicare & Medicaid Services (CMS) b. Guidance from CMS including MITA Framework 3.0 and Harmonized Security and Privacy Framework c. Administration for Children & Families (ACF) d. Dept. of Agriculture Food and Nutrition Services e. NIST 800-53 r4, MARS-E and DOD 8500.2 f. IRS pub 1075, which points back to NIST 800-53 rev 3 g. Federal Information Security Management Act (FISMA) of 2002 h. Health Insurance Portability and Accountability Act (HIPAA) of 1996 i. Health Information Technology for Economic and Clinical Health Act (HITECH) of 2009 j. Privacy Act of 1974 k. e-Government Act of 2002 l. Patient Protection and Affordable Care Act of 2010, Section 1561 Recommendations m. Section 471(a)(8) of the Social Security Act n. Section 106(b)(2)(B)(viii) of the Child Abuse Prevention and Treatment Act	Yes	C	Phase 1	
G6.2	The System architecture and design must accommodate Single Sign-On (SSO) functionality so as to have a single login to all related applications.	Yes	L	Phase 1	
G6.3	The System will be in compliance with all applicable State and Federal laws and regulations, including 42 CFR Part 2 and HIPAA including privacy and client consent for release requirements.	Yes	C	Phase 1	
G6.4	The System will accommodate diverse populations of users including those with visual and hearing impairments, persons with low and moderate educational levels, and the elderly.	Yes	L	Phase 1	
G6.5	The System will conform with the sub-parts of Section 508 of the Americans with Disabilities Act (ADA), and any other appropriate State or Federal disability legislation.	Yes	L	Phase 1	
G6.6	The System will be compliant with CMS' Seven Standards and Conditions.	Yes	L	Phase 1	
G6.7	The System will comply with all applicable State security policies and adhere to all legal, statutory, and regulatory requirements. For example, MARS 2.0. The list of policies and regulations are provided as part of procurement library.	Yes	C	Phase 1	
G6.8	The System will implement security controls in accordance with all Federal and State security policy and regulations	Yes	C	Phase 1	
G6.9	The System will comply with accessibility requirements described in 45 CFR 85 and with State of Arkansas accessibility requirements	Yes	C	Phase 1	
G6.10	The System will adhere to the accessibility standard as outlined in the web guidelines and based on the W3C level 2 accessibility guidelines: (http://www.w3.org/TR/WCAG10/full-checklist.html)	Yes	C	Phase 1	
G6.11	The System will comply with the DHS branding standards as defined by the State	Yes	C	Phase 1	

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
G6.12	The Vendor will adhere to the principle of "Fail Safe" to ensure that a system in a failed state does not reveal any sensitive information or leave any access controls open for attacks	Yes	C	Phase 1	
G6.13	The System will allow for controlled access to client records. Users will be able to view participant data within the System at the State-defined levels of access based on user security privileges.	Yes	C	Phase 1	
G6.14	The System will maintain a level of security that is commensurate with the risk and magnitude of the harm that could result from the loss, misuse, disclosure, or modification of information	Yes	C	Phase 1	
G6.15	The System will be built with information security from its inception rather than "bolted on" after the System has been implemented	Yes	C	Phase 1	
G6.16	The System will uniquely identify each Program, Participant, Provider, and Authorized Representative	Yes	C	Phase 1	
G6.17	The System will authenticate users before allowing access to functionality requiring a login	Yes	C	Phase 1	
G6.18	The System will provide a mechanism to limit access to view/update information, based on User role, access rights, member consent, and program rules	Yes	C	Phase 1	
G6.19	The software used to install and update the System, independent of the mode or method of conveyance, will be certified free of malevolent software ("malware"). The Vendor may self-certify compliance with this standard through procedures that make use of commercial malware scanning software.	Clarification	L	Phase 1	This is supported thru operational and technical controls inherited from the State data center and infrastructure.
G6.20	The System will be configurable to prevent corruption or loss of data already accepted into the System in the event of a System failure (e.g. integrating with a UPS, etc.)	Clarification	L	Phase 1	This is supported thru operational and technical controls inherited from the State data center and infrastructure.
G6.21	The System will support protection of confidentiality of all Protected Health Information (PHI) delivered over the Internet or other known open networks via encryption using Advanced Encryption Standard (AES) and an open protocol such as Transport Layer Security (TLS), Secure Sockets Layer (SSL), Internet Protocol Security (IPsec), XML encryptions, or Secure/Multipurpose Internet Mail Extensions (S/MIME) or their successors. This System will be subject to external Audit checks.	Clarification	L	Phase 1	This is supported thru operational and technical controls inherited from the State data center and infrastructure.
G6.22	The System will, when storing PHI on any device intended to be portable/removable (e.g. Smartphones, portable computers, portable storage devices), support use of a standards based encrypted format using AES or their successors	Clarification	L	Phase 1	This is supported thru operational and technical controls inherited from the State data center and infrastructure.
G6.23	The System will, prior to accessing any PHI, display a State-approved configurable warning or login banner (e.g. "The System should only be accessed by authorized users"). In the event that a System does not support pre-login capabilities, the System will display the banner immediately following authorization.	Clarification	L	Phase 1	This is supported thru operational and technical controls inherited from the State data center and infrastructure.
G6.24	The Vendor will monitor, alert, and protect against web application attacks of internet-facing applications.	Clarification	L	Phase 1	This is supported thru operational and technical controls inherited from the State data center and infrastructure.
G6.25	The System will not transmit or store any Personally Identifiable Information (PII) using publically available storage over the Internet or any wireless communication device, unless: 1) the PII is "de-identified" in accordance with 45 C.F.R § 164.514(b) (2); or 2) encrypted in accordance with applicable law, including the American Recovery and Reinvestment Act of 2009 and as required by policies and procedures established by DHS	Clarification	L	Phase 1	This is supported thru operational and technical controls inherited from the State data center and infrastructure.

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
G6.26	The System will include the same security provisions for the development, System test, acceptance test and training environment as those used in the production environment except those provisions implemented specifically to protect confidential information (e.g. PII)	Yes	C	Phase 1	
G6.27	The System will provide the ability to identify certain information as confidential (e.g. PII, PHI, etc.) and only make that accessible by appropriately authorized users and limit the ability to share among departments without required authorization. This applies to data provided to the Divisions by an individual or through an interface.	Yes	C	Phase 1	
G6.28	The System will restrict access to summarized information according to organizational policy, scope of practice, and jurisdictional law	Yes	C	Phase 1	
G6.29	The System will be able to associate permissions with a user using one or more of the following access controls: a. Role-Based Access Controls (RBAC; users are grouped by role and access rights assigned to these groups) b. Context-based (role-based with additional access rights assigned or restricted based on the context of the transaction such as time-of-day, workstation-location, emergency-mode, etc.)	Yes	C	Phase 1	
G6.30	The System will provide the ability to prevent specified user(s) or groups from accessing confidential information such as a client's Social Security Number (SSN) and other confidential data	Yes	C	Phase 1	
G6.31	The System will provide the ability to limit access to certain confidential information such as a client's SSN and other confidential data	Yes	C	Phase 1	
G6.32	The System will, when access to a user's account is restricted, provide a means for appropriately authorized users to "break the glass" and obtain access for emergency situations, as defined by State of Arkansas policy	Yes	C	Phase 1	
G6.33	The System will be capable of operating within an RBAC infrastructure conforming to ANSI INCITS 359-2004, American National Standard for Information Technology – Role Based Access Control	Yes	L	Phase 1	
G6.34	The System will provide more-advanced session management abilities including, but not limited to, prevention of duplicate logins, remote logout and location-specific session timeouts	Yes	L	Phase 1	
G6.35	The System will provide the ability to perform System administration functions including, but not limited to, reference table maintenance and adding / removing users from the System	Yes	L	Phase 1	
G6.36	The System will allow users access based on their roles irrespective of their geographical location	Yes	L	Phase 1	
G6.37	The System will provide the capability to integrate with existing DHS Enterprise authentication and authorization mechanisms	Yes	L	Phase 1	

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Interface List

The requirements below describe the type of interfaces needed, and are assumed to be implemented via the State Data Hub. For technical requirements regarding how these interfaces should operate please refer to the section "T1 Interoperability-Interfaces".

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
G7.1	Department of Motor Vehicles System	Yes	D	Phase 3	
G7.2	Social Security Administration System	Yes	L	Phase 1	
G7.3	Public Assistance Reporting Information System (PARIS)	Yes	D	Phase 3	
G7.4	Department of Labor System	Yes	D	Phase 3	
G7.5	Electronic Disqualified Applicant System (eDRS)	Yes	D	Phase 4	
G7.6	Child Support Enforcement Agency System	Yes	D	Phase 2	
G7.7	Department of Public Safety/Corrections Division (State prison, Federal prison, and Juvenile Detention) System	Yes	D	Phase 3	
G7.8	National Directory of New Hires (NDNH) System	Yes	D	Phase 3	
G7.9	Department of Homeland Security - SAVE System	Yes	D	Phase 1	
G7.10	US Census Bureau System (to validate census tract)	Yes	D	Additional Phases	We plan to build this interface in Phase 5
G7.11	Postal Service System (to validate address)	Yes	D	Phase 1	
G7.12	Asset Verification System (Accuity)	Yes	D	Phase 3	
G7.13	Division of Workforce Services (Wage/Unemployment — ESD) System	Yes	D	Phase 1	
G7.14	Federal Data Services Hub	Yes	L	Phase 1	
G7.15	ADH WIC System	Yes	D	Phase 2	
G7.16	Department of Workforce Services Welfare-to-Work System (ARWINS)	Yes	D	Additional Phases	We plan to build this interface in Phase 5
G7.17	MMIS System	Yes	L	Phase 1	
G7.18	Medicare Premium (SOLQ) System	Yes	D	Additional Phases	We plan to build this interface in Phase 5
G7.19	EBT Vendor’s system	Yes	D	Phase 3	
G7.20	OASIS System	Yes	D	Phase 4	
G7.21	State Accounting System	Yes	D	Phase 3	
G7.22	State Data warehouse	Yes	D	Phase 3	

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Solution Management and Administration

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
Solution Administration					
G8.1	The System will provide data archiving capabilities based on State defined criteria.	Yes	T	Additional Phases	We plan to implement this requirement in Phase 5
G8.2	The System will provide the capability to move all historical, expired and/or unnecessary data to offline storage according to a set of business rules and schedule to be defined by the State as a part of the ongoing system operational decision making.	Yes	C	Additional Phases	We plan to implement this requirement in Phase 5
G8.3	The System will maintain an archival process so that accumulated historical records and log files do not consume large amounts of disk space.	Yes	T	Additional Phases	We plan to implement this requirement in Phase 5
G8.4	The System will provide an auto archive/purge of the log files to prevent uncontrolled growth of the log and historical records storage using administrator-set parameters.	Yes	T	Additional Phases	We plan to implement this requirement in Phase 5
G8.5	The System will provide version control capabilities to ensure the integrity of all software releases.	Yes	L	Phase 1	
G8.6	The System will provide logging and reporting for accessing errors and exceptions.	Yes	D	Phase 1	
G8.7	The System will monitor and provide reports on any unauthorized access.	Yes	L	Phase 1	
G8.8	All System communications will be protected by at least 128-bit encryption.	Yes	L	Phase 1	
G8.9	The System will be supported by public key/private key encryption Secure Socket Layer (SSL) certificates.	Yes	L	Phase 1	
G8.10	The System will provide admin tools and maintenance routines to change access rights quickly.	Yes	L	Phase 1	
G8.11	The System will use firewalls and Demilitarized Zones (DMZs) for external access and remote access.	Yes	L	Phase 1	
G8.12	The System will allow System administrators to create and manage user accounts.	Yes	L	Phase 1	
G8.13	The System will allow System administrators to assign status and permissions to user accounts.	Yes	L	Phase 1	
G8.14	The System will allow System administrators to create and manage user roles.	Yes	L	Phase 1	
G8.15	The System will allow System administrators to create user groups to manage workflow.	Yes	L	Phase 1	
G8.16	The System will allow System administrators to assign users to particular local offices.	Yes	L	Phase 1	
G8.17	The System will allow System administrators to assign users to particular user groups / units.	Yes	L	Phase 1	
G8.18	The System will allow System administrators to assign users to particular supervisors.	Yes	L	Phase 1	
G8.19	The Vendor will establish an automated maintenance routine that will, at a minimum: a. Backup the user IDs and password data b. Identify expired IDs and related data	Yes	L	Phase 1	
G8.20	The System will allow for Data backup to be conducted offsite in the event of a physical disaster, leveraging the DHS Enterprise infrastructure.	Yes	L	Phase 1	

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
G8.21	The System will be able to automate archiving and expunging of cases and case data, based on Federal and State archiving rules, including, but not limited to: a. Inactive records b. Closed cases c. Any other data as authorized by relevant regulation or agency policy	Yes	T	Additional Phases	We plan to implement this requirement in Phase 5
G8.22	The System will allow a user to recover archived data based on security access level.	Yes	T	Additional Phases	We plan to implement this requirement in Phase 5
G8.23	The System will be able to track a user who enters, changes, and/or views information.	Yes	D	Phase 1	
Solution Management					
G8.24	The System will have the ability to generate administrative alerts and warnings when statistics indicate an impact or potential limits on System component performance and availability.	Yes	L	Phase 1	
G8.25	The System will allow for all changes/updates to the distributed components to be administered and completed centrally and available immediately to all source systems and sites.	Yes	L	Phase 1	
G8.26	The System will provide Service Level Agreement (SLA) monitoring and reporting capabilities. Service Level definitions will be drafted into a single document provided as an attachment.	Yes	L	Phase 1	
G8.27	The System will securely support State's existing remote control (i.e. support personnel ability to take over the user device for troubleshooting and support) capabilities deployed for any type of client workstation.	Yes	L	Phase 1	
G8.28	The System will provide event management and monitoring functionality according to Information Technology Infrastructure Library version 3 (ITIL v3) or equivalent best practices in alignment with the DHS Enterprise Standards.	Yes	L	Phase 1	
G8.29	The System will provide Application Performance Monitoring and Management capabilities (i.e. transaction monitoring, synthetic transactions, component root cause analysis (e.g. Application Server Management) in alignment with the DHS Enterprise Standards.	Yes	T	Phase 1	
G8.30	The System will provide transaction tracking and log consolidation capabilities across all tiers of the application.	Yes	L	Phase 1	
G8.31	The System will be designed to support a performance management toolset which integrates with the DHS Enterprise Standard performance management approach to provide an end-to-end solution. The Vendor should propose, implement and manage one or more monitoring tool(s) to proactively monitor the performance of the application.	Yes	T	Phase 1	
G8.32	The System will be instrumented and have tools to allow end-to-end transaction response time across multiple modules of the DHS Enterprise Standards and report against SLAs.	Yes	T	Phase 1	

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
Performance Monitoring					
G8.33	The System will log all system transactions and keep them easily retrievable and sortable.	Yes	T	Phase 1	
G8.34	The System will detect major errors related to one or more components including loss of network connectivity, a database server going off line, or the application suffers a out-of-memory situation.	Yes	T	Phase 1	
G8.35	The System will detect less than desirable application performance, such as degraded servlet, database or other back end resource response times.	Yes	T	Phase 1	
G8.36	The System will have safeguards designed to ensure that configuration variables affecting the application and the back end resources remain at some predetermined configuration settings.	Yes	L	Phase 1	
G8.37	The System will detect intrusion attempts by unauthorized system users.	Yes	L	Phase 1	
G8.38	The System will monitor critical performance parameters such as response time, resource availability, CPU Utilization, etc.	Yes	T	Phase 1	
G8.39	The System will provide a holistic view of a wide range of application services and network services providing the ability to drill down to a level where the observations provide useful information and both real-time and snapshot views.	Yes	T	Phase 1	
G8.40	The System will send alarms based on the monitored attributes. These can be escalated through E-Mail / SMS etc.	Yes	T	Phase 1	
G8.41	The System will provide information on the bottleneck in the system.	Yes	T	Phase 1	
G8.42	The System will allow DHS to perform admin activities through an intuitive user interface. Shall have the ability to create custom dashboards to empower the users.	Yes	T	Phase 1	
G8.43	The System will allow for different roles for Users including Operators, Administrators, Managers etc.	Yes	L	Phase 1	
G8.44	The System will allow for Report generation and analysis for application troubleshooting and capacity planning.	Yes	L	Phase 1	
G8.45	Monitoring tool(s) to proactively monitor the performance of key infrastructure components of the proposed solution architecture components as well as the overall end user experience are a requirement as part of Solution administration.	Yes	T	Phase 1	

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Technical Solution Architectural Components - DHS Enterprise Standards (Preferences)

The State of Arkansas is moving towards an integrated, person and family-centric systems for Human Services by leveraging, to the extent possible, the established DHS Enterprise Standards and Preferences as below. The

Section #	IE-BM Technical Solution Component	DHS Technology Mandates & Preferences [Mandatory, Preferred, No Preference]	Technical Solution Component Requirement Met in "Column B" ?	DHS Preference Met in "Column C"?	List Vendor's Proposed Component	Proposed Phase	Suggested Alternative Technology
T1	**Presentation Layer**						
T1.1	Portal	No Preference	Yes	Yes	Cúram Citizen Portal; Curam Case Management Portal; Drupal portal as a portlet container and overall portal content aggregator, through which users access Curam and other portals. This portal created through Drupal also includes portal utilities such as FAQs, surveys, enterprise search and Google website analytics.	Phase 1	
T2	**Business Component Layer (Requirements for these are defined in the Functional RTMs)**						
T2.1	CRM/ Case Management Solution	No Preference	Yes	Yes	Cúram HCR (MAGI Medicaid), Cúram CGISS (SNAP) Modules - Part of Cúram SPMP Package	Phase 1	
T2.2	Notifications and Alerts Functionality	No Preference	Yes	Yes	Curam; Pushing alerts over SMS using AT&T GSMS service integrated with Curam	Phase 1	

Section #	IE-BM Technical Solution Component	DHS Technology Mandates & Preferences [Mandatory, Preferred, No Preference]	Technical Solution Component Requirement Met in "Column B" ?	DHS Preference Met in "Column C"?	List Vendor's Proposed Component	Proposed Phase	Suggested Alternative Technology
T3	**Application Infrastructure Services Layer**						
T3.1	Business Rules Management Engine / BRE	No Preference	Yes	Yes	Curam SPMP	Phase 1	
T3.2	Workflow, Business Process Management / BPM	No Preference	Yes	Yes	Curam SPMP for core Case Management workflows; IBM BPM for cross-product BPEL orchestrations and BPMN support	Phase 1	
T3.3	Enterprise Content Management / ECM	Xerox Docushare (Preferred)	Yes	Yes	Xerox Docushare, integrated with Curam	Phase 1	
T3.4	Application Server	WebSphere Application Server (Preferred)	Yes	Yes	WebSphere Application Server	Phase 1	
T4	**Integration Services Layer (Proposed State Hub Architectural Components)**						
T4.1	Application Integration and Enterprise Service Bus (ESB)	On premise ESB - No preference iPaaS - Informatica (Preferred)	Yes	Clarification	IBM Integration Bus (IIB), enhanced with Health Care Connectivity Pack (suggested because of OOTB support for Health IT protocols, integration history with Curam and MDM, and overall better mapping to ESB requirements)	Phase 1	
T4.2	Data Integration, Quality and ETL (Extract, Transform and Load)	Informatica or IBM Infosphere Data Stage (Preferred)	Yes	Yes	Informatica PowerCenter, Informatica Data Quality	Phase 1	
T4.3	MDM (Master Data Management)	Informatica or IBM Infosphere Initiate (Preferred)	Yes	Yes	InfoSphere MDM Initiate	Phase 1	
T5	**Data Services Layer**						
T5.1	DBMS	DB2 or SQL Server (Preferred)	Yes	Yes	DB2	Phase 1	
T5.2	Business Intelligence (BI)	Cognos or Business objects (Preferred)	Yes	Yes	Cognos, combined with SPSS for predictive analytics	Phase 1	

Section #	IE-BM Technical Solution Component	DHS Technology Mandates & Preferences [Mandatory, Preferred, No Preference]	Technical Solution Component Requirement Met in "Column B" ?	DHS Preference Met in "Column C"?	List Vendor's Proposed Component	Proposed Phase	Suggested Alternative Technology
T6	**Security and Privacy Layer**						
T6.1	IAM (Identity and Access Management)	CA IAM (Preferred)	Yes	Yes	CA IAM	Phase 1	
T6.2	Privacy and Consent	No Preference	Yes	Yes	Curam SPMP, augmented with Authorization and Consent asset, that provides fine grained Attribute Based Access Control (ABAC) for deployment of privacy/consent policies	Phase 1	
T7	**Infrastructure Layer**						
T7.1	Platform	Windows or Linux or AIX (Mandatory)	Yes	Yes	AIX, Linux	Phase 1	
T7.2	Virtualization	Power VM or VMWare (Preferred)	Yes	Yes	Power VM	Phase 1	
T7.3	Server Infrastructure	Power 770 or Linux or Wintel Servers (Preferred)	Yes	Yes	Power 770	Phase 1	
T7.4	Data Center / Hosting Infrastructure	DIS Hosting Facilities in Little Rock (Mandatory)	Yes	Yes	DIS Hosting Facilities in Little Rock	Phase 1	
T7.5	Network Infrastructure	DIS Network Infrastructure (Mandatory)	Yes	Yes	DIS Network Infrastructure	Phase 1	
T7.6	Development, Operations and Support Tools	Wiley for Application Monitoring; Nagios and Ganglia for infrastructure monitoring (Preferred)	Yes	Yes	Eclipse and Rational Software Architect for development; Jenkins for build management; GIT for source code control; Rational for testing and quality management; Tivoli Workload Scheduler (TWS) for Production batch scheduling and management; Ganglia, Nagios and NetCool for monitoring of server and network operations	Phase 1	

Note: Mandatory technology components as noted above, do not require a response as part of detailed requirements tab in the following sections.

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Portal

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
T1.1.1	The Portal Component will provide a portal UI framework that separates content from logic and is robust, scalable and interoperable with W3C Web-based standards.	Yes	T	Phase 1	
T1.1.2	The Portal Component will provide session management capabilities to support user sessions and coordinated back-end application functionality.	Yes	T	Phase 1	
T1.1.3	The Portal Component will provide support for multiple languages and character set encoding standards.	Yes	T	Phase 1	
T1.1.4	The Portal Component will provide portal personalization and customization capabilities for the constituent user experience.	Yes	T	Phase 1	
T1.1.5	The Portal Component will support access from multiple channels and devices.	Yes	T	Phase 1	
T1.1.6	The Portal Component will provide support for Web content management and is robust and scalable.	Yes	T	Phase 1	
T1.1.7	The Portal Component will provide time-based content expiration and version management capabilities.	Yes	T	Phase 1	
T1.1.8	The Portal Component will provide Web content related workflow management capabilities.	Yes	T	Phase 1	
T1.1.9	The Portal Component will provide syndicated content capabilities including creation and subscription to RSS feeds.	Yes	T	Phase 1	
T1.1.10	The Portal Component will provide content metadata attributes for portal extensibility.	Yes	T	Phase 1	
T1.1.11	The Portal Component will provide multimedia Web content management capabilities.	Yes	T	Phase 1	
T1.1.12	The Portal Component will provide wiki- and blog-based capabilities.	Yes	T	Phase 1	
T1.1.13	The Portal Component will provide XHTML e-form capabilities.	Yes	T	Phase 1	
T1.1.14	The Portal Component will provide survey engine capabilities.	Yes	T	Phase 1	
T1.1.15	The Portal Component will provide chat and instant messaging (IM) support.	Yes	T	Phase 1	
T1.1.16	The Portal Component will provide the capability to consume externally available mapping Web services.	Yes	T	Phase 1	
T1.1.17	The Portal Component will provide portlet capabilities.	Clarification	T	Phase 1	Portlet like capabiltiies are accomplished through blocks and regions in Drupal/PHP.
T1.1.18	The Portal Component will provide inter-portlet communications that are robust, scalable and reliable.	Clarification	T	Phase 1	Portlet like capabiltiies are accomplished through blocks and regions in Drupal/PHP.
T1.1.19	The Portal Component will provide search engine capabilities.	Yes	T	Phase 1	
T1.1.20	The Portal Component will provide taxonomy-based cataloging of portal resources.	Yes	T	Phase 1	
T1.1.21	The Portal Component will provide index-based search capabilities.	Yes	T	Phase 1	
T1.1.22	The Portal Component must allow for user analytics to be captured and reported.	Yes	T	Phase 1	

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Case Management Functionality (Please refer to Functional RTM for Detailed Requirements)

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
T2.1.1	The Vendor's proposed technology solution will provide technical capabilities to fulfill all Case Management requirements, as detailed in the Functional RTMs	Yes	L	Phase 1	

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Notification and Alerts (Please refer to Functional RTM for Detailed Requirements)

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
T2.2.1	The Vendor's proposed technology solution will provide technical capabilities to fulfill all Notifications and Alerts requirements, as detailed in the Functional RTMs	Yes	L	Phase 1	

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Business Rules Engine (BRE)

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
T3.1.1	The BRE component will support data verification and consistency checks.	Yes	L	Phase 1	
T3.1.2	The BRE component will support Compute values based on input data	Yes	L	Phase 1	
T3.1.3	The BRE component will support the selection of business process path.	Yes	L	Phase 1	
T3.1.4	The BRE component will support mechanisms and ease of use for users to edit rules while maintaining compliance with State and Federal rules.	Yes	L	Phase 1	
T3.1.5	The BRE component will support design for a multi-step decision.	Yes	L	Phase 1	
T3.1.6	The BRE component will have the ability to tune individual steps in the overall decision process for maximum performance by the execution engine.	Yes	L	Phase 1	
T3.1.7	The BRE component will support reporting requirements either natively or integrate with other reporting tools to provide reporting.	Yes	L	Phase 1	
T3.1.8	The BRE component will support repository infrastructure for rule storage and versioning.	Yes	L	Phase 1	
T3.1.9	The BRE component will easily integrate with the rest of proposed Solution architecture	Yes	L	Phase 1	
T3.1.10	The BRE component will support seamless and easy user interaction.	Yes	L	Phase 1	
T3.1.11	The BRE component will provide context sensitive help and extensive documentation.	Yes	L	Phase 1	
T3.1.12	The BRE component must be able to submit business rules to a federal repository at such time as the repository exists.	Yes	L	Phase 1	
T3.1.13	The BRE component will support advanced inference features, including: a. Truth maintenance to support parallel rule execution b. Inductive and deductive problem sets supported c. Recursive rules supported d. Rule aggregation supported e. Links to simulation capabilities f. Agent or daemon links g. Object inheritance supported h. Multiple-engine support	Clarification	L	Phase 1	Cúram supports recursive rules, rule aggregation, simulation capabilities, and object inheritance

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
T3.1.14	The BRE component will include rule management features for the execution engine, including: a. Rule extensibility b. Rule mapping to owners and stewards c. Rule change impact analysis purposes d. Integration/coordination of distributed rule engines with a corporate "master" e. Ability to rerun the engine for a point which has passed (for example, after 1 January, still able to rerun year-end jobs with 31 December rules) f. Ability to enter new rules or changes to become effective on a future date (for example, ability to put in the rule changes for 1 January in December) g. Rule consistency/collision checks h. Rule versioning i. Release versioning and rollback j. Rule security	Clarification	L	Phase 1	Cúram supports rule extensibility, rule change impact analysis, ability to re-run rules for a point in time, enter new rules effective in future dates, rule versioning, release versioning
T3.1.15	The BRE component will include a rule repository for global rule management, including: a. Nomadic support b. An extensible meta model c. Rule merge support d. Versioning/lockout e. Rule promotion f. Change management g. Electronic rule distribution (publish or subscribe) h. Security	Clarification	L	Phase 1	Cúram rules support an extensible meta model, rule merge support, versioning, and rule promotion
T3.1.16	The BRE component will support ease of use in operation/development and administration, including: a. Rule-firing audit report capabilities b. Rule views by project or role c. Ability to be used as a wizard/plug-in for multiple development environments d. Dynamic rule change supported e. Rules separated from the engine f. Constraints naturally supported	Clarification	L	Phase 1	Cúram supports rules being used for multiple development environments, dynamic rule changes, rules separated from the engine, and constraints naturally supported.
T3.1.17	The BRE component will include the capability to save and retrieve partial user sessions.	Yes	L	Phase 1	
T3.1.18	The BRE component will provide the capability to associate effective dates with each program and rule in the rules engine.	Yes	L	Phase 1	
T3.1.19	The BRE component will provide the capability to associate a rule with multiple program profiles.	Yes	L	Phase 1	
T3.1.20	The BRE component will provide the capability to identify and apply a rule change appropriately to existing cases.	Yes	L	Phase 1	

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
T3.1.21	The BRE component will provide the capability to copy an existing rule to create a new rule.	Yes	L	Phase 1	
T3.1.22	The BRE component will provide the ability to identify all other rules that are dependent on a specific rule by allowing rules association	Yes	L	Phase 1	
T3.1.23	The BRE component will provide the capability to generate and display a flow chart of each program profile.	Yes	D	Phase 1	
T3.1.24	The BRE component will provide the ability to maintain and display the history of each rule change in the rules engine. This history will show previous versions of the rule, a timestamp of when the change was made and the ID of the user making the change.	Yes	L	Phase 1	
T3.1.25	The BRE component will provide the capability to add additional table-driven variables to support new regulations using a rules engine.	Yes	L	Phase 1	
T3.1.26	The BRE component will include an automated rule build capability for rule repository propagation through the environments Development, Integration/Test, User Acceptance Testing and Production.	Yes	L	Phase 1	
T3.1.27	The BRE component will have the ability to expose sets of interrelated rules in the rules repository as either a web service and/or in a interactive, web-based interview format.	Yes	D	Phase 1	
T3.1.28	The BRE component will have the ability to create customizable web-based, interview sessions based on defined rule sets.	Yes	L	Phase 1	
T3.1.29	The BRE component must facilitate the creation and maintenance of rules referencing complex data relationships this will include, but not be limited to, rules referencing complex many-to-many relationships between entity types	Yes	L	Phase 1	
T3.1.30	The BRE component must have the ability for text documentation and meta-data to be included as part of the rules repository.	Yes	L	Phase 1	
T3.1.31	The BRE component will have documentation for assisting rule authors and administrators with best practices for rule repository creation and maintenance, repository check-in/checkout, repository promotion across environments.	Yes	L	Phase 1	

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Workflow and Business Process Management (BPM)

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
T3.2.1	The Workflow/BPM component will includes business rules engine/capabilities (e.g., roles, responsibilities, policies, procedures, approvals, deadlines, integrations, etc.)	Yes	L	Phase 1	
T3.2.2	The Workflow/BPM component will provide process execution and state management	Yes	L	Phase 1	
T3.2.3	The Workflow/BPM component will interact/integrate with Enterprise Data and Content Management Solution components.	Yes	D	Phase 1	
T3.2.4	The Workflow/BPM component will integrate with other solution architecture components	Yes	C	Phase 1	
T3.2.5	The Workflow/BPM component will provide simulation and optimization.	Yes	L	Phase 1	
T3.2.6	The Workflow/BPM component will provide robust Security functions	Yes	L	Phase 1	
T3.2.7	The Workflow/BPM component will provide a registry for process components	Yes	L	Phase 1	
T3.2.8	The Workflow/BPM component will provide robust Administration functions	Yes	L	Phase 1	
T3.2.9	The Workflow/BPM component will provide and/or integrate with a robust and easily configurable workflow engine	Yes	L	Phase 1	
T3.2.10	The Workflow/BPM component will include the capability to assign tasks to staff based on defined business rules.	Yes	L	Phase 1	
T3.2.11	The Workflow/BPM component will include the capability to route work to the next person in a workflow based on process outcomes.	Yes	L	Phase 1	
T3.2.12	The Workflow/BPM component will provide an automated method to balance workload based on user and work unit queues or skills and availability.	Yes	L	Phase 1	
T3.2.13	The Workflow/BPM component will provide a method to manually reassign workload based on user input.	Yes	L	Phase 1	
T3.2.14	The Workflow/BPM component will support e-mail (push) or on-line queries (pull) by a user for work that is in their queue.	Yes	L	Phase 1	
T3.2.15	The Workflow/BPM component will provide data validation rules to ensure data validity	Yes	C	Phase 1	
T3.2.16	The Workflow/BPM component will enforce workflow rules (with task checklists) to ensure that processes are completed correctly.	Yes	L	Phase 1	
T3.2.17	The Workflow/BPM component will improve management and staff accountability through the production of reports and/or electronic notifications which will alert users of pending and over due work.	Yes	L	Phase 1	

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
T3.2.18	The Workflow/BPM component will provide for comprehensive case tracking as defined in requirements detailed during Workflow/BPM component configuration - minimally these requirements will include logging of task status, case and contact history, issues, etc.	Yes	L	Phase 1	
T3.2.19	The Workflow/BPM component will track milestones and due dates and support notification of the appropriate parties about upcoming and overdue milestones	Yes	C	Phase 1	
T3.2.20	The Workflow/BPM component will support multiple forms of electronics notification channels for external users(e.g. text, page, etc.)	Yes	L	Phase 1	
T3.2.21	The Workflow/BPM component will support a visual/modeling tool to define business process flows.	Yes	L	Phase 1	
T3.2.22	The Workflow/BPM component will support standard business process definition languages	Yes	L	Phase 1	
T3.2.23	The Workflow/BPM component will provide the capability to tie business rules to workflows	Yes	L	Phase 1	
T3.2.24	The Workflow/BPM component will provide the capability to link a workflow to one or more workflows.	Yes	L	Phase 1	
T3.2.25	The Workflow/BPM component will provide the capability to suspend and resume a workflow that is incomplete	Yes	L	Phase 1	
T3.2.26	The Workflow/BPM component will provide production of reports and/or electronic notifications to identify suspended workflows	Yes	L	Phase 1	
T3.2.27	The Workflow/BPM component will provide all operational functions to manage Global and individual queues	Yes	L	Phase 1	
T3.2.28	The Workflow/BPM component will provide standard reports on pending tasks queried by county, zip code, office, program, due date etc.	Yes	C	Phase 1	
T3.2.29	The Workflow/BPM component will implement the functional requirements as defined in T6-Functional Requirements RTM FR 13.31, and 13.32. To that extent, the System will report on the following metrics. a) The Workflow/BPM component will measure time taken for each task to report on the average time taken for each type of task and have this metric rolled it up to a case level b) The Workflow/BPM component should also calculate the actual and elapsed time taken for each case and report on averages.	Clarification	C	Phase 1	Case level reporting is based on rollup of task level data, and is presented as such on the page/report.

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Enterprise Content Management (ECM)/Document Management

The Vendor's technical solution must either leverage DHS' current DocuShare implementation for all Document and Records Management of Electronic documents or implement a new technical component and migrate all existing documents from DocuShare to the new system. If they select a new system the component must meet the following requirements

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
Document Management					
T3.3.1	The ECM/Document Management component will provide the ability to capture System generated documents and store them at appropriate level (e.g. individual, case, program, application, various workflow/process)	Yes	L	Phase 1	
T3.3.2	The ECM/Document Management component will provide the ability to store electronic forms (System generated or 3rd-party generated forms)	Yes	L	Phase 1	
T3.3.3	The ECM/Document Management component will provide the capability to scan and store imaged documents and electronic files	Yes	L	Phase 1	
T3.3.4	The ECM/Document Management component will enable indexing and searching of documents by a variety of user-defined metadata attributes	Yes	L	Phase 1	
T3.3.5	The ECM/Document Management component will provide support for full text search	Yes	L	Phase 1	
T3.3.6	The ECM/Document Management component will provide built-in viewers/converters for a wide variety of file types	Yes	L	Phase 1	
T3.3.7	The ECM/Document Management component will provide digital rights management capabilities	Yes	L	Phase 1	
T3.3.8	The ECM/Document Management component will provide notification features for files that are checked out (over due, availability, etc.)	Yes	L	Phase 1	
T3.3.9	The ECM/Document Management component will ensure version control of documents as they are changed or modified	Yes	L	Phase 1	
T3.3.10	The ECM/Document Management component will allow rollback to a previous version of a document	Yes	L	Phase 1	
T3.3.11	The ECM/Document Management component will enable collaborative document creation and/or markup	Yes	T	Phase 1	Assuming this is a Docushare capability

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
T3.3.12	The ECM/Document Management component will enable attachment of documents to e-mails and e-mail distribution lists with the option to have them encrypted prior to distribution.	Yes	L	Phase 1	
T3.3.13	The ECM/Document Management component will utilize the System authorization and access control for file level security	Yes	L	Phase 1	
T3.3.14	The ECM/Document Management component will have the ability to, based on rules or context, automate the creation of indexing, meta data and overall taxonomy	Yes	D	Phase 1	
T3.3.15	The ECM/Document Management component will have robust bulk load and conversion features	Yes	L	Phase 1	
T3.3.16	The ECM/Document Management component will provide the capability to communicate natively with the document management API	Yes	C	Phase 1	
T3.3.17	The ECM/Document Management component will provide the capability to access the output of the document management files over the Internet and/or Intranet web sites.	Yes	L	Phase 1	
T3.3.18	The ECM/Document Management component will develop a user guide that can be accessed online and printed on demand.	Yes	L	Phase 1	
T3.3.19	The ECM/Document Management component will provide the capability for online access to policy and procedure and training materials.	Yes	D	Phase 1	
T3.3.20	The ECM/Document Management component will be integrated with document processing center workflow.	Yes	D	Phase 1	
Imaging and Image Capture					
T3.3.21	The ECM/Document Management component will provide scanning software that is configurable to accommodate user-defined field edits such as the exclusion or inclusion of special characters.	Yes	L	Phase 1	
T3.3.22	The ECM/Document Management component design will accommodate multiple imaging locations.	Yes	L	Phase 1	
T3.3.23	The ECM/Document Management component will integrate the Imaging and Document Management capabilities.	Yes	D	Phase 1	
T3.3.24	The ECM/Document Management component will provide the capability to access System to extract data to pre-populate index fields, and/or values on forms.	Yes	D	Phase 1	
T3.3.25	The ECM/Document Management component will provide the capability to send and receive faxed and e-form documents, process the data and image directly into and out of the System including the ability to automatically send confirmation of transmission to the sender.	Yes	L	Phase 1	

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
T3.3.26	The ECM/Document Management component will provide the capability for performing conditional routing that will send documents to a specific queue or inbox, either manually or electronically, based on preset conditions as defined by the User.	Yes	C	Phase 1	
T3.3.27	The ECM/Document Management component will provide the capability to store and view a multiple page document as a single document.	Yes	L	Phase 1	
T3.3.28	The ECM/Document Management component will provide the capability to attach notes, annotations, e-mails and other documents to an original scanned document at any time without rescanning.	Yes	L	Phase 1	
T3.3.29	The ECM/Document Management component will provide the capability to notify the user when a duplicate document has been received so the user can decide whether to use the previously received document, replace the existing document or store the new document separately.	Yes	L	Phase 1	
T3.3.30	The ECM/Document Management component will provide the capability to link imaged documentation together and link it to an individual and/or cases within the System.	Yes	C	Phase 1	
T3.3.31	The ECM/Document Management component will provide the capability to record user and workstation identification for each document processed, accessed or updated.	Yes	L	Phase 1	
T3.3.32	The ECM/Document Management component will provide the capability for documents to be grouped together during scanning based on user defined criteria.	Yes	L	Phase 1	
T3.3.33	The ECM/Document Management component will provide the capability to allow the User to manually remove, rescan and replace a previously scanned image or document(s).	Yes	L	Phase 1	
T3.3.34	The ECM/Document Management component will provide the capability to employ user-defined form/template, indexes and/or field values for recognition and retrieval of documents.	Yes	C	Phase 1	
T3.3.35	The ECM/Document Management component will provide the capability to validate data captured from specific fields on forms electronically read by OCR/OMR/ICR.	Yes	L	Phase 1	

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
T3.3.36	The ECM/Document Management component will provide the capability to archive documents manually and/or automatically by user-defined criteria.	Yes	T	Additional Phases	We plan to implement this requirement in Phase 5
T3.3.37	The ECM/Document Management component will provide the capability for archived documents to be retrieved and re-indexed.	Yes	T	Additional Phases	We plan to implement this requirement in Phase 5
T3.3.38	The ECM/Document Management component will provide the capability to permanently delete documents based on user defined criteria.	Yes	D	Additional Phases	We plan to implement this requirement in Phase 5
T3.3.39	The ECM/Document Management component will provide the capability to interface with other imaging Systems using industry standard interfaces and file formats.	Yes	L	Phase 1	
T3.3.40	The ECM/Document Management component will provide the capability to version multiple copies of scanned documents.	Yes	L	Phase 1	
T3.3.41	The ECM/Document Management component will provide image retrieval response times within a maximum of two seconds for all documents stored in the System given a minimum level of bandwidth agreed during detailed requirements.	Yes	L	Phase 1	
T3.3.42	The ECM/Document Management component will provide an imaging capability that includes advanced Optical Character Recognition, Intelligent Character Recognition, and Optical Mark Recognition capabilities with a minimum 90% accuracy rate and the ability to regulate the error percentage between 90 and 100 percent by document type.	Yes	L	Phase 1	
T3.3.43	The ECM/Document Management component will provide audit trail functions with the ability to log every step in the process to a database for query and reporting purposes.	Yes	L	Phase 1	

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
Records Management					
T3.3.44	The ECM/Document Management component will automatically calculate transfer and destruction dates (and assign records ready for deletion to the appropriate review process for approval of final deletion) for all records in the retention schedules.	Yes	C	Phase 1	
T3.3.45	The ECM/Document Management component will provide email notification of disposition results	Yes	L	Phase 1	
T3.3.46	The ECM/Document Management component will include a workflow tool to support the records management process	Yes	C	Phase 1	
T3.3.47	The ECM/Document Management component will allow users to manually or automatically classify records or classified automatically based on a policy/rules engine	Yes	D	Phase 1	
T3.3.48	The ECM/Document Management component will allow administrators and authorized users to create, apply, view or remove legal holds for individual or multiple records	Yes	C	Phase 1	
T3.3.49	The ECM/Document Management component will enable declaration of email: a) From Microsoft Outlook as records using drag-and-drop or menu functions b) As it is inbound to and outbound from the email System c) In Microsoft Outlook journal folders	Yes	L	Phase 1	
T3.3.50	The ECM/Document Management component will have the capability to produce colored and bar-coded labels created for physical records	Yes	D	Phase 1	
T3.3.51	The ECM/Document Management component will have the capability to check records in and out using barcodes, with adherence to security permissions and support the use of barcode scanners for the purpose	Yes	L	Phase 1	
T3.3.52	The ECM/Document Management component will have the capability to track all types and sizes of storage containers within storage locations	Yes	L	Phase 1	
T3.3.53	The ECM/Document Management component will be compliant with U.S. Department of Defense 5015.2-STD Electronic Records Management Standard	Yes	L	Phase 1	
T3.3.54	The ECM/Document Management component will have the ability for an administrator to create and maintain retention schedules	Yes	L	Phase 1	
T3.3.55	The ECM/Document Management component will have the ability to create disposition, legal hold and audit reports for the records	Yes	L	Phase 1	

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
Web Content Management					
T3.3.56	The ECM/Document Management component will provide content authoring capabilities including: a) Provide a structured container for the content (e.g. document) b) Support reuse via Copy and Paste or "Save As" c) Tracking of changes to content within a container d) Drag-and-drop page layout e) Ability for collaboration by allowing the “single control” to transfer between authors, reviewers and authorizers f) Real-time active collaboration allowing multiple authors to review and update the content in a container during the course of a shared session g) Standard templates to make authoring documents within certain parameters h) Facilitate the use of Microsoft Office creation tools to submit content directly into the WCM repository i) The bulk import and export of XML content for integration and migration j) Reuse of content and templates to enforce a common “look and feel” and brand identity k) A flexible and extensible workflow to manage authoring review and approval of content across its life cycle l) The ability to expire and retire content.	Yes	L	Phase 1	
T3.3.57	The ECM/Document Management component will support the combination of text and other page elements, such as graphics, logos and buttons and multimedia, such as audio/video and Flash.	Yes	L	Phase 1	
T3.3.58	The ECM/Document Management component will include the ability to support content in multiple languages	Yes	L	Phase 1	
T3.3.59	The ECM/Document Management component will support multiple versions of the same site using the same WCM instance and repository (e.g. ECM has a built-in Web Content Management)	Yes	L	Phase 1	
T3.3.60	The ECM/Document Management component will display content targeted toward specific user profiles	Yes	C	Phase 1	
T3.3.61	The ECM/Document Management component will target content based on visitor-supplied preferences	Yes	C	Phase 1	

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
T3.3.62	The ECM/Document Management component will personalize a site based on customer transaction data, apply personalization rules to elements smaller than pages and use perceived behavior employing mechanisms to assess the behavior of an individual user (known or unknown) in real time and enable choice of delivered content based on that analysis)	Yes	D	Phase 1	
T3.3.63	The ECM/Document Management component will provide reporting of a) The status and history of a piece of content b) Content source and descriptive information c) Timetable of release dates or content submission dates d) User-definable audit reporting on an ad hoc basis for content e) Active content page inventory	Yes	C	Phase 1	
T3.3.64	The ECM/Document Management component will provide out-of-the-box log file analysis	Yes	L	Phase 1	
T3.3.65	The ECM/Document Management component will have the ability to find broken links and repair them	Yes	L	Phase 1	
T3.3.66	The ECM/Document Management component will have the capability to track and report on-site use and demographics	Yes	C	Phase 1	
T3.3.67	The ECM/Document Management component will provide content publication capabilities including: a) Support in-context (what you see is what you get - WYSIWYG) editing and the ability to preview rendered content in a staging area. Verifying content for hygiene (for example, accessibility, spelling, format validation, privacy, security, speed of deployment) b) Publish to multiple locations and channels based on predefined attributes c) Roll back content publication if unsuccessful d) Automatically publishing on a scheduled date e) Support dynamic and event-driven presentation of content	Yes	C	Phase 1	

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Application Server

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
T3.4.1	The Application Server component shall be a scalable, enterprise-ready application and shall support the deployment of many types of distributed applications and provides an ideal foundation for building applications based on Service Oriented Architectures (SOA).	Yes	L	Phase 1	
T3.4.2	Application Server component shall enable deployment of mission-critical applications or components in a robust, secure, highly available, and scalable environment.	Yes	L	Phase 1	
T3.4.3	Application Server component clusters shall provide scalability and reliability for applications by distributing the work load among multiple instances of the Server.	Yes	L	Phase 1	
T3.4.4	Overload protection to allow the Server the ability to detect, avoid, and recover from overload conditions.	Yes	L	Phase 1	
T3.4.5	Prioritize work based on pre-defined rules and by monitoring actual run time performance statistics.	Yes	L	Phase 1	
T3.4.6	Store-and-forward services to enable the Server to deliver messages reliably between applications that are distributed across many Server instances.	Clarification	T	Phase 1	Accomplished via IIB enterprise service bus
T3.4.7	The Application Server component security architecture shall provide a comprehensive, flexible security infrastructure designed to address the security challenges of making applications or components available on the Web.	Yes	L	Phase 1	
T3.4.8	The system must provide a standard set of user analytics and provide required API / configuration to collect additional metrics and reporting.	Yes	L	Phase 1	
T3.4.9	The Application Server component shall support session replication to support transparent fail over.	Yes	L	Phase 1	

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Enterprise Service Bus (ESB) / Application Integration

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
T4.1.1	The ESB/Application Integration component will provide reliable, once-only delivery of messages (guarantee of reliable and non-repetitive delivery).	Yes	T	Phase 1	
T4.1.2	The ESB/Application Integration component will have the ability to support varying message payloads, ranging from individual transactions to large files (more than 1GB) containing multiple transactions.	Yes	T	Phase 1	
T4.1.3	The ESB/Application Integration component will have the ability to track a message from its origin to its destination (inside a firewall), inquire on the status of that message and address exceptions (for example, resend the message if a target times out). Usually implemented via a warehouse for archiving messages together with the associated tracking and logging data.	Yes	T	Phase 1	
T4.1.4	The ESB/Application Integration component will have: a. Protocols: The ability to use standards-based communication protocols, such as TCP/IP, HTTP, HTTP/S and SMTP. b. Protocol bridging: The ability to convert between the protocol native to the messaging platform and other protocols, such as Remote Method Invocation (RMI), IIOP and .NET remoting.	Yes	T	Phase 1	
T4.1.5	The ESB/Application Integration component will have features that enable in-flight message manipulation, such as transformation (typically XML-based), intelligent routing, naming and addressing.	Yes	T	Phase 1	
T4.1.6	The ESB/Application Integration component will have the ability to apply logic to the routing of messages, including support for the following file interaction styles: a. Store and forward: Ability to persist a message and then send it to destinations. b. Publish/subscribe: Ability to distribute a message to multiple destinations based on a message attribute usually described as the subject area of the message. c. Request/reply: Ability to correlate asynchronous messages so that the target's response is associated with the appropriate request made by the source. d. Content-based: The ability to route a message based on a value or values within a message. For example, the ability to route a referral message whose target turnaround time is small to a different set of targets than a referral message whose turnaround time is high.	Yes	T	Phase 1	
T4.1.7	The ESB/Application Integration component will provide for syntactic conversion and semantic transformation, including ease of use and reuse, number of built-in functions, ease of extending the transformation function with custom-coded logic and XML support (e.g. schema or Extensible Stylesheet Language Transformations - XSLT).	Yes	T	Phase 1	

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
T4.1.8	The ESB/Application Integration component will have the capability during operations, to assist service consumers by dynamically finding, binding to and invoking the execution of service providers.	Yes	T	Phase 1	
T4.1.9	The ESB/Application Integration component will provide the technology that combines design tools and runtime software to implement programs that act as "glue," transforming among protocols, connecting to databases and linking pre-SOA Application Programming Interfaces (APIs) to the SOA backplane. To support B2B projects, adapters also need to support SOA services using B2B protocols such as Applicability Statement 1 (AS1)/Applicability Statement 2 (AS2), RosettaNet and Electronic Data Interchange for Administration, Commerce and Transportation (EDIFACT).	Yes	T	Phase 1	
T4.1.10	The ESB/Application Integration component will support the industry-standards messaging and interfaces relevant to health and human services organizations including, but not limited to: a. Health Level Seven (HL7) Versions 2.x, 3.x, and CCD b. Integrating the Healthcare Enterprise (IHE) XD* Profiles	Yes	T	Phase 1	
T4.1.11	The ESB/Application Integration component will provide the technology that hosts the execution of process logic spanning multiple back-end services or applications - typically for short-term (seconds or minutes) processes that can occasionally also be long term (hours, days, weeks) - with the aim of implementing composite services or automated ESB/Application Integration component-to-ESB/Application Integration component processes. Features include: a. Graphical design surface for specifying process flows b. Support for standard specification languages including Business Process Modeling Notation (BPMN) c. Support for standard representations including Business Process Execution Language (BPEL), XML Process Definition Language (XPDL), Business Process Modeling Language (BPML) and Web Services Flow Language (WSFL) a. Ability to specify compensating transactions and execute those transactions upon failure of the process flow b. Integration with workflow	Yes	T	Phase 1	
T4.1.12	The ESB/Application Integration component will provide the technology to perform syntactic and semantic hub-based transformation of messages, including: a. Support of taxonomy b. Support of ontology c. Reusable transformation maps d. Built-in transformation functions e. Extending the transformation function with custom-coded logic f. Support B2B project translation including Electronic Data Interchange (EDI), RosettaNet, HL7, etc.	Yes	T	Phase 1	

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
T4.1.13	The ESB/Application Integration component will provide the functionality that provides reliability for applications, services or message flows: a. Load balancing b. High availability c. Fault tolerance d. Failover e. In-order delivery f. Transaction support g. Execution prioritization h. Message prioritization i. Downstream throttling	Yes	T	Phase 1	
T4.1.14	The ESB/Application Integration component will provide the functionality used to monitor the operation of the overall ESB/Application Integration component (services, applications, processes and application infrastructure), and to collect events and usage information aimed at populating technical KPIs of the deliverables supported by the SOA backplane and of the SOA backplane components by monitoring and collecting metrics for: a. Messaging traffic b. Process state and behavior c. Application and service parameters and behavior for all nodes in a LAN or WAN	Yes	T	Phase 1	
T4.1.15	The ESB/Application Integration component must provide for any combination of Alert Destinations such as Email, JMS, SNMP, reporting services, and server logs. The alerts will be customizable with respect to the frequency of the alert, the ability to enable/disable an alert, rule expiration dates, starting and ending times for an alert, and customizable conditions for an alert".	Yes	T	Phase 1	
T4.1.16	The ESB/Application Integration component will provide the tools and technologies required to implement the necessary control access to the services and the connected resources (for example, other services and databases), as well as the SOA backplane functionality. Capabilities include: a. Authentication b. Authorization c. Encryption/decryption d. Digital signatures e. Credential mapping	Yes	T	Phase 1	
T4.1.17	The ESB/Application Integration component will provide the functionality to assist State's operations personnel in keeping the resultant ESB/Application Integration component (applications, services and infrastructure) running at peak efficiency at all times, including: a. Establishing rules for automated ESB/Application Integration component monitoring b. Establishing network-alert-based management c. Supporting autonomous network behavior so local management and problem Resolution can continue during an outage d. A console that enables domain-specific display for multiple devices	Clarification	L	Phase 1	This will be accomplished thru the State Data center and integrated tooling for IE-BM.

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
T4.1.18	The ESB/Application Integration component will provide the technology that manages the metadata and provides the features needed to support the reliable operation of services. Examples include: a. Online catalog of services and associated artifacts such as WSDL files, XSDs, BPEL files b. A single point of controlled access for cataloging, promoting, publishing and searching for information about managed assets c. Metadata that enables an Enterprise Service Bus (ESB) to find, bind to and invoke the execution of a service implementation d. Support for extending existing asset types and defining and populating custom asset types	Yes	T	Phase 1	
T4.1.19	The ESB/Application Integration component will provide support for building frameworks and extensible tools that enable the design, configuration, assembly, deployment, monitoring, and management of software designed around an SOA.	Yes	T	Phase 1	
T4.1.20	The ESB/Application Integration component will provide assistance for deploying applications with SOA and event-driven architecture in a manner that supports the following implementation strategies: a. Web Services: Web Services Interoperability (WS-I) Organization-compliant implementation of basic Web services standards, including SOAP, WSDL and Universal Description, Discovery and Integration (UDDI), as well as higher-level Web services standards, such as WS-Security. b. Representational State Transfer (REST): Support for XML-based message processing a well as HTTP, and XHTML.	Yes	T	Phase 1	
T4.1.21	The ESB/Application Integration component will support Transport Security, Message Security, WS-Security, SAML architecture, and WS-Policy. In addition, the ESB/Application Integration component will also implement the ability to externalize security by using a third-party security infrastructure whereby the ESB's proxy action calls a third-party for user/role information.	Yes	T	Phase 1	
T4.1.22	The ESB/Application Integration component will provide the technology to implement processing logic that directly manipulates data values, and the representation of those values for storage, transport or presentation purposes. This processing logic is used to establish common access to data sources (structured and unstructured), improve data quality or federate data from multiple sources.	Yes	T	Phase 1	

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
T4.1.23	The ESB/Application Integration component will provide the tooling that enables the recording (storage) or retrieving (reading) of information (data) from data stores. An example is distributed query functionality that parses incoming queries into sub queries and the execution of those sub queries, via the connectivity layer, against the respective sources where the desired data resides.	Yes	T	Phase 1	
T4.1.24	The ESB/Application Integration component will provide the data infrastructure tooling that enables users to represent semantic models, identify model-to-model relationships, and execute the necessary translations to reconcile data with differing semantic models.	Yes	T	Phase 1	
T4.1.25	The ESB/Application Integration component will provide optimization services that continuously read various types of metadata from across the architecture. The optimization verbs will use the semantic/logical services to reconcile context to data content and deliver against some aspect of the application service-level agreement (requirements for data quality, data freshness, data volumes, throughput parameters, data-mining results, on-demand data aggregation or summarization, data enrichment, and many others).	Yes	T	Phase 1	
T4.1.26	The ESB/Application Integration component must incorporate the ability to undo changes, detect and resolve conflicts, test service connectivity with tracing information, easily enable/disable services, provide logging and view all session activities/change history attributable to each logged in user.	Yes	T	Phase 1	
T4.1.27	The ESB/Application Integration component must incorporate Role/Group-based rights for the management of the Service Bus across the environments.	Yes	T	Phase 1	
T4.1.28	A Service Registry shall serve as an integration point for runtime tooling	Yes	T	Phase 1	
T4.1.29	ESB/Application Integration component shall subscribe to new or modified assets	Yes	T	Phase 1	
T4.1.30	Composite applications shall discover updated endpoints and WSDL locations	Yes	T	Phase 1	
T4.1.31	Runtime monitoring tooling shall publish metrics to the Service Registry	Clarification	T	Phase 1	This is accomplished through monitoring toolset.
T4.1.32	The Security policy manager for Web services shall allow for centrally defined security policies that govern Web services operations (such as access policy, logging policy, and load balancing)	Yes	T	Phase 1	
T4.1.33	The ESB component shall provide dynamic discovery and service level monitoring of all artifacts deployed in the Application Server	Clarification	T	Phase 1	This is accomplished through monitoring toolset.

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Data Integration, Quality, and ETL

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
T4.2.1	The Data Integration/ETL component will have the ability to convert message formats and translate coded data within messages.	Yes	C	Phase 3	
T4.2.2	The Data Integration/ETL component will provide support for a metadata repository for data and message conversion and transformations.	Yes	C	Phase 3	
T4.2.3	The Data Integration/ETL component will at a minimum support the following standards: a. Integrating the Health Enterprise (IHE): Cross-Enterprise Document Sharing (XDS, XDS.b); Cross-Community Access (XCA) b. Health Level Seven (HL7) Continuity of Care Document (CCD) C32 profile c. AHS ONC Direct Project	Yes	L	Phase 3	
T4.2.4	The Data Integration/ETL component will provide the technology to implement processing logic that can manipulates data values, and the representation of those values for transport or conversion purposes. This processing logic is used to establish a common meaning of data, improve data quality or federate data from multiple sources.	Yes	C	Phase 3	
T4.2.5	The Data Integration/ETL component will provide tooling that supports data profiling: the process of examining the data available in an existing data source (for example, a database or a file), and collecting statistics and information about that data. The purpose of these statistics may be to: a. Find out whether existing data can easily be used for other purposes. b. Give metrics on data quality, including whether the data conforms to company standards. c. Assess the risk involved in integrating data for new applications. d. Track data quality. e. Assess whether metadata accurately describes the actual values in the source database. f. Establish an understanding of data challenges early in any data-intensive project, so that late project surprises are avoided. Finding data problems late in the project can incur time delays and project cost overruns. g. Have an enterprise view of all data for uses such as master data management (MDM), where key data is needed, or data governance, for improving data quality.	Yes	L	Phase 3	

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
T4.2.6	The Data Integration/ETL component will provide tools for data source connectivity: Adapters for a range of source types beyond Relational Database Management Data Integration/ETL components (RDBMS's) and legacy databases (access to data stored in non-relational structures - for example, VSAM files and IMS databases), including packaged applications and Web services, the ability to access semi-structured and unstructured data (such as e-mail, websites, office productivity tools, content repositories and rich media)and the ability to interpret (as a source) XML structures.	Yes	L	Phase 3	
T4.2.7	The Data Integration/ETL component will provide tools to support the Extract-Transform-Load (ETL) process that involves: a. Extracting data from data sources. b. Transforming it to fit business needs (which can include quality levels). c. Loading it into the target data store. d. Caching: The ability to cache federation results and various subsets of the source data to improve performance in situations where source data volumes are large; therefore, retrieving all data required for integration directly from the source is not feasible. e. Verbose ETL process logging to allow for ease of support and debugging.	Yes	L	Phase 3	
T4.2.8	The Data Integration/ETL component will have the ability to load data in a variety of approaches including (but not limited to) the following: a. Bulk data extraction and loading b. Granular trickle-feed acquisition and delivery c. Changed-data capture (ability to identify and extract modified data) d. Event-based acquisition (time-based or data-value-based)	Yes	C	Phase 3	
T4.2.9	The Data Integration/ETL component will include the following types of transformation: a. Simple transformations such as data-type conversions, string manipulations and Simple calculations b. Moderate-complexity transformations, such as lookup and replace operations, aggregations, summarizations, deterministic matching and management of slowly changing dimensions c. Higher-order transformations, such as sophisticated parsing operations on free-form text and rich media Facilities for developing custom transformations and extending packaged transformations d. Facilities for developing custom transformations and extending packaged transformations	Yes	C	Phase 3	
T4.2.10	The Data Integration/ETL component will provide tools that enables the recording (storage) or retrieving (reading) of information (data) from data stores. An example is distributed query functionality that parses incoming queries into subqueries and the execution of those subqueries, via the connectivity layer, against the respective sources where the desired data resides.	Yes	L	Phase 3	

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
T4.2.11	The Data Integration/ETL component will comply with all relevant HIPAA standards, including national standards for electronic health care transactions and code sets, unique employee and provider identifiers, and security and privacy of individually identifiable health information (called "protected health information" or PHI).	Yes	L	Phase 3	

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
T4.2.12	The Data Integration/ETL component will prepare the necessary data conversion programs using Extract Transform and Load (ETL) from the existing database and file Data Integration/ETL components to the new Data base / file Data Integration/ETL component.	Yes	C	Phase 3	
T4.2.13	Test Data Management (TDM): The Data Integration/ETL component will have the ability to create test data in Development and Test environments from production datasources using Extract, Transform and Load (ETL) mechanisms	Yes	C	Phase 3	
T4.2.14	Data Sub-setting: The Data Integration/ETL component will provide the ability in selecting sub-set of data elements from a set of data sources for a given criteria, follow the Referential Integrity constraints, and prepare the data to be copied to a Target destination or repository	Yes	C	Phase 3	
T4.2.15	Data Masking: The Data Integration/ETL component will provide the ability to mask data for PII (Personally identifiable Information) fields such as SSN , name and address etc. In addition the TDM Data Integration/ETL component will have reverse masking capability too.	Yes	C	Phase 3	
T4.2.16	The Data Integration/ETL component will have the ability to interact with a range of different data structure types including: a. Connectivity and native access data stored in relational database management system b. Connectivity to, and native access to, data stored in nonrelational structures c. Support for access to and interpretation of a variety of flat-file formats d. Support for "interpret" and "create" XML structures e. Interfaces to common packaged applications via the standard application interfaces provided by a vendor f. Interfaces to common applications delivered off-premises via SaaS or cloud-based environments (Salesforce, for example) g. Interpretation and creation of industry-standard message formats h. Connectivity to message queues, including those provided by application integration middleware products and standards-based architectures i. Support for data structures such as graph-oriented, XML and other NoSQL-style database management system j. Connectivity to data resident in popular mobile device operating Data Integration/ETL components and mobility platforms k. Connectivity to APIs and data structures of popular social media sources (e.g., LinkedIn, Twitter) l. Connectivity to popular spatial data sources (e.g., common GIS Data Integration/ETL components, ESRI) m. Support for in-memory database management system and in-memory data grids n. Ability to access data in nontraditional source types, such as email, Web, office productivity tools and content repositories	Yes	L	Phase 3	
T4.2.17	The Data Integration/ETL component will have the ability to profile data in existing databases (without the need to extract or move the data)	Yes	L	Phase 3	
T4.2.18	The Data Integration/ETL component will have the ability to profile data external to existing databases (by importing the data into the tool)	Yes	L	Phase 3	

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
T4.2.19	The Data Integration/ETL component will include a range of prebuilt analyses on individual attributes/columns/fields such as minimum, maximum, frequency distributions of values and patterns and others	Yes	L	Phase 3	
T4.2.20	The Data Integration/ETL component will include a range of prebuilt analyses to identify relationships, patterns, integrity gaps and duplication between and across multiple attributes/columns/fields and across tables, databases and files	Yes	L	Phase 3	
T4.2.21	The Data Integration/ETL component will have the ability to configure and execute user-defined profiling analyses	Yes	C	Phase 3	
T4.2.22	The Data Integration/ETL component will include a prebuilt functionality to analyze trends in profiling results over time	Yes	L	Phase 3	
T4.2.23	The Data Integration/ETL component will have the ability to present profiling results in a graphical manner (using various chart formats, for example)	Yes	L	Phase 3	
T4.2.24	The Data Integration/ETL component will have the ability to present profiling results in textual report format	Yes	L	Phase 3	
T4.2.25	The Data Integration/ETL component will provide standard reports for exposing profiling results	Yes	L	Phase 3	
T4.2.26	The Data Integration/ETL component will include prebuilt graphical dashboards presenting profiling results (gauges and meters comparing actual metrics to user-specified limits/controls, for example)	Yes	C	Phase 3	
T4.2.27	The Data Integration/ETL component will have the ability to customize graphical, dashboard and tabular presentation formats	Yes	C	Phase 3	
T4.2.28	The Data Integration/ETL component will have the ability to present profiling results using third-party reporting or business intelligence tools (graphically or in tabular form)	Yes	C	Phase 3	
T4.2.29	The Data Integration/ETL component will provide ad hoc execution of profiling processes via user interface	Yes	L	Phase 3	
T4.2.30	The Data Integration/ETL component will provide scheduled execution of profiling processes (via built-in or third-party scheduling)	Yes	L	Phase 3	
T4.2.31	The Data Integration/ETL component will provide a number of parsing capabilities including: a. Ability to split text fields based on delimiters such as space or commas b. Ability to split text fields by matching character strings against packaged knowledge bases of terms, names and more c. Facilities for adding to, or customizing terms in, packaged knowledge bases, and the ability to create new knowledge bases d. Ability to perform parsing operations using knowledge bases from third-party sources e. Facilities for configuring user-defined parsing rules	Yes	L	Phase 3	

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
T4.2.32	The Data Integration/ETL component will provide a number of standardization and cleansing capabilities, including: a. Simple transformations, such as data-type conversions, string splitting and concatenation operations b. Moderately complex transformations such as look-up and replace operations c. Higher-order transformations, such as sophisticated parsing operations on free-form text and rich media d. Prebuilt rules for common standardization and cleansing operations, such as formatting addresses or telephone, social security and tax ID numbers e. Facilities for developing custom transformations and extending packaged transformations	Yes	L	Phase 3	
T4.2.33	The Data Integration/ETL component will provide a number of matching/relationship identification capabilities, including: a. Predefined rules for performing exact value-based matching b. Predefined algorithms/rules for matching, based on mathematical models, rather than on exact data values c. Linguistic techniques and other types of matching algorithms, for example (indicate types in comments column)" d. Entity identification/resolution across data of differing linguistic and cultural nuances e. Ability to weight, prioritize and tune matching rules (to optimize the frequency and number of potential matches, or the "tightness" or "looseness" of matching, for example) f. Facilities for implementing and customizing rules by which duplicate or related records can be merged into a single "survivor" g. Automatic removal of duplicate records based on rules for determining survival h. Ability to create logical groups of records by relating those with user-determined properties i. Ability for users to extend and/or customize the algorithms for matching, merging, linking and deleting duplications j. Ability to switch on/off data masking of records so that users are able to address data quality issues without compromising privacy and data security rules	Yes	L	Phase 3	
T4.2.34	The Data Integration/ETL component will include mechanisms for aiding the ongoing understanding and assurance of data quality, including: a. Ability to develop business rules that check for specific quality issues b. Ability to deploy monitoring rules within existing applications and data flows (explain deployment mechanism in comments column) c. Ability to deploy monitoring rules as a stand-alone process (explain deployment mechanism in comments column) d. Ability to generate alerts of various types (such as email, page and error message) if monitoring rules have been violated e. Prebuilt and customizable reports that show numbers and types of monitoring rule violations over time	Yes	C	Phase 3	

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
T4.2.35	The Data Integration/ETL component will include packaged functionality to address specific requirements of party data quality issues, such as standardization of names, addresses, contact details and hierarchies, and merging of duplicate party records	Yes	C	Phase 3	
T4.2.36	The Data Integration/ETL component will include the following support for location-related data standardization and cleansing: a. Vendor-provided libraries certified by relevant postal authorities b. Support for address extensions (such as the U.S. Postal Service's Zip+4 code look-up service), change of address notification and delivery-point validation c. Ability to provide some degree of email address validation (domain-level or user-level) d. Frequency and mechanism by which updates to postal libraries are delivered and applied e. Ability to tag records with geocoding information (such as latitude and longitude) f. Level of precision of geocoding data in relevant countries (street, block or rooftop, for example)	Yes	C	Phase 3	
T4.2.37	The Data Integration/ETL component will provide process flow and user interface capabilities to enable business users to perform data-quality-related tasks and fulfill stewardship functions, including: a. Packaged processes, including steps used to perform common quality tasks (providing values for incomplete data, resolving conflicts of duplicate records, specifying custom rules for merging records, profiling, auditing, for example) b. User interface in which quality processes and issues are exposed to business users, stewards and others c. Functionality to manage the data quality issue resolution process through the stewardship workflow (status tracking, escalation and monitoring of the issue resolution process) d. Ability to customize the user interface and workflow of the resolution process e. Ability to execute data quality resolution steps in the context of a process orchestrated by BPM tools (packaged integration or other ability to work with popular BPM suites, for example)	Yes	C	Phase 3	
T4.2.38	The Data Integration/ETL component will provide content publication capabilities including: a. Support in-context (what you see is what you get - WYSIWYG) editing and the ability to preview rendered content in a staging area. Verifying content for hygiene (for example, accessibility, spelling, format validation, privacy, security, speed of deployment) b. Publish to multiple locations and channels based on predefined attributes c. Roll back content publication if unsuccessful d. Automatically publishing on a scheduled date e. Support dynamic and event-driven presentation of content	Yes	L	Phase 3	

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
T4.2.39	The Data Integration/ETL component will include metadata capabilities including: a. Automated discovery and acquisition of metadata from data sources, applications and other tools b. Generation of lineage and impact analysis reports via graphical and tabular formats c. Open metadata repository with the ability to share metadata bidirectionally with other tools d. Automated synchronization of metadata across multiple instances of the tools e. Ability to extend metadata repository with customer-defined attributes and relationships f. Documentation of project/program delivery definitions and design principles that support requirements definitions g. Business analyst/end-user interfaces that view and work with metadata h. Capabilities that offer metadata management across unstructured data (e.g., using search, taxonomy management) alongside structured data (e.g., rules, data models) that serve the needs for data quality across the entire enterprise information landscape	Yes	L	Phase 3	
T4.2.40	The existing data from the current database tables and/or files will be run through the Data quality checks and all Data quality issues will be reported to DHS. Necessary corrective action will be performed under DHS supervision, before final data conversion takes place in the New Data Integration/ETL component.	Yes	C	Phase 3	

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Master Data Management (MDM)

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
General MDM Requirements					
T4.3.1	The MDM component will have the capability to support the global identification, linking and/or synchronization of client and provider information across heterogeneous data sources through semantic reconciliation of master client and master provider data.	Yes	T	Phase 2	IBM InfoSphere Master Data Management
T4.3.2	The MDM component will create and manage a central, database-based Data Integration/MDM component or index of record for master client (i.e. Master Client Index - MCI) and master provider (i.e. Master Provider Index - MPI) data.	Yes	T	Phase 2	IBM InfoSphere Master Data Management
T4.3.3	The MDM component will enable the delivery of a single client and a single provider view for all stakeholders.	Yes	T	Phase 2	IBM InfoSphere Master Data Management
T4.3.4	The MDM component will support ongoing client and provider data stewardship and governance requirements through monitoring of policy decisions and corrective action.	Yes	T	Phase 2	IBM InfoSphere Master Data Management
T4.3.5	The Data Integration/MDM component will track and maintain detailed records on all changes via interfaces and authoring to support audit requirements.	Yes	T	Phase 2	IBM InfoSphere Master Data Management
Data Model Requirements					
T4.3.6	The Data Integration/MDM component must include a flexible data model that can model the complex relationships between the internal application sources inside the State, its trading partners, clients and providers, as well as intermediaries and other parties, with the ability to handle complex hierarchies.	Yes	T	Phase 2	IBM InfoSphere Master Data Management
T4.3.7	The Data Integration/MDM component's data model must be capable of handling at least the following categories of elements for clients and providers: a. Identification b. Demographics c. Contact information d. Relationships with other entities / providers e. Interactions with other entities / providers	Yes	T	Phase 2	IBM InfoSphere Master Data Management
T4.3.8	The Data Integration/MDM component will include data modeling capabilities that will be configurable, customizable, extensible, and upgradable.	Yes	T	Phase 2	IBM InfoSphere Master Data Management

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
T4.3.9	The Data Integration/MDM component's data model must be able to support the State's standards for data content and coding where they exist.	Yes	T	Phase 2	IBM InfoSphere Master Data Management
T4.3.10	The Data Integration/MDM component's data model must be expressed using commonly accepted logical data model conventions with associated metadata.	Yes	T	Phase 2	IBM InfoSphere Master Data Management
Data Quality Management Requirements					
T4.3.11	The Data Integration/MDM component will have strong facilities, in batch and real-time mode, for profiling, cleansing, matching, linking, identifying and semantically reconciling master client and master provider data in different data sources to create and maintain golden records.	Yes	T	Phase 2	IBM InfoSphere Master Data Management
T4.3.12	The Data Integration/MDM component's business rules and associated metadata related to data cleansing will be sufficiently visible to satisfy any audit requirements.	Yes	T	Phase 2	IBM InfoSphere Master Data Management
T4.3.13	The Data Integration/MDM component will include the ability to review data quality metrics and track corrective actions.	Yes	T	Phase 2	IBM InfoSphere Master Data Management
Loading, Integration and Synchronization					
T4.3.14	The Data Integration/MDM component will provide dynamically configurable rules for comparing and reconciling semantics across data sources, matching (both probabilistic and tunable) across changing demographic data structures, linking data, and managing the merging and unmerging of client and provider records with full auditability and survivability.	Yes	T	Phase 2	IBM InfoSphere Master Data Management
T4.3.15	Where data is matched by a proxy rather than the actual identifier (e.g. client or provider ID) the Data Integration/MDM component will load data no less quickly, efficiently or accurately.	Yes	T	Phase 2	IBM InfoSphere Master Data Management
T4.3.16	The Data Integration/MDM component will include integration middleware, including publishing and subscription mechanisms, to provide a communication backbone for the bidirectional flow of client and provider data between the central repository and the spoke Data Integration/MDM components, be they copies or subsets of the repository, or remote applications.	Yes	T	Phase 2	IBM InfoSphere Master Data Management
T4.3.17	The Data Integration/MDM component will provide tools to validate and manage all client and provider addresses to include all address types (mailing, residential, E-911).	Yes	T	Phase 2	IBM InfoSphere Master Data Management
T4.3.18	The Data Integration/MDM component will be able to leverage a range of middleware products to data sources, including all State and trading partner data sources, and expose Healthcare industry-standard interfaces.	Yes	T	Phase 2	IBM InfoSphere Master Data Management
T4.3.19	The Data Integration/MDM component will support integration with different latency characteristics and styles (e.g. real-time, batch).	Yes	T	Phase 2	IBM InfoSphere Master Data Management
T4.3.20	The Data Integration/MDM component will support integration with downstream Business Intelligence (BI) and analytical requirements.	Yes	T	Phase 2	IBM InfoSphere Master Data Management

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
Authoring and Workflow Functionality					
T4.3.21	The Data Integration/MDM component will provide flexible and comprehensive workflow capabilities to enable business users and client and provider data managers to collaborate effectively in the authoring and management of client and provider data across the multiple source Systems	Yes	T	Phase 2	IBM InfoSphere Master Data Management
MDM Manageability Requirements					
T4.3.22	The Data Integration/MDM component will include facilities for managing and controlling access to client and provider data in the MDM such as reporting on MDM activities.	Yes	T	Phase 2	IBM InfoSphere Master Data Management
Security Requirements					
T4.3.23	The Data Integration/MDM component will have the ability to integrate the data within the MDM with management and security tools.	Yes	T	Phase 2	IBM InfoSphere Master Data Management
T4.3.24	The Data Integration/MDM component will manage the policies and rules associated with privacy access rights.	Yes	T	Phase 2	IBM InfoSphere Master Data Management
T4.3.25	The Data Integration/MDM component will configure and manage differing visibility rules, providing different views for different roles.	Yes	T	Phase 2	IBM InfoSphere Master Data Management
T4.3.26	other directory Data Integration/MDM component in use to provide authorization, e.g., role-based security.	Yes	T	Phase 2	IBM InfoSphere Master Data Management
Data Stewardship Support Requirements					
T4.3.27	The Data Integration/MDM component will provide analytics and performance measures related to the range of processes and activities taking place within the MDM; from the running of batch data loads and the execution of workflows against benchmarks to the quality of active client and provider data in the MDM.	Yes	T	Phase 2	IBM InfoSphere Master Data Management
T4.3.28	The Data Integration/MDM component will include status and management tools for the chief data steward to monitor to-do lists to ensure effective action takes place across the management of the master client and master provider data.	Yes	T	Phase 2	IBM InfoSphere Master Data Management
T4.3.29	The Data Integration/MDM component will include Data Integration/MDM component-wide meta models to help identify what users, roles, applications and Data Integration/MDM components are responsible for which client and provider data.	Yes	T	Phase 2	IBM InfoSphere Master Data Management
T4.3.30	The Data Integration/MDM component will provide workflow services for remediation of quality issues in client and provider data.	Yes	T	Phase 2	IBM InfoSphere Master Data Management
T4.3.31	The Data Integration/MDM component will include business rules services to interrogate which rules are used by MDM by frequency and preference and to provide suggested enhancements to such business rules.	Yes	T	Phase 2	IBM InfoSphere Master Data Management

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
Technology and architecture considerations					
T4.3.32	The Data Integration/MDM component will be based on up-to-date, mainstream technologies, and capable of flexible and effective integration with a wide range of other application and infrastructure platform components (whether from the same vendor or not) that will be deployed by DHS.	Yes	T	Phase 2	IBM InfoSphere Master Data Management
T4.3.33	The Data Integration/MDM component will protect and complement the data layer with a layer of business services for accessing and manipulating the client and provider data that is built for an SOA environment, by exposing web services interfaces.	Yes	T	Phase 2	IBM InfoSphere Master Data Management
T4.3.34	The Data Integration/MDM component will be capable of flexible configuration into a range of architectural styles in terms of instantiation, latency and use of client and provider data to enable different deployment scenarios, such as the consolidation, registry, coexistence and centralized scenarios.	Yes	T	Phase 2	IBM InfoSphere Master Data Management
Master Client and Provider Index					
T4.3.35	The Solution must implement a Master Client Index (MCI) built on the existing data sources which are designated as part of IE-BM scope. This MCI must be designed and implemented as an independent module. It must act as a single source of truth for all Client information. This Index must have an easily navigable GUI with appropriate access controls built in for authorized DHS staff for access.	Yes	T	Phase 2	IBM InfoSphere Master Data Management
T4.3.36	The Solution must implement a Master Provider Index (MPI) built on the existing data sources which are designated as part of IE-BM scope. However, a majority of the provider data will only be available as part of future enhancements to the system, e.g interface to MMIS data, and thus the necessary framework and structure for MPI has to be setup as part of the IE-BM scope to make it ready to fulfill future requirements. This MPI must be designed and implemented as an independent module. It must act as a single source of truth for all Provider information. This Index must have an easily navigable GUI with appropriate access controls built in for authorized DHS staff for access.	Yes	T	Phase 2	IBM InfoSphere Master Data Management

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Database Management System (DBMS)

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
T5.1.1	The DBMS component will lock database records based on various parameters (e.g., at row level, field level, or at the application level).	Yes	C	Phase 1	
T5.1.2	The DBMS component will accommodate separate instances of databases.	Yes	C	Phase 1	
T5.1.3	The DBMS component will support online modifications to database structures with minimal user downtime.	Yes	C	Phase 1	
T5.1.4	The DBMS component will allow for data and transaction replication including, but not limited to, copying an instance of any database to specified locations (e.g. SAN, Multi-site implementations)	Yes	C	Phase 1	
T5.1.5	The DBMS component will provide standard data extraction APIs to allow import and export of data.	Yes	C	Phase 1	
T5.1.6	The DBMS component will provide documented best practices including, but not limited to optimum database configuration, client maintenance and change control.	Yes	L	Phase 1	
T5.1.7	The DBMS component will handle load balancing, failover and/or clustering ability for extended scalability and performance.	Yes	L	Phase 1	
T5.1.8	The DBMS component will use and take advantage of the capacity planning model for database configuration.	Yes	C	Phase 1	
T5.1.9	The DBMS component supports advanced configurations for data caching (e.g., support of client/application caching, support of server caching, etc.)	Yes	C	Phase 1	
T5.1.10	The DBMS component will have the ability to optimize performance in transaction processing versus report processing	Yes	C	Phase 1	
T5.1.11	The DBMS component will use history tracking within the database and logging options (e.g., transaction auditing)	Yes	C	Phase 1	
T5.1.12	The DBMS component will be fully ACID (Atomicity, Consistency, Isolation, Durability)-compliant so as to ensure it handles transaction rollbacks, validity and referential integrity checks, etc.	Yes	L	Phase 1	
T5.1.13	The DBMS component will handle record locking (e.g., row, field, other) and record updating/committing.	Yes	L	Phase 1	
T5.1.14	The DBMS component will support indexing technology (multiple types of Indexing will be available to tune performance of SQL statements).	Yes	L	Phase 1	

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
T5.1.15	The DBMS component must have the ability to support a variety of data model constructs including complex entity relationships and complex many-to-many relationships	Yes	C	Phase 1	
T5.1.16	The DBMS component will provide the ability to optimize individual queries and support parallelizing a query to run on multiple CPUs at the same time to increase performance.	Yes	C	Phase 1	
T5.1.17	The DBMS component will manage multiple query queue entries in parallel.	Yes	C	Phase 1	
T5.1.18	The DBMS component will offer tools to manage and control disparate mixed workloads in a Database Management Solution (DBMS) environment.	Yes	C	Phase 1	
T5.1.19	The DBMS component must have the ability to maintain security based upon appropriate roles	Yes	C	Phase 1	
T5.1.20	The DBMS component must have data replication capabilities to external file formats or other RDBM DBMS components.	Yes	T	Phase 1	
T5.1.21	The DBMS component will have full, incremental and transaction log backup and recovery capabilities on both a regular schedule and an ad hoc basis, including redundant off-site backups.	Yes	C	Phase 1	
T5.1.22	The DBMS component will provide the capability to remain fully-functional during database backup windows.	Yes	C	Phase 1	
T5.1.23	The DBMS component must support geo-coded address data for the storage and retrieval of latitude and longitude coordinates.	Yes	C	Phase 1	
T5.1.24	The DBMS component design will provide the framework to assist the State in developing procedures to ensure that specified data is archived and protected from loss, unauthorized access, or destruction.	Yes	T	Phase 1	
T5.1.25	The names of Tables, views, columns and indexes will follow a standard naming convention and not be cryptic and adhoc	Yes	C	Phase 1	
T5.1.26	The DBMS component design will provide the framework for naming conventions used in naming tables, views, columns and indexes.	Yes	C	Phase 1	
T5.1.27	The key tables will have initially defined partitions to facilitate archiving at a defined frequency.	Yes	C	Phase 1	
T5.1.28	The DBMS component design will specify if the application code is Database agnostic or tied to a specific database. If the code is partially database agnostic, the design must specify which modules are DBMS specific.	Yes	C	Phase 1	

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Analytical Processing and Business Intelligence (BI)

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
T5.2.1	The BI Component will provide the ability to impose graduated access to reports based on user role and agency requirements/permissions to better analyze program data	Yes	C	Phase 3	
T5.2.2	The BI Component's business intelligence and reporting capabilities must be scalable to accommodate changes in BI Component scale including changes in user population, transaction volume, throughput and geographical distribution while maintaining the agreed service levels.	Yes	C	Phase 3	
T5.2.3	The BI Component will have a mechanism to share specific data (e.g. limited data sets, detailed data at the level of the individual but with the data anonymous and completely de-identified, etc.) in a controllable fashion with other State and local agencies.	Yes	C	Phase 3	
T5.2.4	The BI Component will be extensible and have a scalable data architecture incorporating State and external data.	Yes	C	Phase 3	
T5.2.5	The BI Component will provide a tool to allow predictive modeling and analysis utilizing production data and coexist and integrate with such tools already in use	Yes	C	Phase 3	
T5.2.6	The BI Component will provide the ability for user to create and customize reports, queries, and dashboards.	Yes	L	Phase 3	
T5.2.7	The BI Component design will provide a list of Out -of-Box standard set of Reports, Dashboards and visualizations that serve most of expected Reporting needs	Yes	C	Phase 3	

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Identity and Access Management (IAM)

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
T6.1.1	The IAM component design will comply with U.S. Department of Health & Human Services and U.S. Department of Education privacy and data security requirements, including, but not limited to, the Health Insurance Portability and Accountability Act (HIPAA), the Family Educational Rights and Privacy Act (FERPA) and the Health Information Technology for Economic and Clinical Health (HITECH) Act provisions of the American Recovery and Reinvestment Act (ARRA) of 2009.	Yes	L	Phase 1	
T6.1.2	The IAM component will comply with all applicable State security policies.	Yes	L	Phase 1	
T6.1.3	The IAM component will implement security controls in accordance with all Federal and State security policy and regulations.	Yes	L	Phase 1	
T6.1.4	The IAM component will meet: a. NIST 800-53A and NIST 800-53 rev3 Moderate baseline b. IRS pub 1075, which points back to NIST 800-53 rev 3 c. NIST 800-53A rev1 guidance (http://csrc.nist.gov/publications/nistpubs/800-53A-rev1/sp800-53A-rev1-final.pdf) and Harmonized Security and Privacy Framework.	Yes	L	Phase 1	
T6.1.5	The IAM component design will adhere to the principle of “Fail Safe” to ensure that a IAM component in a failed state does not reveal any sensitive information or leave any access controls open for attacks	Yes	L	Phase 1	
T6.1.6	The IAM component will allow for controlled access to participant records. Users will be able to view participant data within the IAM component at the DHS-defined levels of access based on user security privileges.	Clarification	C	Phase 1	The IAM and underlying applications will jointly enforce access controls. IAM (using CA IAM) will be responsible for authentication. Once authenticated, the user's session will be controlled by the Role Based (RBAC) or Attribute Based (ABAC) access controls in the application (Curam, Cognos…).
T6.1.7	The IAM component will provide for security concepts covering the following components: Virtual Private Network (VPN), firewall technology and Demilitarized Zone (DMZ), virus-/intrusion detection, mail/content filtering avoiding fault positives, encryption, Public Key Infrastructure (PKI).	Clarification	L	Phase 1	These capabilities will be inherited from the State Data Center.
T6.1.8	The IAM component will maintain a level of security that is commensurate with the risk and magnitude of the harm that could result from the loss, misuse, disclosure, or modification of information.	Yes	L	Phase 1	
T6.1.9	Information security will be built into the IAM component from its inception rather than “bolted on” after the IAM component has been implemented.	Yes	L	Phase 1	
T6.1.10	The IAM component will support security at the object level (e.g. Table, View, Index).	Clarification	C	Phase 1	This requirement will be me by the Privacy and Consent solution.
T6.1.11	The IAM component will support security at the row and column level.	Clarification	C	Phase 1	This requirement will be me by the Privacy and Consent solution.
T6.1.12	The IAM component will support auditing at the object level (i.e. Table, Column).	Clarification	C	Phase 1	This requirement will be me by the Privacy and Consent solution.
T6.1.13	The IAM component will provide the ability for concurrent users to simultaneously view the same record, documentation and/or template.	Yes	L	Phase 1	

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
T6.1.14	The IAM component will provide protection to maintain the integrity of data during concurrent access.	Yes	L	Phase 1	
T6.1.15	The software used to install and update the IAM component, independent of the mode or method of conveyance, will be certified free of malevolent software ("malware"). Vendor may self-certify compliance with this standard through procedures that make use of commercial malware scanning software.	Yes	L	Phase 1	
T6.1.16	The IAM component will be configurable to prevent corruption or loss of data already accepted into the system in the event of any solution component failure	Clarification	L	Phase 1	These capabilities will be inherited from the State Data Center.
T6.1.17	The IAM component will support protection of confidentiality of all Protected Health Information (PHI) delivered over the Internet or other known open networks via encryption using triple-DES (3DES) or the Advanced Encryption Standard (AES) and an open protocol such as Transport Layer Security (TLS), Secure Sockets Layer (SSL), Internet Protocol Security (IPsec), XML encryptions, or Secure/Multipurpose Internet Mail Extensions(S/MIME) or their successors.	Clarification	L	Phase 1	These capabilities will be inherited from the State Data Center.
T6.1.18	The IAM component, when storing PHI on any device intended to be portable/removable (e.g. smartphones, portable computers, portable storage devices), will support use of a standards based encrypted format using 3DES, AES or their successors.	Yes	L	Phase 1	
T6.1.19	The IAM component, prior to access to any PHI, will display a configurable warning or login banner (e.g. "The System should only be accessed by authorized users"). In the event that a IAM component does not support pre-login capabilities, the IAM component will display the banner immediately following authorization.	Yes	C	Phase 1	
T6.1.20	The IAM component will support a form of user authentication.	Yes	L	Phase 1	
T6.1.21	The IAM component design must use an advanced form of user authentication utilizing multiple form factors and/or "biometric" mechanisms. The design must account for advanced forms of user authentication (including two-factor authentication using hardware tokens, biometric devices, confirmation codes sent to a mobile phone, etc.) that will maximize effectiveness and minimize inconvenience for DHS and legitimate users.	Yes	L	Phase 1	
T6.1.22	The IAM component upon detection of inactivity of an interactive session will prevent further viewing and access to the System by that session by terminating the session, or by initiating a session lock that remains in effect until the user reestablishes access using appropriate identification and authentication procedures. The inactivity timeout will be configurable.	Yes	C	Phase 1	
T6.1.23	The IAM component will enforce a limit of (configurable) consecutive invalid access attempts by a user. The IAM component will protect against further, possibly malicious, user authentication attempts using an appropriate mechanism (e.g. locks the account/node until released by an administrator, locks the account/node for a configurable time period, or delays the next login prompt according to a configurable delay algorithm).	Yes	C	Phase 1	
T6.1.24	The IAM component will provide the capability to prevent database administrators from seeing the data in databases they maintain.	Clarification	L	Phase 1	System will audit all privieleged user activity.
T6.1.25	The IAM component will support grouping users by functional departments or other organization to simplify security maintenance.	Yes	L	Phase 1	
T6.1.26	The IAM component will provide the ability to capture and maintain identifiers required for licensed clinicians to support their practice.	Yes	L	Phase 1	
T6.1.27	The IAM component will provide the ability to maintain a directory of all personnel who currently use or access any part of System functionality	Yes	L	Phase 1	

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
T6.1.28	The IAM component will provide the ability to create and maintain a directory of external providers to facilitate communication and information exchange.	Yes	L	Phase 1	
T6.1.29	The IAM component will provide the ability to identify certain information as confidential (e.g. PII, PHI, etc.) and only make that accessible by appropriately authorized users.	Clarification	C	Phase 1	The IAM and underlying applications will jointly enforce access controls. IAM (using CA IAM) will be responsible for authentication. Once authenticated, the user's session will be controlled by the Role Based (RBAC) or Attribute Based (ABAC) access controls in the application (Curam, Cognos…).
T6.1.30	The IAM component will restrict access to summarized information according to organizational policy, scope of practice, and jurisdictional law.	Clarification	C	Phase 1	The IAM and underlying applications will jointly enforce access controls. IAM (using CA IAM) will be responsible for authentication. Once authenticated, the user's session will be controlled by the Role Based (RBAC) or Attribute Based (ABAC) access controls in the application (Curam, Cognos…).
T6.1.31	The IAM component must be able to associate permissions with a user using one or more of the following access controls: 1) user-based (access rights assigned to each user) 2) Role-Based Access Controls (RBAC; users are grouped by role and access rights assigned to these groups) 3) context-based (role-based with additional access rights assigned or restricted based on the context of the transaction such as time-of-day, workstation-location, emergency-mode, etc.)	Clarification	C	Phase 1	The IAM and underlying applications will jointly enforce access controls. IAM (using CA IAM) will be responsible for authentication. Once authenticated, the user's session will be controlled by the Role Based (RBAC) or Attribute Based (ABAC) access controls in the application (Curam, Cognos…).
T6.1.32	The IAM component will provide the ability to prevent specified user(s) or groups from accessing confidential information such as a patient's chart.	Clarification	C	Phase 1	The IAM and underlying applications will jointly enforce access controls. IAM (using CA IAM) will be responsible for authentication. Once authenticated, the user's session will be controlled by the Role Based (RBAC) or Attribute Based (ABAC) access controls in the application (Curam, Cognos…).
T6.1.33	The IAM component will provide the ability to limit access to certain confidential information such as a patient's chart to providers directly involved in service of the patient, or providers involved in review of the service.	Clarification	C	Phase 1	The IAM and underlying applications will jointly enforce access controls. IAM (using CA IAM) will be responsible for authentication. Once authenticated, the user's session will be controlled by the Role Based (RBAC) or Attribute Based (ABAC) access controls in the application (Curam, Cognos…).
T6.1.34	When access to a user's account is restricted, the IAM component will provide a means for appropriately authorized users to "break the glass" and obtain access for emergency situations, as defined by DHS policy.	Clarification	C	Phase 1	This requirement will be me by the Privacy and Consent solution.
T6.1.35	When access to a chart is restricted and the "break the glass" has occurred, the IAM component will provide the ability to notify specified users and provide an audit trail for this access.	Clarification	C	Phase 1	This requirement will be me by the Privacy and Consent solution.
T6.1.36	The IAM component will enforce the most restrictive set of rights/privileges or accesses needed by users/groups or processes acting on behalf of users, for the performance of specified tasks.	Clarification	C	Phase 1	The IAM and underlying applications will jointly enforce access controls. IAM (using CA IAM) will be responsible for authentication. Once authenticated, the user's session will be controlled by the Role Based (RBAC) or Attribute Based (ABAC) access controls in the application (Curam, Cognos…).
T6.1.37	The IAM component will provide the ability for authorized administrators to assign restrictions or privileges to users/groups.	Yes	L	Phase 1	
T6.1.38	The IAM component will support removal of a user's privileges without deleting the user from the System to ensure history of user's identity and actions.	Yes	L	Phase 1	

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
T6.1.39	The IAM component will be able to support RBAC in compliance with the HL7 Permissions Catalog.	Clarification	C	Phase 1	The IAM and underlying applications will jointly enforce access controls. IAM (using CA IAM) will be responsible for authentication. Once authenticated, the user's session will be controlled by the Role Based (RBAC) or Attribute Based (ABAC) access controls in the application (Curam, Cognos…).
T6.1.40	The IAM component will be capable of operating within an RBAC infrastructure conforming to ANSI INCITS 359-2004, American National Standard for Information Technology – Role Based Access Control.	Clarification	C	Phase 1	The IAM and underlying applications will jointly enforce access controls. IAM (using CA IAM) will be responsible for authentication. Once authenticated, the user's session will be controlled by the Role Based (RBAC) or Attribute Based (ABAC) access controls in the application (Curam, Cognos…).
T6.1.41	The IAM component will provide more-advanced session management abilities such as prevention of duplicate logins, remote logout and location-specific session timeouts.	Yes	L	Phase 1	
T6.1.42	The IAM component design will provide the ability to perform Security administration functions such as reference table maintenance and adding / removing users from the System	Yes	L	Phase 1	
T6.1.43	The IAM component will allow users access based on their roles irrespective of their geographical location.	Yes	L	Phase 1	
T6.1.44	The IAM component will provide the capability to integrate with existing authentication and authorization mechanisms.	Yes	L	Phase 1	
T6.1.45	The IAM component will provide the capability to create temporary and emergency accounts and terminate those accounts automatically after a user defined period of time.	Yes	L	Phase 1	
T6.1.46	The IAM component will provide the capability to override a role and restrict access to information by users or groups of users.	Clarification	C	Phase 1	The IAM and underlying applications will jointly enforce access controls. IAM (using CA IAM) will be responsible for authentication. Once authenticated, the user's session will be controlled by the Role Based (RBAC) or Attribute Based (ABAC) access controls in the application (Curam, Cognos…).
T6.1.47	The IAM component will allow an individual with active eligibility under a different user id to reapply under their own user id.	Yes	L	Phase 1	
T6.1.48	The IAM component will provide the capability to monitor events and detect attacks, and provide identification of unauthorized use of the System.	Yes	L	Phase 1	
T6.1.49	The IAM component will provide the capability to identify and report on inappropriate access to information in the System, based on user defined criteria.	Yes	L	Phase 1	
T6.1.50	The IAM component will enforce minimum password requirements compliant with State-provided security policies	Yes	L	Phase 1	
T6.1.51	The IAM component will allow User to change his or her password at any time	Yes	L	Phase 1	
T6.1.52	The IAM component will have mandatory security questions for the User to answer for username and password validation in case of any user requested changes	Yes	L	Phase 1	
T6.1.53	The IAM component will allow for online password reset self-service	Yes	L	Phase 1	
T6.1.54	The IAM component will prevent multiple sessions for any single user ID. A session may be defined as the activity wherein a user with a unique IP address accesses the System during a specified period of time.	Yes	L	Phase 1	
T6.1.55	The IAM component will have the ability to revoke external access to any change in circumstances, as defined in Functional requirements	Yes	L	Phase 1	
T6.1.56	The IAM component will notify specified users (and provide an audit trail for this access) when access to client's confidential data is restricted but the "break the glass" has occurred	Clarification	C	Phase 1	This requirement will be me by the Privacy and Consent solution.

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
T6.1.57	The IAM component will support grouping users by roles, functional departments or other organization to simplify security maintenance	Clarification	C	Phase 1	The IAM and underlying applications will jointly enforce access controls. IAM (using CA IAM) will be responsible for authentication. Once authenticated, the user's session will be controlled by the Role Based (RBAC) or Attribute Based (ABAC) access controls in the application (Curam, Cognos…).
T6.1.58	The IAM component will provide the ability to maintain a directory of all personnel who currently use or access the System	Yes	L	Phase 1	
T6.1.59	The IAM component will, upon detection of inactivity of an interactive session, prevent further viewing and access to the System by that session by terminating the session, or by initiating a session lock that remains in effect until the user reestablishes access using appropriate identification and authentication procedures. The inactivity timeout will be configurable.	Yes	L	Phase 1	

State of Arkansas Department of Human Services
Integrated Eligibility and Benefit Management Engagement (IE-BM) RFP
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Template T-8 - Technical Requirements Traceability Matrix

Privacy and Consent Management

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
T6.2.1	The Privacy and Consent Management component will be interoperable / vendor agnostic.	Yes	C	Phase 1	
T6.2.2	The Privacy and Consent Management component will support break-the-glass / override access for emergency data access per HIPAA.	Yes	C	Phase 1	
T6.2.3	The Privacy and Consent Management component will provide an alert mechanism for privacy breaches.	Yes	C	Phase 1	
T6.2.4	The Privacy and Consent Management component will be SOA-based	Yes	C	Phase 1	
T6.2.5	The Privacy and Consent Management component will be non-disruptive to worker workflow	Yes	C	Phase 1	
T6.2.6	The Privacy and Consent Management component will be centralized to consistently enforce policies network-wide	Yes	C	Phase 1	
T6.2.7	The Privacy and Consent Management component will enable all applications to support consumer consent	Yes	C	Phase 1	
T6.2.8	The Privacy and Consent Management component will accommodate granular directives	Yes	C	Phase 1	
T6.2.9	The Privacy and Consent Management component will audit all access to protected information in real time	Yes	C	Phase 1	
T6.2.10	The Privacy and Consent Management component will provide an alert mechanism for privacy breaches or when HIPAA break-the-glass or override functions are enacted	Yes	C	Phase 1	
T6.2.11	The Privacy and Consent Management component will be highly flexible to meet changing requirements	Yes	C	Phase 1	
T6.2.12	The design will have the consent service tied into role-based access control Privacy and Consent Management component for real-time permissions access-granting/removal/denial.	Yes	C	Phase 1	
T6.2.13	The component will accommodate extensive search and reporting capabilities on any consent audit event data.	Yes	C	Phase 1	
T6.2.14	The component will maintain historical records of consent/removal of consent.	Yes	C	Phase 1	

State of Arkansas Department of Human Services
Integrated Eligibility and Benefit Management Engagement (IE-BM) RFP
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Template T-8 - Technical Requirements Traceability Matrix

Infrastructure

The proposed solution must be hosted by DIS. The State of Arkansas has defined which technologies must be leveraged as part of the vendor's solution (Mandatory) and which the State would prefer are leveraged by the Vendor's solution (Preferred).

DHS has included Hosted Private Cloud services as an optional deliverable which vendors may choose to include in their proposals. After the proposals are evaluated DHS will assess whether having DIS or the Vendor host the solution is the best value for the State

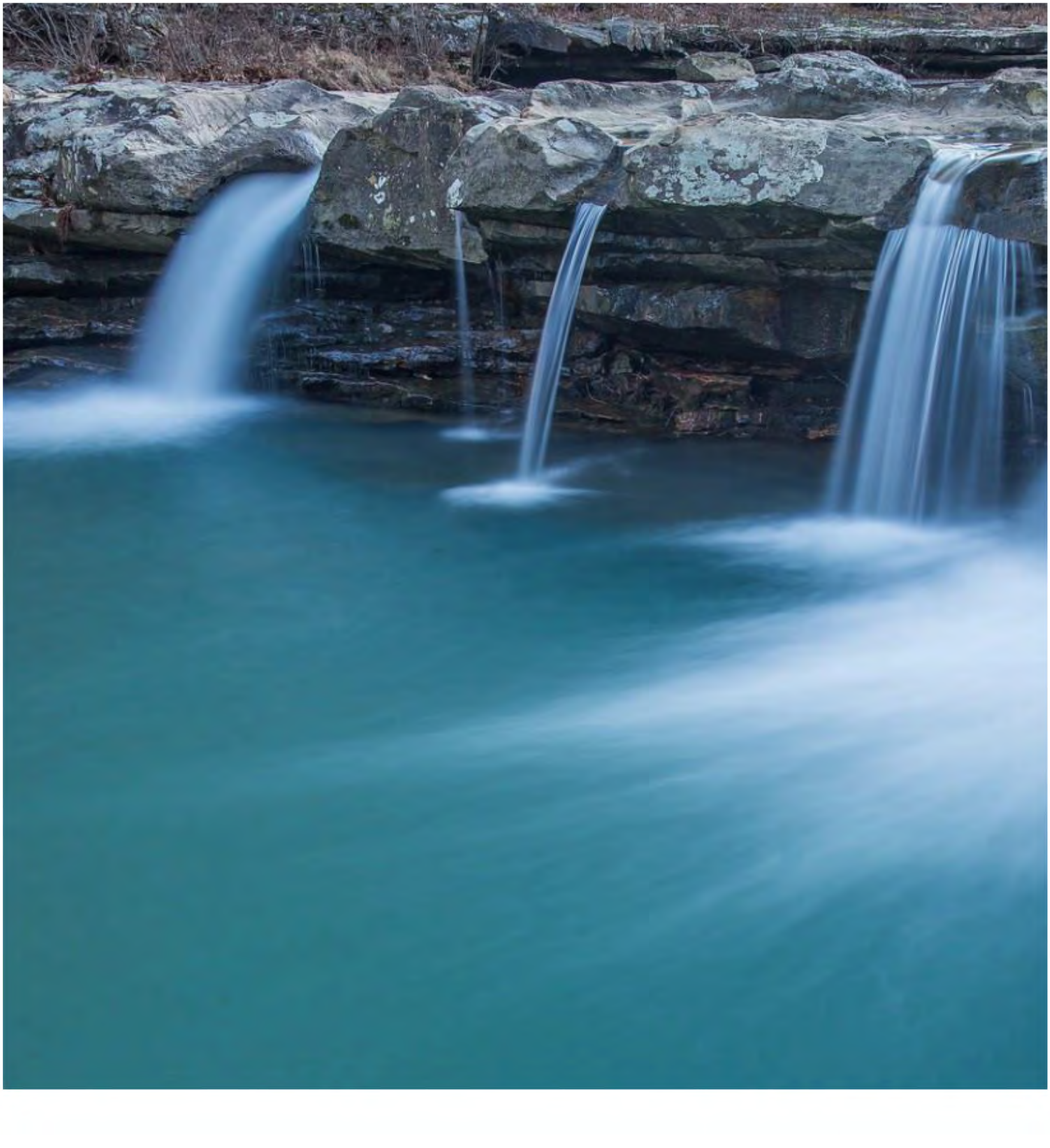
Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
T7.1	For Platform requirements, the State has a "Mandatory" requirement for the Vendor to propose one or more of the following technologies as part of their Solution Architecture - Windows, Linux, AIX (Mandatory). The vendor must include this tool in their system architecture	Yes	L	Phase 1	
T7.2	For Virtualization requirements, the State has a "Preference" for the Vendor to propose one or more of the following technologies as part of their Solution Architecture - Power VM, VMWare (Preferred). The vendor may propose an alternate technology with a detailed and compelling justification if it deems it suitable within the overall solution architecture being proposed	Yes	L	Phase 1	
T7.3	For Server Infrastructure requirements, the State has a "Preference" for the Vendor to propose one or more of the following technologies as part of their Solution Architecture - Power 770, Linux, Wintel Servers (Preferred). The vendor may propose an alternate technology with a detailed and compelling justification if it deems it suitable within the overall solution architecture being proposed	Yes	L	Phase 1	
T7.4	For Data center/Hosting Infrastructure requirements, the State has a "Mandatory" requirement for the Vendor to utilize DIS Hosting Facilities in Little Rock (Mandatory) as part of their Solution design and implementation. The vendor must include this tool in their system architecture	Yes	L	Phase 1	
T7.5	For Networking Infrastructure requirements, the State has a "Mandatory" requirement for the Vendor to utilize DIS Network Infrastructure (Mandatory) as part of their Solution design and implementation. The vendor must include this tool in their system architecture	Yes	L	Phase 1	
T7.6	For Applications Monitoring the State has a "Preference" the Vendor proposes Wiley as part of their solution architcture (Preferred). The vendor may propose an alternate technology with a detailed and compelling justification if it deems it suitable within the overall solution architecture being proposed	Yes	L	Phase 1	

Req #	Requirement Description	Requirement Met	Solution Method	Proposed Phase	Suggested Clarifying Comments
T7.7	For Infrastructure Monitoring the State has a "Preference" the Vendor proposes Nagios and Ganglia as part of their solution architcture (Preferred). The vendor may propose an alternate technology with a detailed and compelling justification if it deems it suitable within the overall solution architecture being proposed	Yes	L	Phase 1	
T7.8	For defect management and help desk/incident management, the State has a "Mandatory" requirement the Vendor leverages the State's implementation of JIRA as part of their solution design (Mandatory). The vendor must include this tool in their system architecture	Yes	L	Phase 1	
T7.9	For deployment automation the State has a "Preference" the Vendor proposes Jenkins as part of their solution architecture. The vendor may propose an alternate technology with a detailed and compelling justification if it deems it suitable within the overall solution architecture being proposed	Yes	L	Phase 1	
T7.10	For code versioning the State has a "Preference" the Vendor proposes Jenkins as part of their solution architecture. The vendor may propose an alternate technology with a detailed and compelling justification if it deems it suitable within the overall solution architecture being proposed	Yes	L	Phase 1	
T7.11	For document management the State has a "Preference" the Vendor proposes SharePoint as part of their solution architecture. The vendor may propose an alternate technology with a detailed and compelling justification if it deems it suitable within the overall solution architecture being proposed	Yes	L	Phase 1	
T7.12	For batch scheduling the State has a "Preference" the Vendor proposes AutoSys as part of their solution architecture. The vendor may propose an alternate technology with a detailed and compelling justification if it deems it suitable within the overall solution architecture being proposed	Yes	L	Phase 1	
T7.13	For test automation and management the State has a "Preference" the Vendor proposes Rational Test Manager, Selenium, as part of their solution architecture. The vendor may propose an alternate technology with a detailed and compelling justification if it deems it suitable within the overall solution architecture being proposed	Yes	L	Phase 1	

Template T-9

Technical Requirements Approach

Response Template RFP #: SP-17-0012



Template T-9

Technical Requirements Approach

Response Template

RFP #: SP-17-0012

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Technical Requirements Approach

The Vendor should provide a narrative overview of how the System will meet the Integrated Eligibility and Benefits Management (IE-BM) Project technical requirements. The following questions pertaining to technology and application architecture requirements and policy should be answered by the Vendor.

While responding, the Vendor should reference the IE-BM SOW, the Generalized System Design (GSD) document and other technical and infrastructure documentation provided as part of the Procurement Library, to gain an overall understanding of the current application and infrastructure environment and future DHS vision.

Please use these response sections to provide specific details of the proposed approach to meeting DHS requirements in each area. Responses should, when necessary, reference requirements using the appropriate RFP Requirement Numbers from Template T-8 – Technical Requirements Traceability Matrix.

Responses for the Technical Requirements Approach should be highly focused on the specific requirements and should not simply provide generic or marketing descriptions of technology or product capabilities. Also, include one (1) or more diagrams where necessary that detail the proposed design and the relationships between key technical components.

1.0 General Technical Solution Approach

Instructions: Describe in detail the overall technical approach and proposed System architecture/design. At a minimum, please describe:

- How the technical design/architecture will meet the technical requirements and deliver the business objective, focusing on delivering DHS vision
- How the technical design will ensure sharing of data and information across the DHS IE-BM Solution
- How the technical design aligns with DHS technology standards (including SOA compliance) and justification for any deviations from the standards, and technology component mandates and preferences
- How each of the proposed COTS solution components will be used to fulfill the Solution design

Additionally, describe in detail how the Vendor's approach to the technical requirements will leverage COTS solutions and tools to minimize custom development. If custom development is required, include a detailed description of where and how customization would be undertaken to fulfill specific functionality that cannot be fulfilled by COTS.

Technical approach

The IBM team technical approach comprises of the following pillars:

- An integrated portfolio of leading commercial off the shelf (COTS) products, which meet DHS' requirements with minimal customization.
- Re-use of existing assets implemented under the EEF program to the extent possible to minimize risk in changing specific solutions and to save overall costs in reducing risk, avoiding re-development, training, and testing.

- A set of assets transferred from our successful engagements in the areas of Integrated Eligibility and person-centric model.
- Strong binding frameworks, standards, and leading practices that bring these COTS products and assets together to deliver DHS' vision with the greatest effectiveness and the least risk.

The following diagram presents a "mind map" of our technical approach.

At the very core are the forces that form the solution: Person- and family-centric model, improved self-service and consumer satisfaction, increased ready access to data, predictable and efficient operations, and decreased cost of ownership, which are the goals to keep families happy, healthy, and safe with manageable levels of government spending. Surrounding this core are the key enablers: the binding frameworks, standards, and leading practices that help us make the most of our COTS products and assets. And finally, there are the COTS products and assets, implemented by the team that has the overarching experience.

Figure 1: IBM proposed solution mind map

Data sharing across the solution

IBM's data sharing solution enables a person- and family-centric model, as opposed to a program-centric model. The Cúram data model for IE-BM is intrinsically person-centric. IBM differentiate ourselves by integrating this to a Master Client Index (MCI) running on IBM InfoSphere Master Data Management (MDM), such that client data can be accurately propagated across the entire IE-BM solution, without duplication or redundancy. IBM's MDM solution operates in conjunction with our Enterprise Service Bus (ESB), to form a State hub, whereby data may be shared between the IE-BM solution and other State or Federal systems in a person-centric way. IBM offers this advanced interoperability solution such that the State of Arkansas may effectively participate in cross-agency and national initiatives. The following graphic details IBM's Health and Human Services Connect360 framework.

In our experience, the fragmentation of person data in siloed HHS systems is one of the biggest obstacles to a person-centric model. We created the IBM Health and Human Services Connect360 framework to break down these siloes and enable a truly person-centric model. Developed together with our client the County of San Diego, the framework pivots on the central principle of person-centric care, wherein information is brought together from multiple systems and channels of service to holistically fulfill the client's needs. The Connect360 framework is one of the binding frameworks for our IE-BM solution. The framework is comprised of the following components: identity resolution, composite customer view, and authorization and consent, bound together in a Service Oriented Architecture (SOA). Various methods of integrating the composite customer view into business processes are also described within this framework. Our presentation at the National Association of Counties highlights the tremendous impact of this framework in enabling data sharing across HHS organizations. While the framework is product agnostic, at this time it's implemented with Cúram, InfoSphere MDM, and Cognos, the same COTS products that form the core IE-BM solution.

https://www-01.ibm.com/common/ssi/cgi-bin/ssialias?htmlfid=GVW03061USEN

Figure 2: IBM Health and Human Services (HHS) Connect 360 framework

The data sharing part of the solution represents our assets and expertise from a similar project for the County of San Diego. MDM is implemented in the registry style, whereby a MCI is created based upon client demographic data from multiple systems. Cúram consumes and updates this MCI, such that the person data in IE-BM is consistent with the rest of the State portfolio. The MCI is also consumed by the Data Warehouse Extraction, Transformation, and Load (ETL), such that the same consistency extends to the analytic realm. A star-schema for client demographics in the Data Warehouse, where the fully resolved client identity is the key dimension, is the most accurate data source for creating client-centric reports, dashboards, and queries. It allows the State to not only delve into a specific person's circumstance, but also analyze anomalies between systems and resolve issues. The Connect360 framework also allows the presentation of cross-program data, through a star-schema for program participation in the Data Warehouse. Program and case data in IE-BM and across DHS systems can potentially be presented on Cognos reports and dashboards. Figure 3 shows the data flows within our data sharing approach.

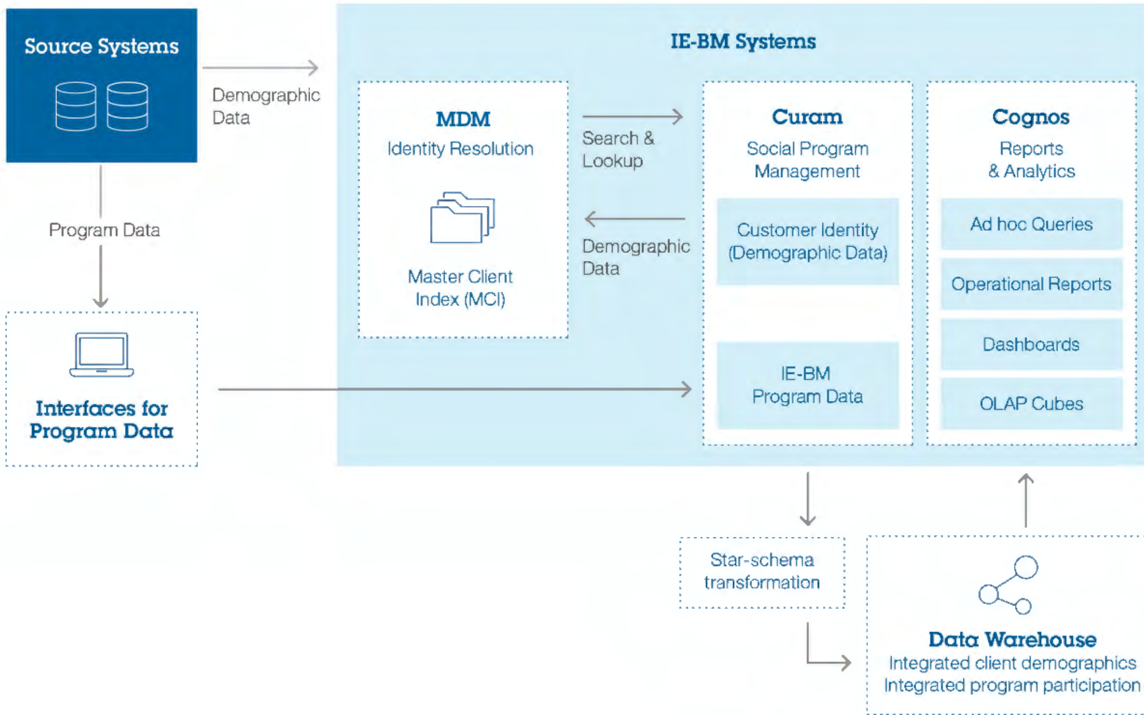


Figure 3: IBM IE-BM Connect360 framework

Data sharing is also supported by the following constructs of our proposed solution:

- An authorization and consent component that executes privacy and access control policies. This component is an integral part of the Connect360 framework and is a major asset that we are proposing to re-use from our work at County of San Diego. This component provides a layer of Attribute Based Access Control (ABAC) on top of the OOTB Cúram Role Based Access Control (RBAC), thereby enabling very fine-grained access control and compliance with regulations such as HIPAA and CFR 42 part two.
- IBM's Information on Demand framework, makes information accessible on multiple channels. Users and clients can access information through enterprise portals or mobile devices. We present a truly integrated experience, wherein Cognos analytics are seamlessly accessible from within the Cúram portal. IBM's Cognos BI implementation includes the Cognos mobile app, a widely used mobile analytics platform.
- IBM's notifications and alerts functionality includes the ability to push messages to clients and users over email or SMS. This is supported by an integration between Cúram and AT&T's GSMS service, another asset transferred from County of San Diego.
- Self-service data access through Citizen Portal. Clients can register for self-service access using our Identity Proofing (RIDP) solution integrated with Cúram Citizen Portal. Broadly, the mechanics of Information on Demand is supported by the IBM SOA Foundation described below, which provides the interoperability backplane of the solution.

Service oriented architecture (SOA) compliance and alignment with DHS technology standards

IBM's SOA architecture for IE-BM is based upon the IBM SOA foundation and the Open Group Reference Architecture for SOA and is fully compliant with DHS standards. DHS requirements include ESB, SOA Governance, and use of Open interoperability standards e.g. SOAP, REST, Web Services Defined Language (WSDL), WADL, XML Schema Definition (XSD) and WS-Security. IBM is a prime contributor to organizations such as W3C, OpenGroup, WfMC, and OASIS that developed these standards. IBM is among the initial founders of the BPEL standard. IBM SIMM (Services Integration Maturity Model) is standardized as the OpenGroup Services Integration Maturity Model (OSIMM). DHS SOA Lifecycle Management requirements generally follow the same model.

IBM's SOA architecture, as shown in Figure 4 below, is constructed as a set of logical layers. Note that this representation is not designed to imply a strictly layered architectural style in which one layer solely depends upon the layer below it. Rather, a SOA is a partially layered architecture in which the enterprise has a set of layers that are more service consumer oriented (consumer layer, business process layer and service layer) and a set of layers that are more service provider oriented (the service layer, service component layer, operational systems layer). Further, the service provider will provide quality of service through the security, monitoring, and management supplied by the QoS layer. The communication between a service and its service components or operational system will occur through the integration layer, IBM Integration Bus (ESB).

A service consumer may access a service directly, or from a service composition in the business process layer. The service provider will provide an implementation of the service in a service component or by wrapping an existing legacy system or packaged application. This partially layered architecture provides tremendous flexibility, plus it uses an inventory of IBM design patterns around legacy system coexistence and retirement.

IBM's IE-BM solution is built around our COTS solutions and their SOA capabilities; the intra-architecture integration and enterprise integration is implemented on the IBM Integration Bus (IIB). IBM has selected IIB as the integration broker in our proposed solution, rather than the State preferred products – JBoss and Informatica. This is the only place where IBM has deviated from a State mandated or preferred product. The reason is substantial: IIBM not only supports open interoperability standards but also Health Care IT semantic standards, such as HL7, XDS, through its Health Care Connectivity Pack. The out-of-the-box (OOTB) support for these health information exchange protocols greatly reduces custom integration work.

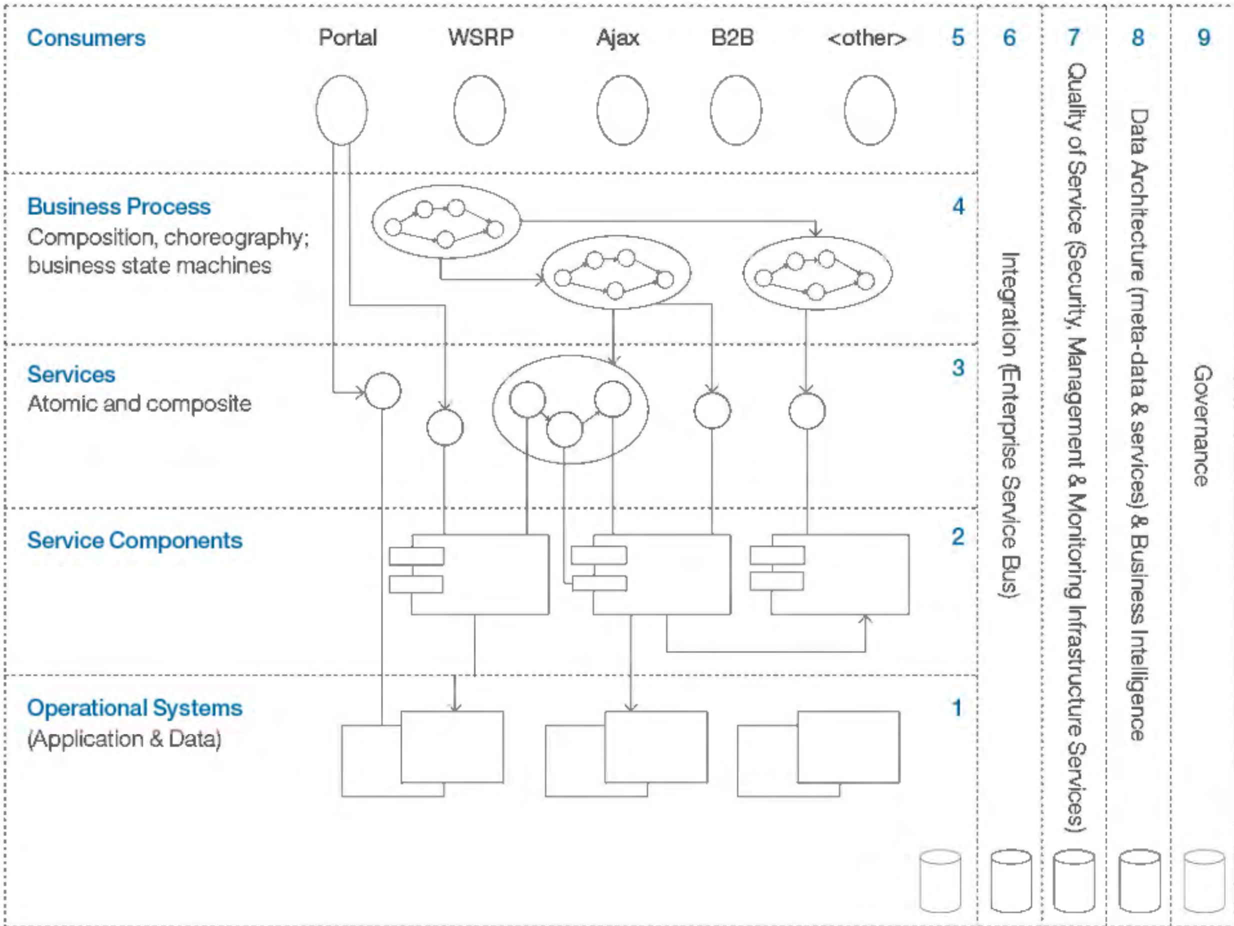


Figure 4: IBM SOA architecture

Along with open and semantic interoperability standards, the IBM proposed solution also meets standards for application architecture and security. The constituent products of the IBM proposed solution all run within JEE containers and support the JEE Application Programming Interface (APIs). Our proposed solution includes National Institute of Standards Testing (NIST) 800-53 security controls at the FIPS 199 Moderate level baseline. IBM has implemented FISMA compliant system security plans at this level, for nearly the exact mix of products we bring to IE-BM. IBM will bring expertise not only in designing security controls within the IE-BM ecosystem, but also in security assessments and management of Plan of Actions and Milestones (POA&Ms).

Proposed COTS components

The following table shows the proposed COTS components, at the various layers of the DHS enterprise architecture.

Table 1: Proposed COTS components

IE-BM technical solution component	DHS technology mandates and preferences [Mandatory, Preferred, No Preference]	Vendor's proposed component
Presentation Layer		
Portal	No Preference	Cúram Citizen Portal, Cúram Case Management Portal, Drupal portal as a portlet container and overall portal content aggregator, through which users can access Cúram and other portals. This portal created through Drupal also includes portal utilities such as FAQs, surveys, enterprise search, and Google website analytics.
Business Component Layer (Requirements for these are defined in the Functional RTMs)		
CRM/ Case Management Solution	No Preference	Cúram HCR (MAGI Medicaid), Cúram CGISS (SNAP, TANF, Traditional Medicaid, Work requirements) Modules - Part of Cúram SPMP Package.
Notifications and Alerts Functionality	No Preference	Cúram, pushing alerts over SMS and email using AT&T GSMS service integrated with Cúram.
Application Infrastructure Services Layer		
Business Rules Management Engine / BRE	No Preference	Cúram SPMP – Cúram Rules Engine.
Workflow, Business Process Management / BPM	No Preference	Cúram SPMP for core Case Management workflows, IBM BPM for cross-product BPEL orchestrations and BPMN support.
Enterprise Content Management / ECM	Xerox DocuShare (Preferred)	Xerox DocuShare, integrated with Cúram.
Application Server	WebSphere Application Server (WAS) (Preferred)	WebSphere Application Server (WAS).
Integration Services Layer (Proposed State Hub Architectural Components)		
Application Integration and Enterprise Service Bus (ESB)	On premise ESB – No preference iPaaS - Informatica (Preferred)	IBM Integration Bus (IIB), enhanced with Health Care Connectivity Pack.

IE-BM technical solution component	DHS technology mandates and preferences [Mandatory, Preferred, No Preference]	Vendor's proposed component
Data Integration, Quality and ETL (Extract, Transform and Load)	Informatica or IBM InfoSphere Data Stage (Preferred)	Informatica PowerCenter, Informatica Data Quality.
MDM	Informatica or IBM InfoSphere Initiate (Preferred)	InfoSphere MDM Initiate.
Data Services Layer		
Database Management System (DBMS)	DB2 or SQL Server (Preferred)	DB2.
Business Intelligence (BI)	Cognos or Business objects (Preferred)	Cognos, combined with SPSS for predictive analytics.
Security and Privacy Layer		
IAM (Identity and Access Management)	CA IAM (Preferred)	CA IAM.
Privacy and Consent	No Preference	Cúram SPMP, augmented with authorization and consent asset, that provides fine-grained ABAC for deployment of privacy and consent policies.
Infrastructure Layer		
Platform	Windows, Linux, AIX (Mandatory)	Windows, AIX, Linux.
Virtualization	Power VM, VMWare (Preferred)	Power VM.
Server Infrastructure	Power 770, Linux, Wintel Servers (Preferred)	Power 770.
Data Center / Hosting Infrastructure	DIS Hosting Facilities in Little Rock (Mandatory)	DIS Hosting Facilities in Little Rock.
Network Infrastructure	DIS Network Infrastructure (Mandatory)	DIS Network Infrastructure.

IE-BM technical solution component	DHS technology mandates and preferences [Mandatory, Preferred, No Preference]	Vendor's proposed component
Development, Operations and Support Tools	Wiley for Application Monitoring; Nagios and Ganglia for infrastructure monitoring (Preferred)	• Eclipse and Rational Software Architect for development. • Jenkins for build management; SVN for source code control. • Rational for testing and quality management. • Autosys (CA Workload Automation) for Production batch scheduling and management. • Wily Introscope (CA Application Management) for Application Monitoring, Ganglia and Nagios for monitoring of server and network operations.

Solution outline

The following is a landscape diagram of the solution, showing the layout of the various COTS components and their interactions. As you can see, our artifact names follow the TOGAF standard. The ◀ in the diagram denote architectural dependencies, and the ⟶ major data flows.

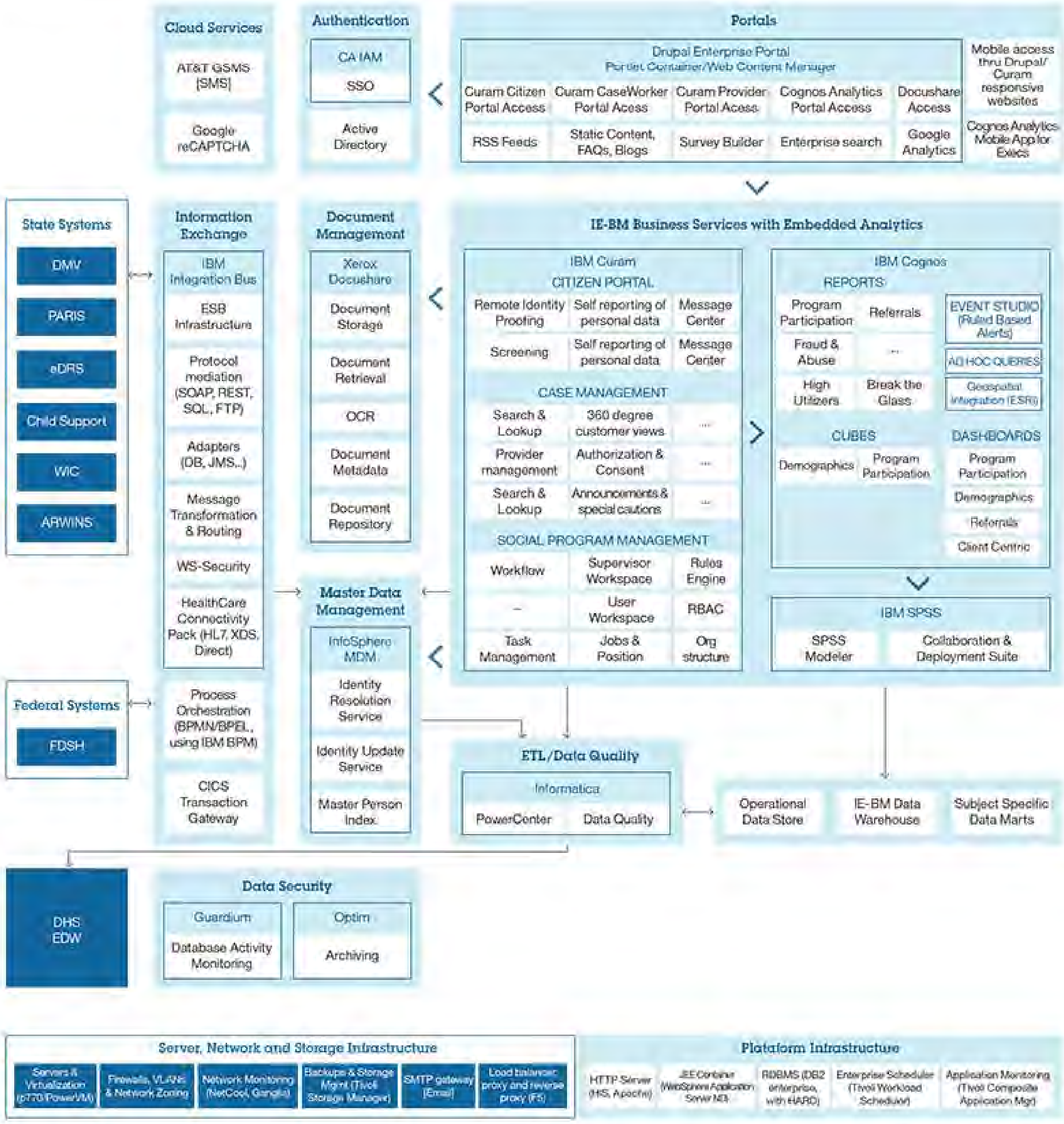


Figure 5: IBM IE-BM architecture

Maximizing COTS and minimizing customization

We use OOTB COTS capabilities to the maximum extent and minimize custom development. The IBM SOA Foundation framework supports COTS component reuse and multiple channels for access, while maximizing use of COTS products such as Cúram. In COTS-based projects, a disciplined fit-gap exercise forms the crux of our approach, as depicted in the following diagram:

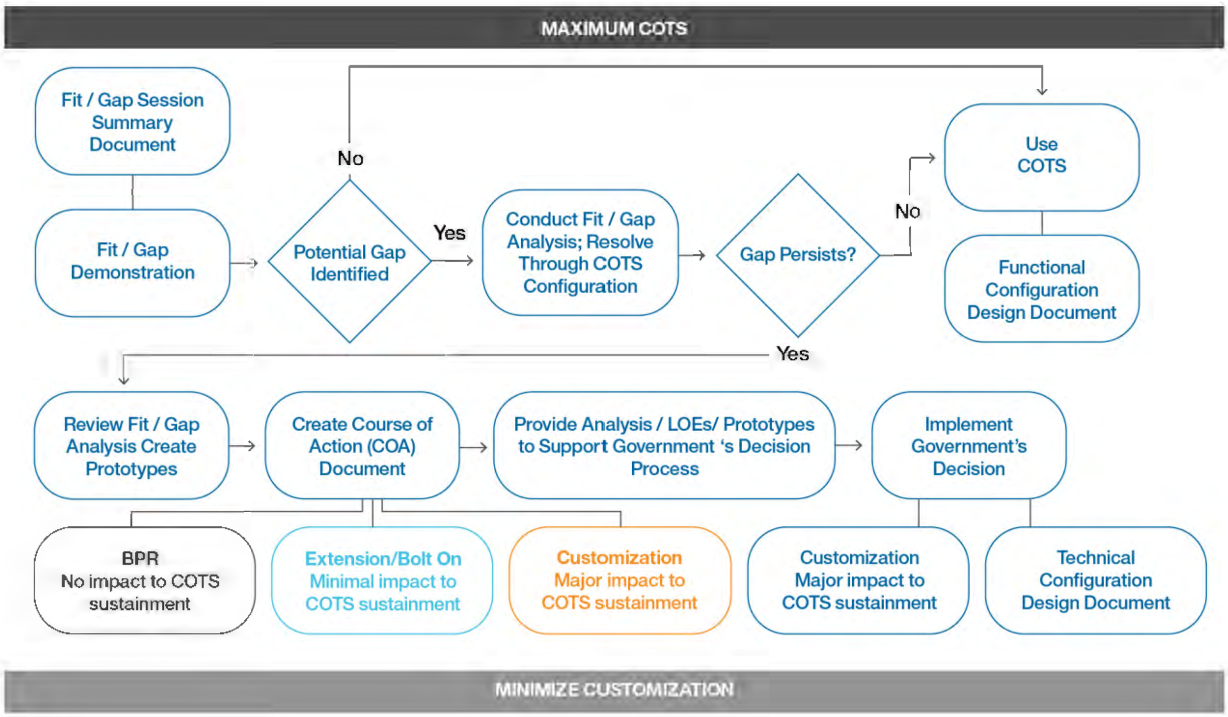


Figure 6: IBM IE-BM solution COTS approach

Figure 6 above explains two salient features of our approach:

Agile, prototype-driven requirements discovery and fit and gap. By providing early, hands-on exposure to the system, we will provide the users' experience with the delivered functionality and explore ways in which it can be used to meet their business requirements. Our fit and gap demonstrations will follow the Agile principles of focused sprints with maximum user involvement and frequent demonstrations of delivered capabilities. We will explore alternate configurations and reassess gaps repeatedly. Gap resolution status will be rolled up and presented in management summary reports.

Disciplined approach to extensions. The IBM team will work with the State of Arkansas to implement extensions to all COTS products according to each vendor's stated guidance, such as the Cúram Development Compliancy Guide. We will avoid customizations outside vendor prescribed methods so that future upgrades are not in jeopardy of overwriting or otherwise destroying prior modifications.

For each gap in COTS functionality, we will propose alternatives in the form of Business Process Reengineering (BPR), vendor compliant COTS extensions, and in rare circumstances COTS customization in the form of changing product metadata. Each alternative is accompanied by a statement of impact, and we will present the analysis in a Course of Action (CoA) forum, using either a decision paper or a summarized executive presentation.

The following list includes major customizations that the IBM team is proposing which cannot be completely met by the COTS products:

- Integrated application
- Cúram-MDM integration (asset reuse)
- Cúram-Cognos integration (asset reuse)
- Arkansas-specific non-MAGI rule sets

- Arkansas-specific SNAP rule sets
- Arkansas-specific TANF/TEA and other assistance programs
- Integration with Federal systems
- Integration with State systems
- Integration IE-BM systems
- Single sign-on implementation (partial asset reuse)
- ETL processes for reporting and data conversion
- Rule based alerts and notifications (asset reuse)

2.0 General System Behavior Requirements Approach

The Vendor should ensure that the responses to this section are in alignment with the requirements set forth in each respective tab of Template T-8 — Technical Requirements Traceability Matrix, on the tabs starting with G.

2.1 Usability

Instructions: Describe the design approach and the characteristics of the user interface for the System. The System must be designed to use a browser based or a Rich Internet Application that can provide feature rich applications that can be updated over the WAN and the Internet, and should deliver a consistent user experience to the various user groups. At a minimum, please describe:

- How the User interface will support different types of users (e.g. end users who log in very infrequently and Intake Workers who log in daily) using fixed location and mobile devices
- How the System will allow the users to easily navigate to a variety of functions available to them without having to move sequentially through excessive menus and screens
- How the System will allow incomplete data sets to be saved for completion of the workflow at a later time
- How the System will have the capability to push messages to the intended workers without requiring them to specifically inquire for the data
- How the System will maintain compatibility with the three (3) most current versions of each browser (Chrome, IE and Safari), provide data over a web browser interface (i.e., HTML over HTTP) and will include the capability to encrypt the data communicated over the network via SSL (HTML over HTTPS)

IBM Cúram Social Program Management (SPM) is a web-based application offering an intuitive and consistent look and feel that reflects modern aesthetics. The Cúram SPM User Interface has been developed in conjunction with our customers, delivering the exacting experience that they require. It is also highly configurable and accessible as it is designed in accordance with the W3C's Web Content Accessibility Guidelines (WCAG).

To support workers who log in from fixed locations, the application provides a web-based interface. Each page has the following major components:

- **Application banner**: Contains branding and application view information along with details of the user currently logged on and a Quick Search feature. Preferences, about, and logout functions are also available from a menu on the application banner.
- **Application tabs**: Form the main building blocks on which the user interface is built. They display the main content of the application and are where a user does most of their work. Typically, a tab represents a significant real-world business object, for example, a person or a case.
- **Shortcuts panel**: Displays on the left of the interface and contains links to commonly used actions and pages and is easily accessible by the user from any page within a section.

The following is a sample application screen:

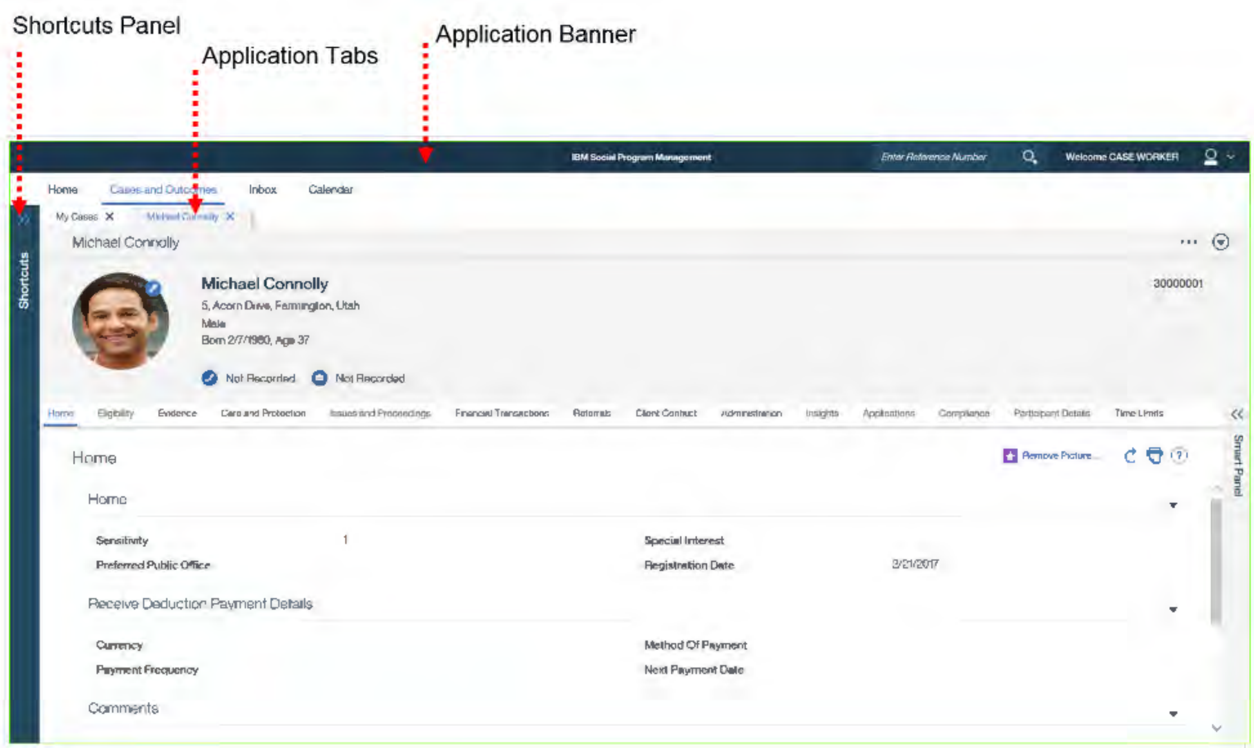


Figure 7: Major components of Cúram SPM User Interface

The Cúram SPM User Interface has the following benefits:

- Delivers a highly consistent look and feel, which is user-friendly and intuitive for new users to learn.
- Provides clear navigation that facilitates users have a sense of where they are, where they have been, and where they can go to in the system.
- Includes “tabbed” pages to provide an easily navigable way of viewing and accessing a large amount of information for various record types.
- Includes user home and landing pages that are customizable according to user’s preference, so that commonly accessed menu options and features can be accessed straight after logging in. The collapsible or expandable shortcuts menu is available from any page to allow the user to navigate to any area of the application quickly and easily.

- Provides high accessibility to enable users with disabilities to work effectively with the system. Cúram conforms to both the US Federal Section 508 requirements for accessibility for persons with disabilities and the Americans with Disabilities Act (ADA).

[G1.1, G1.2, G1.3, G1.8, G1.10, G1.22, G1.23, G1.37]

Code tables are used extensively to verify consistency of data and to provide a discrete list of centrally maintained values that are made available to users. These are typically presented through "drop-down" lists presented in clear, recognizable language that users are familiar with, and they can select the appropriate value. List entries can be selected by typing the first letters of the value to be selected, and default values can be configured pull down lists. Checkbox values and radio buttons are also possible and can be used where appropriate. Pages use lookup functionality to allow the user to search and select appropriate data where necessary.

Additionally, validation or error messages and informational messages are delivered in full sentences using familiar language to help the user understand each situation. Users can easily navigate using the expandable or collapsible menus, tabbed pages, expandable or collapsible sections within pages, and hyperlinks to modal or non-modal windows. The interface provides a Wizard mechanism to guide users through step-by-step processing when necessary.

[G1.4, G1.5, G1.7, G1.9, G.1.16, G1.20, G1.24, G1.25, G1.32]

Search pages provide the functionality for users to search for various business entities including persons, employers, providers, and cases. Depending on the type of search to be performed, different search criteria can be entered. Business entities that meet the search criteria are displayed in a summary list format from, which users can navigate through a single-click link to the relevant home page.

[G1.11]

Page level help is available from every page in the Cúram application. The help information typically lists each field on the screen and a description of its meeting. Links and actions specific to the page are also explained. Online help, policy manuals, and user guides can be implemented through the planned Drupal portal described in section 3.1.1, which will give authorized users the ability to edit this online documentation as necessary. The portal can easily support multimedia help collateral, such as recorded videos designed to assist citizens and guide them through data entry and business processes and will include advanced search capabilities to make these materials easier to find and promote self-help for citizens.

For users using multiple pages or browsers, logging out of one session will end all sessions, using the design that the IE-BM will authenticate users through single sign-on (SSO).

[G1.10, G1.17, G1.18, G1.19, G1.21, G1.26, G1.27, G1.48, G1.49, G1.55, G1.56]

For data entry, a range of data validation checks are implemented to safeguard data integrity and improve the quality of data. Mandatory fields are clearly marked with an asterisk (*) on each screen. Such data validation checks validate that text is not accepted in a numeric field, or that a date is entered in the specified format such as MM/DD/YYYY, and the system will inform the user they have entered invalid data. Users can tab through data or click on the fields that require data entry. Data entry is fully validated when the user tries to use save or next buttons to complete a screen. Cúram supports action verification based on defined fields and user preferences to allow users to confirm their request, such as deleting data. If errors occur, the user can navigate to the appropriate fields and enter or correct the data entered to attempt to save again. If users navigate to pages that they did not intend, they can simply close out of the page as a form of “emergency exit” whenever necessary by clicking the “X” on the page or tab they have opened.

[G1.12, G1.13, G1.15, G1.28, G1.31, G1.33, G1.34, G1.35, G1.38, G1.40, G1.45]

The IBM Team will follow State standards to accommodate diverse user populations including those with limited English proficiency. We will follow recommended conventions to limit the user of words or actions that have multiple meanings. Screens will be secured with role-based access security. We will use an authorization and consent component from our County of San Diego project, which provides a layer of ABAC on top of the OOTB RBAC. Additionally, the Cúram framework has support for conditionally displaying fields based on other data elements or parameters. Screens will only include necessary fields for the unit of work involved. The system will not copy data from previous cases unless specifically designed to do so, thus preventing data leaks from old cases to new.

[G1.6, G1.14, G1.29, G1.30, G1.36, G1.60]

Cúram pages also include a Rich Text editor for comments or text fields, which allows users to use basic word processing functions to format text. The system also includes calendaring functionality, which can synchronize system generated meetings and appointments to a user’s personal information manager such as Microsoft Outlook. OOTB functionality also allows uploading attachments of various file formats such as .doc, .pdf, .jpg, and many other formats to be attached to person or case. We will implement the same extension as we did on the County of San Diego project, where the OOTB Cúram person search page will be enhanced to search the MDM instead of the local database, allowing “fuzzy search” capabilities, which will display a score or rank in the results list - as shown in the following screenshot:

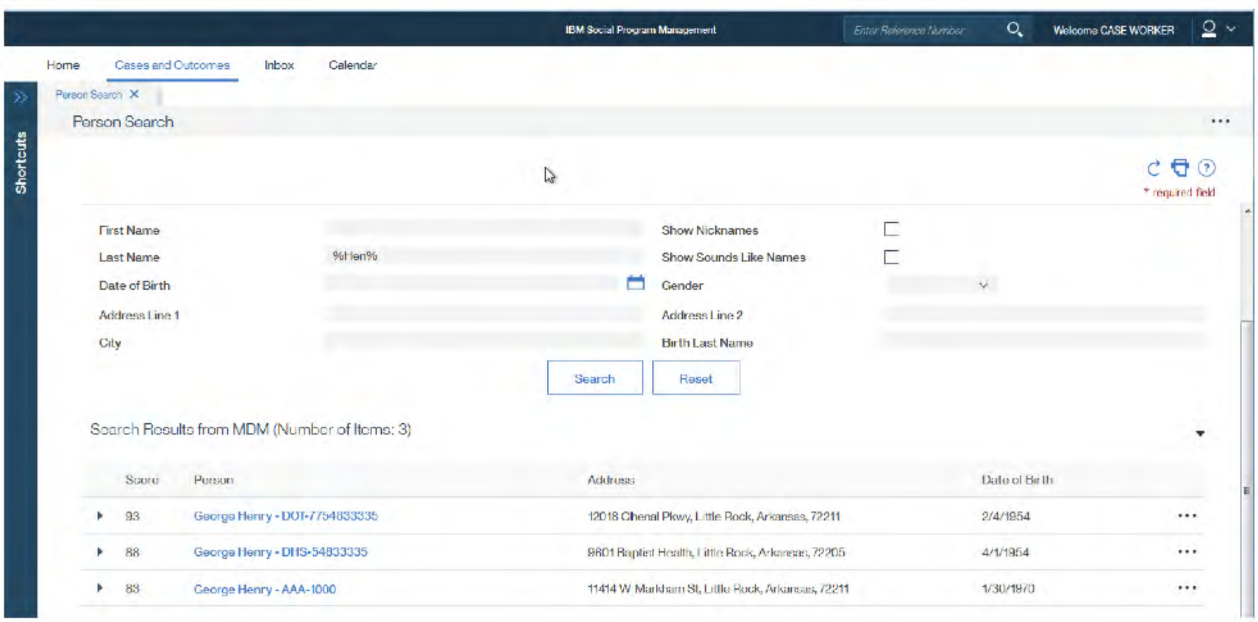


Figure 8: Cúram application integration with MDM

[G1.57, G1.58, G1.59]

The Cúram application is currently certified on desktop browsers and tablet devices. To support users who log in from mobile devices, the IBM Cúram application offers REST services which can be used to support mobile development. Various business partners have implemented mobile applications that work with the Cúram application. IBM recognizes that citizens need to be able to apply for benefits online using any device and is currently researching and prototyping modifications to Citizen Portal to support fully responsive design. Research is based on direct customer feedback, and progress has been presented to customers through interactive workshops to allow further feedback and input to the design. Our proposed solution includes the Cognos mobile app, which can be used to create mobile applications for reading the data stored in the Cúram relational database. The IBM Team will review the progress and enhancements made to the Cúram Citizen Portal at the time of design and if necessary, will implement fixes in the critical areas of citizen engagement, if mobile phone use is experiencing viewing and navigation issues.

For incomplete data sets, the IBM Cúram system does not require online applications to be completed in one session. IBM Cúram Universal Access allows citizens to save partially completed applications and return to finish them at a later time. Once registered for their citizen account, citizens can save and resume applications, withdraw previously submitted applications, or delete applications that have not yet been submitted. The identical functionality is available to case worker who may be performing intake of an application on behalf of a client. The following screenshot shows an Intelligent Evidence Gathering (IEG) intake screen with multiple sections, where a user may exit and save at any point with the ability to resume at a later time:

[G1.38]

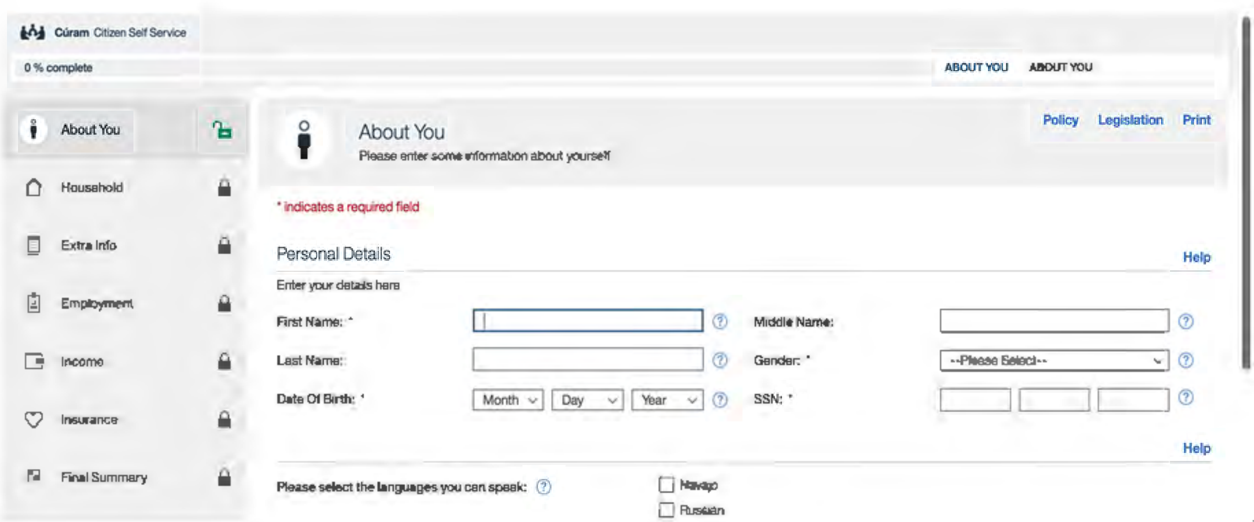


Figure 9: Example Cúram IEG intake screen

To push messages to intended workers, the IBM team will use the Cúram Workflow engine. IBM Cúram workflow can create notifications, often referred to as “ticklers,” to provide information that may be of interest to a user or a group of users. Notifications contain subject text, body text, and links to relevant application pages. They can be issued in the form of an Alert, an email message, or both. Alerts appear in a user's list of notifications, available from their Inbox, until such time as they are acknowledged by the user. E-mail notifications appear in the inbox of the user’s e-mail system such as Microsoft Office Outlook. Notifications and alerts can be pushed to clients and users over SMS as well; this is supported by an integration between Cúram and AT&T’s GSMS service, re-using an asset we have developed in the County of San Diego. To centralize pending work items, Cúram workflow can be used to create tasks and assign them to users or work queues, and assign them to jobs, positions, or organizational units. Users associated with these business objects will see the open or unassigned tasks as part of their inbox and workload. Workflows, configured by a system administer, can also be used to create a graduated system of alert levels by exploiting the deadline functionality of Cúram workflow. As deadlines pass, messages can be assigned to business objects like queues or organizational units with increasing priority values and urgency.

[G1.41, G1.42, G1.46, G1.47, G1.50, G1.57]

By default, the application is configured to enforce secure http (https), such as a secure TLS connection between the web client and the server. For browser support, Chrome, Firefox, Edge, and Safari browsers release new versions more frequently than Internet Explorer and install updates automatically by default. IBM Cúram SPM releases are generally tested on the latest version of these browsers available at the start of a development cycle; if tested with no issues, IBM will certify that version. The IE-BM application will be accessible over a wide area network (WAN) to any user who has valid credentials and will allow remote access to be configured according to State compliance requirements.

[G1.51, G1.52, G1.53, G1.54]

In summary, the Cúram SPM User Interface delivers a highly consistent look and feel and includes “tabbed” pages to provide an easily navigable way of viewing and accessing a large amount of information for various record types. It also includes user home pages, which are customizable according to user’s preference, and provides high accessibility to enable users with disabilities to work effectively with the system. The system allows case worker and citizens to save and resume applications to complete unfinished datasets and can push messages to intended users by exploiting the Cúram workflow engine to deliver notifications based on actions and events in the system. The new Drupal based portal will provide interactive help, video tutorials, and other helpful aids to assist both citizens and case worker when applying for and processing benefits.

2.2 Audit and Compliance

Instructions: Describe the Vendor’s approach for the System to meet Audit and Compliance requirements. At a minimum, please describe the Vendor’s approach to:

- Providing the capability to audit records in a manner suitable for the user to interpret the information
- Providing the capability to generate reports based on ranges of System date and time that audit records were collected
- Providing the capability to integrate consent audit trails and data access audit trails in a consolidated searchable system for search/report to support consent rule enforcement or investigation, including audit trails based on deprecated rules or policies
- Providing an audit trail of all pertinent events, giving due consideration to storage space and performance constraints. Examples of these events include:
  - System start-up and shutdown
  - Successful and unsuccessful login attempts
  - User actions to access files or applications (successful and unsuccessful)
  - Actions taken by System administrators and security personnel
  - All administrative actions performed on the System (e.g. adding users)
  - Permission changes
  - Creation of users and objects

- ❑ Deletion and modification of System files
- ❑ Registry key / kernel changes
- ❑ Skipped or rejected alerts
- ❑ Changes, additions or deletions to data (including operational and security data) sets identified by management
- ❑ Out of normal System operations usage or user access
- ❑ Session timeout and account lockouts
- ❑ Backup and restores

Audit and compliance approach

IBM's auditing approach enables the auditing, alerting, and retrospective investigation of potential policy violations by leveraging the inherent audit capability of the IE-BM applications. As illustrated in the following diagram, each IE-BM application is configured to audit certain pre-defined events.

- Each application audits entry and exit, and changes to application security e.g. changes to RBAC.
- In Cúram, all actions at the remote interface layer (between the session bean and business object) can be audited.
- MDM retains history on MCI/MPI changes. Cognos retains history on reports and query access.
- Guardium audits connections that bypass the application layer such as privileged user connections. For example, if a DBA alters a database table, or a Security Administrator alters a user's permissions, those audit trails will be captured. Guardium is also used to install a redundant layer of audit on data of particular criticality. Finally, Guardium can be configured to block changes to data that is immutable by design, such as previously captured audit logs.

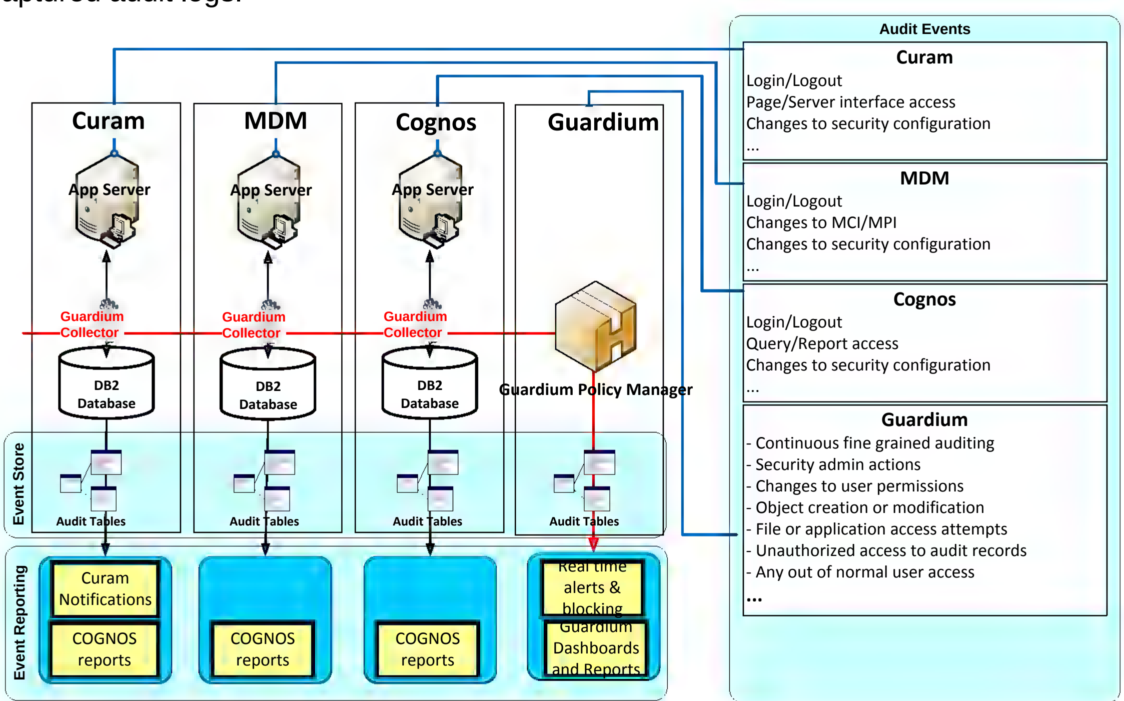


Figure 10: IBM auditing approach

Cúram, the major transaction system in our proposed solution, provides audit capture at multiple levels, as shown in the following diagram. Most transactions are adequately audited at the “remote interface layer (RIL),” where the presentation layer invokes the back-end business objects. Additional, redundant audit trails, at the DB or record level, may be implemented for transactions of particular criticality.

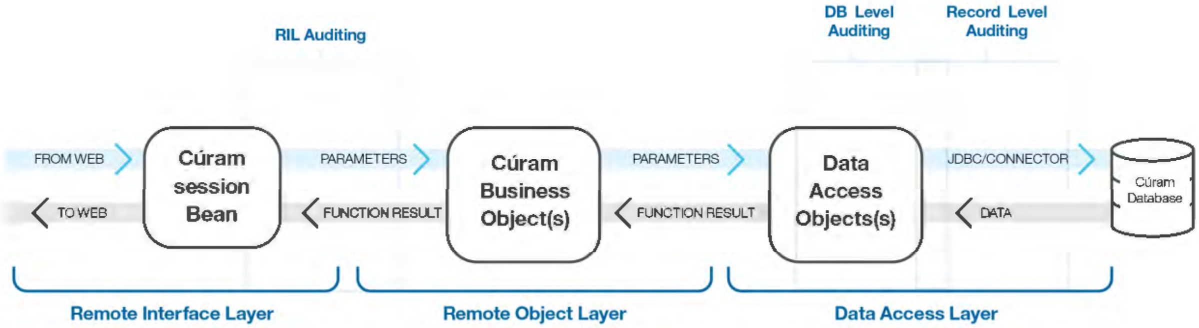


Figure 11: Cúram audit capabilities

Reporting of audit information

Audit information is written to database tables. Cognos reports connect to these tables to present the information is an easy-to-understand format. In the County of San Diego, IBM has created such Cognos reports for Cúram and MDM. The MDM product itself provides a user-friendly utility, MDM Inspector, wherein the lineage of any client data may be traced. Cognos and MDM reports can be filtered by date to provide information for the windows of interest. Finally, Guardium offers a range of detailed reports and dashboards that show the following components, among others:

- System start-up and shutdown.
- User actions to access files or applications (successful and unsuccessful).
- Security configuration changes.
- Privileged user actions.
- Deletion and modification of system files.
- Backup and restores.

[G2.1, G2.2, G2.3, G2.4, G2.5, G2.6, G2.7, G2.8, G2.9, G2.10, G2.11, G2.12, G2.13, G2.14, G2.15]

2.3 Performance and Availability

The IE-BM solution will be architected to promote and help maximize availability and performance.

Our system architecture includes the following key elements:

- Use of the IBM Power servers for maximum performance and reliability.
- Use of IBM PowerVM for highly efficient virtualization and flexibility.
- Use of the IBM storage subsystem for data replication to the DR site.
- Scale-out clustering for redundancy at the network, Web, and application server levels.

- Scale-up clustering and optional failover automation for redundancy at the database level.
- Ability to adopt optional automatic site failover for disaster recovery reliability.

How these elements contribute to system availability and performance are explained in more detail in the following sections.

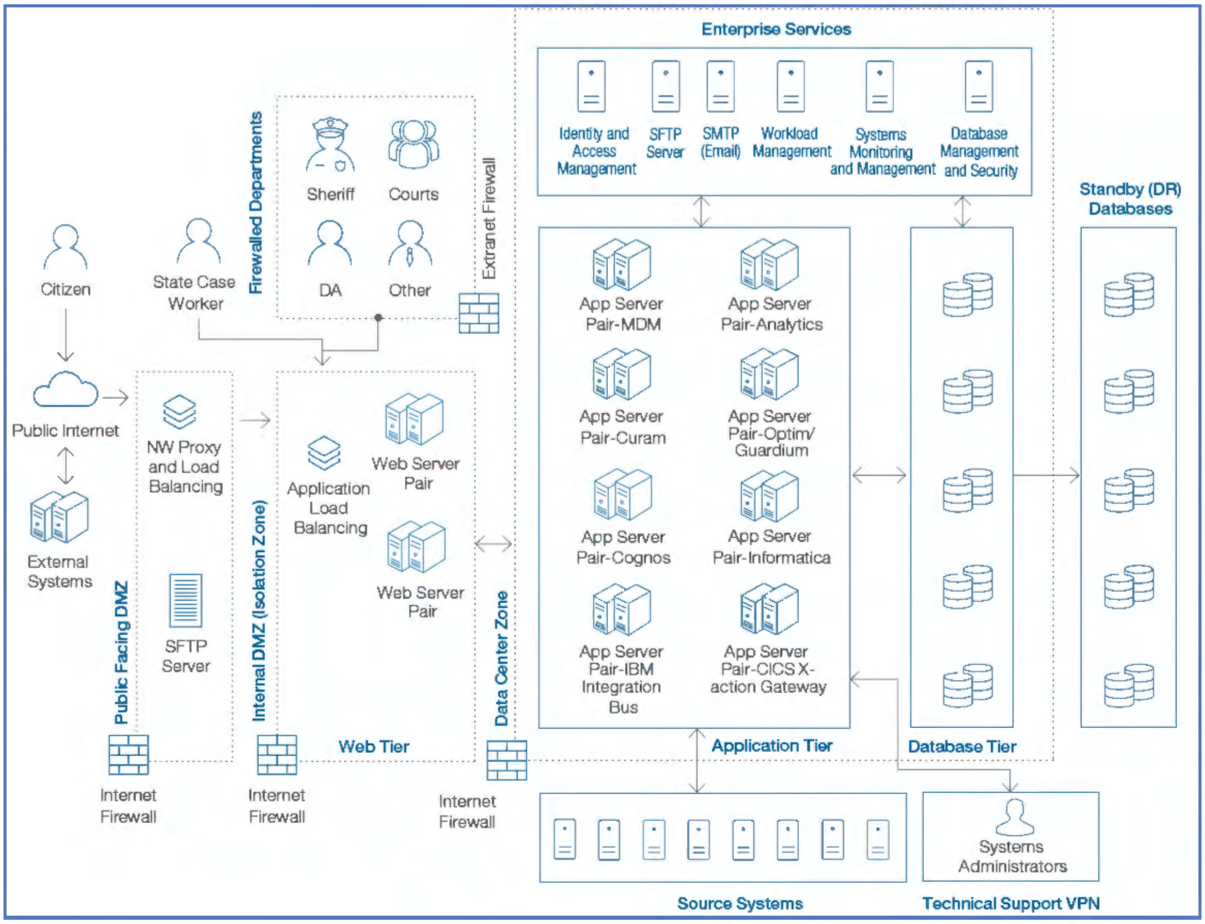


Figure 12: Sample production landscape diagram: redundancy, dual site, data replication

[G3.3, G3.4, G3.5, G8.20]

2.3.1 System Performance Requirements Approach

Instructions: Describe the Vendor's approach for the System to meet performance standards and how the data will be measured and reported. At a minimum, describe the ability of the Vendor's System architecture to support: ■ Internal State, DHS, District and County staff, and external participants with their use of the System ■ Mission-critical services/SLAs ■ Ease of management ■ Ability to upgrade (ease and compatibility) ■ Meeting System response time requirements

User performance support

IBM Cúram is the principal entry point into the IBM's IE-BM solution platform for internal State, DHS, District and County staff, and external participants for their use of the system. IBM Cúram SPM and Universal Access are built around three unique user access patterns:

- **Organization users**: These are internal State case worker, supervisors, managers, and other DHS, District, and County staff.
- **External system users**: These are providers and other users like authorized representatives outside the State's organization structure.
- **Public access users**: These are clients who register with the system for self-service.

Each one of these types of users enter the system in a similar yet separate path and perform different mixes of transactions and reports, so end-to-end application transaction management is required. See Sections 2.8.1 – Solution Administration and 2.8.2 – Transaction Monitoring and Logging for a detailed discussion of capabilities.

Mission-critical services and SLA support

Mission-critical services and SLAs are monitored by use of the management and monitoring tools across the infrastructure, primarily Nagios augmented by additional "fit for purpose" tooling. See Section 2.8.1 - Solution Administration, for a discussion of the monitoring tools used in the solution and how preventative and corrective actions will be taken to verify SLA compliance.

[G8.26]

Ease of management

As described in Section 2.8 – Solution Administration and Management, systems management and monitoring will cross the application, middleware, and infrastructure realms, using primary (general) and secondary (specific) tooling that is "fit for purpose." This same strategy is employed relative to role-based access and reporting from the systems administration perspective. In this manner, ease of management is validated by matching the function of a specific tool or report to a systems administration or managerial role.

Furthermore, the use of DHS and DIS preferred technologies preserves current system administration skill sets.

[G3.3, G3.4, G8.10]

Ability to upgrade

From the infrastructure, middleware, and application perspectives, the IBM IE-BM solution is eminently upgradeable.   Our team has strong experience upgrading IBM Cúram- based solutions across multiple clients for a smooth transition to updating the functionality and infrastructure.

IBM's Power servers and AIX operating system have kept binary compatibility and upgradability since their introduction in 2001.

The middleware (DB2, WebSphere) in the solution is similarly upgradeable to new releases and versions.

The Cúram application is upgradeable as well, being designed from the beginning as an object-oriented, model-based application written in Java that follows SOA principles and guidelines. By design, the services in an SOA solution are loosely-coupled, with standardized and open interfaces provided for ease of interaction and modification of functionality.

Furthermore, the Cúram application is modular and customizable. The Cúram product development team provides formal guidance and information on both customizing the program and upgrading the program to help clients preserve and enhance functionality from release to release without major re-work or conversion efforts. Where applicable, wizards are provided to assist in and minimize the effort in performing support upgrades.

[G3.3, G3.4]

System response time requirements

The performance SLR for the IE-BM solution in OLTP mode is two seconds average response time and three seconds at the 99.5th percentile. The overall architecture, infrastructure sizing, and application configuration for the IE-BM solution considers these SLRs. The sizing reflects product benchmarking exercises and performance results in similar implementations. Given the scalability of the infrastructure and the application frameworks, meeting the response time SLRs should not be an issue.

However, there are certain transactions that may take longer than three seconds due to the complex nature of the requirements addressed by the Cúram application. When an infrequent complex transaction runs, the Cúram user interface provides a graphical progress indicator to indicate to the user that the transaction is running and will complete promptly.

2.3.2 System Availability Requirements Approach

Instructions: The Vendor is responsible for delivering a cost-effective, high-availability environment that minimizes the frequency and impact of System failures, reduces downtime, and minimizes recovery time in the event of catastrophic failure. At a minimum, describe the Vendor's approach to providing a highly available System, and:

- How the System will have the ability to support session replication and transparent failover using high-availability architectural options
- How the System will be designed to support the planned Federally-compliant Solution and any anticipated expansion in scope of connectivity
- How the System will allow access for 24x7x365 with a 99.75% uptime SLR, with the exception of scheduled downtime
- How the System will leverage virtualization to expedite disaster recovery. Virtualization design must enable DHS quickly reconfigure system platforms without having to acquire additional hardware.

IBM's approach to availability

IBM's approach to overall system availability is one of highly reliable and redundant components in the infrastructure and clustering of major functional components in the web, middleware, and database tiers.

Session replication and transparent fail-over

The IBM WAS and IBM HTTP Server combination, when clustered as in the IE-BM architecture, provide session replication and transparent failover. IBM WebSphere Network Deployment edition uses memory-to-memory session replication between multiple WAS instances in a cluster. In this mode, sessions can replicate to one or more application servers to address HTTP Session single point-of-failure (SPOF).

In a clustered WAS- Network Deployment (ND) environment, session affinity in the WAS plug-in routes the requests for a given session to the same server. If the current owner server instance of the session fails, then the WAS plug-in routes the requests to another appropriate server in the cluster, transparently preserving the session from the user perspective.

[G3.1]

Federally-compliant solution

The IBM IE-BM solution adheres to the following guidelines:

- NIST.
- CMS and HITECH guidance.
- HIPAA.
- IRS 1075.
- ACA.
- MARS-E.

IBM will use the IIB as the ESB in the solution. IIB will be the component of the solution that will provide interfaces and connectivity to external systems. For scalability, IIB supports an active/active deployment topology across multiple physical/virtual machines, and all active instances benefit by being able to share a single set of persistent state. So, as a potential expansion in scope of connectivity evolves, the IBM IE-BM solution will scale to meet those requirements in a Federally-compliant manner.

For more information see Section 2.4. Interoperability/Interfaces – under IBM's section Service Bus.

[G3.2]

Availability

The availability SLR for the IE-BM solution is 99.75%, not including downtime for scheduled maintenance and upgrades. The high availability architectures presented herein typically meet this availability. There are no single points of failure within the IE-BM architecture. This architecture can be comprised of four tiers: network, web, app, and database. At a minimum, each tier uses a redundant pair of resources. The components used in the IE-BM architecture are standard, robust, widely-used commercial products that support much higher availability. In practice, an availability service level of 99.95%+ is easily supported with this architecture.

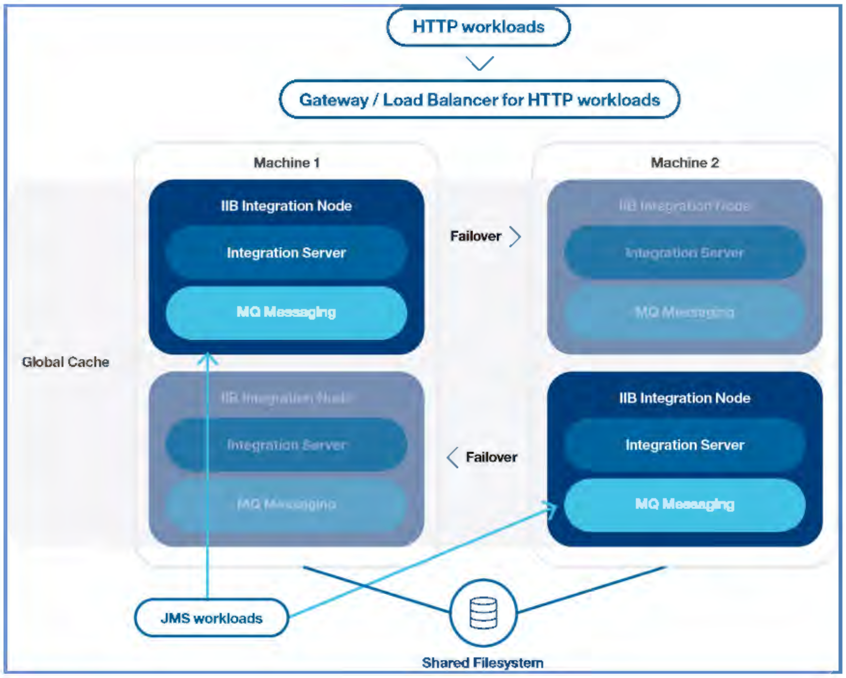


Figure 13: IIB: Highly available and scalable

Leveraging virtualization to expedite disaster recovery

Current disaster recovery (DR) functionality includes data replication at the disk sub-system level, data replication at the Virtual Tape Library (VTL) level (for backups), and weekly replication of AIX mksysb images. The current environment is considered to be active/passive, whereby no servers are running at the DR site, but the data, backups, and images are being continuously replicated as scheduled. Significant manual efforts must be undertaken to “rebuild” the production environment at the DR site.

To further expand DR capabilities, DHS and DIS may choose to enhance DR capabilities in a number of ways, all of which take advantage of and integrate with the PowerVM virtualization capabilities. In general, automation software helps Power Systems users restart virtual machines to a remote location for DR and makes DR testing quicker and more reliable. Automatic failover helps streamline execution and makes it easier to plan and implement an optimized business continuity program designed to meet business requirements.

The following solutions provides an automated way to manage data replication and the server and network management tasks associated with restarting systems, applications and workloads in remote locations. IBM will work with DHS and IS to determine and implement the best option to cost-effectively meet business requirements.

[G3.5, G3.8, G3.9, G3.10, G8.20]

PowerHA SystemMirror

The IBM PowerHA System Mirror offering provides near-continuous application availability through both planned and unplanned outages. Cúram applications are configured into a cluster, which is dedicated to keeping production continuously available.

In addition to the day-to- day high availability operations, DR operations are increasingly becoming a standard part of the clustering environment. Once relegated to manual procedures, many organizations require periodic testing designed to prove DR capability. The IBM PowerHA offering is designed to simplify operations both within the data center and across geographically dispersed locations.

PowerHA SystemMirror Standard Edition and PowerHA SystemMirror Enterprise Edition with Cluster Aware AIX (CAA) are designed to provide robust HA and DR environments focused on ease of implementation and ease of use.

PowerHA SystemMirror integrates clustering technology into the kernel and the OS to enable kernel-level messaging, event management, and monitoring in coordination with AIX to provide greater automation and more robust clustering technology.

PowerHA V7.2 integrates and manages Power Enterprise Pools and Elastic Capacity-on-Demand (CoD), as part of failover operations, enabling the automated move of processor, memory, and software entitlements between partitions in the cluster. Live partition mobility (LPM) and AIX live update are integrated as part of a PowerHA V7.2 cluster. In both cases, these operations will maintain the cluster topology through the transition and exchange of nodes as they are removed and replaced due to an LPM or AIX live update procedure. Cluster integrity is significantly enhanced in V7.2 with failing node quarantine policies, which verify that an intermittent or failing node is isolated prior to a failover operation, thereby eliminating the possibility of partitioned cluster caused by the sick node returning during the failover process.

PowerHA V7 provides smart assists for easier, out-of-the-box high availability setup and application management for many well-known middleware products, including DB2 and WebSphere. Smart assists are used to define high-availability policies and also to discover software that is deployed within the cluster. Discovery-based information helps define the high-availability policy and provides periodic health monitoring, enabling middleware and resource dependencies to be restarted through the specified policy.

The PowerHA V7 Enterprise Edition enables clients to readily extend their traditional data center cluster to incorporate a remote location environment for DR. The V7 cluster extension technology makes DR testing relatively simple while putting the operator in charge of managing failover policy and procedures.

PowerHA SystemMirror Enterprise Edition V7 supports HyperSwap configurations with the IBM DS8800 or DS8870 in a Metro Mirror configuration. This advanced technology provides the capability for a cluster to span two sites with the storage and servers cross coupled in a manner that keeps the application resilient through either a storage server or a production server outage for active-active workloads. HyperSwap can also be deployed in single AIX logical partition (LPAR) configurations.

Geographically dispersed configurations can be deployed through a stretched cluster configuration defined as having a single cluster repository or through a linked cluster configuration with two independent yet linked cluster repositories. A stretch cluster can also be deployed with the Standard Edition and logical volume manager (LVM) mirroring in a cross-site mirror configuration similar to what clients have deployed in previous versions. The stretched cluster configuration provides three levels of cluster communication redundancy through either unicast or multi-cast across the network, SAN fabric, and repository disk.

The Enterprise Edition with the geographic logical volume manager (GLVM) component provides host-based synchronous and asynchronous data replication and fail-over to remote sites. It features a GLVM configuration wizard to make deployment easier and less risky.

The Enterprise Edition supports IBM Storage Systems DS8800, SAN Volume Controller (SVC) V7000 and XIV, with either Global Mirror or Metro Mirror, enabling automatic fail-over between geographically dispersed data centers. It provides for managing and moving workload Service IP addresses (same ones or different ones) between remote sites, allowing users the flexibility to take over IP workloads at back-up locations. Also, concurrent mode access allows active applications and data synchronization at a local site, while still backing up to a secondary site.

The following diagram shows a high-level schematic of PowerHA SystemMirror capabilities.

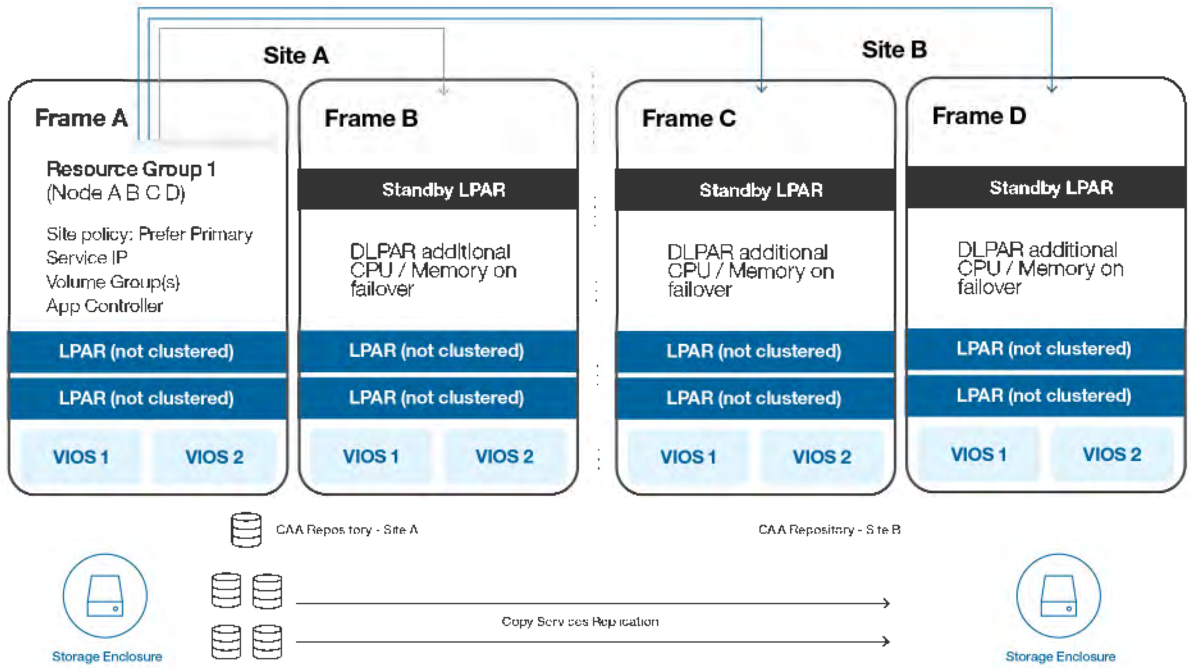


Figure 14: PowerHA SystemMirror schematic: Local and Remote DR automation control

IBM Geographically Dispersed Resiliency (GDPR) for Power Systems

The IBM GDPR for Power Systems is designed to supply a simpler, more cost-effective way to significantly reduce recovery times. Automation software, installation services, and remote-based software support will help the State streamline the process of recovery and testing and maintain a leading DR solution. Built-in functionality and IBM support can decrease the need for expert-level skills and shorten State recovery time objective, improve your recovery point objective, optimize backups, and better manage growing data volumes.

IBM GDPR uses automation to manage data replication and the server and network management tasks associated with restarting systems, applications, and workloads. It helps streamline DR testing and increase availability without requiring expert skills, and it avoids costs such as duplicate software licenses because it does not require a clustered configuration.

The following diagram shows a high-level schematic illustrating GDPR capabilities:

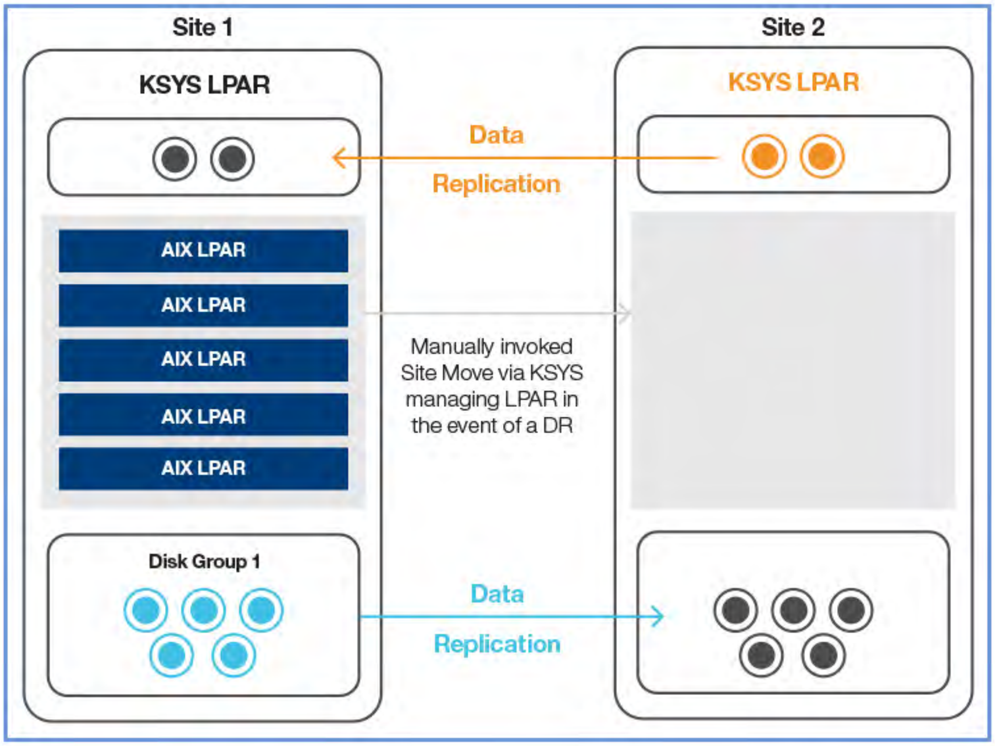


Figure 15: GDPR - Concept of Automated Operations for DR failover

2.4 Interoperability/Interfaces

Instructions: Describe the interoperability features and capabilities of the Vendor's System, specifically in providing support for integrating various applications with SOA and event-driven architectures in a manner that supports the following implementation strategies:

Web Services: Web Services Interoperability (WS-I) Organization-compliant implementation of basic Web services standards, including SOAP, WSDL and Universal Description, Discovery and Integration (UDDI), as well as higher-level Web services standards, such as WS-Security

Representational State Transfer: Support for XML-based messages, processing and HTTP, and XHTML

Web Services

Our IE-BM solution provides built-in support for Web Services. Cúram business objects can be exposed as Web Service, and Cúram business objects can in turn consume externally defined Web Services. Organizations looking to create or provide Web Services merely have to identify the components of Cúram functionality to be "exposed". Once identified, Cúram generates the required code and deployment information, shown in the following graphic:

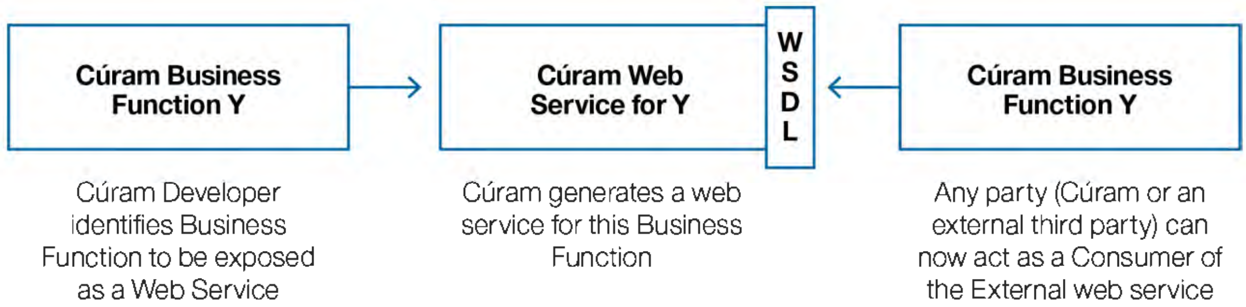


Figure 16: Exposing a Cúram business service for external consumption

Implementations that require the use or consumption of external Web Services only have to provide the WSDL for those Web Services and Cúram will generate the functionality needed to call them. Moreover, this new functionality will appear to application developers as native Java code – the fact that the implementation is a set of Web Service invocations is hidden from the consumer, as illustrated in the following graphic:

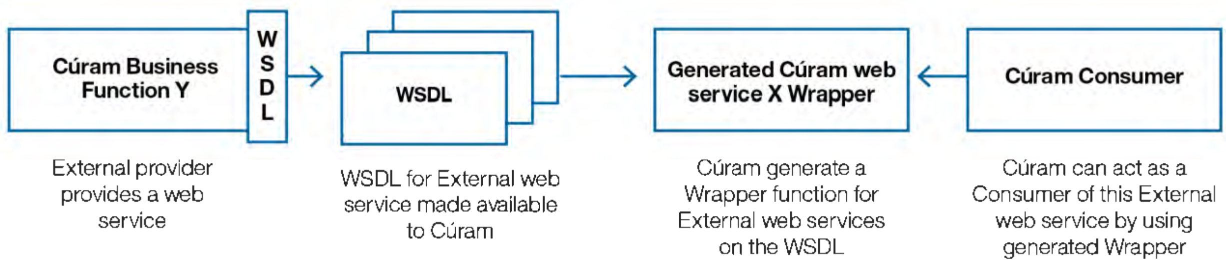


Figure 17: Cúram acting as consumer of external web service

The Cúram Web Services connector provides a generated approach for consuming a Web Service from within a Cúram application. This allows for Cúram to use Web Services to access information from legacy applications, or call Web Services to create or maintain information held outside of the Cúram domain.

Other products in our IE-BM solution, including MDM and Cognos, natively support Web Services. Cúram, Cognos and MDM natively support web services that have the following characteristics:

- Defined in WSDLs
- Input and output data structures defined in XSD
- Callable using SOAP and HTTP
- Discoverable using Universal Description Discovery and Integration (UDDI).

Representational State Transfer (REST)

REST is a pattern for allowing interaction with business objects over HTTP. APIs can be exposed to facilitate integration with external systems web applications, and mobile applications. The REST infrastructure complements the existing Web Service infrastructure. Enterprises can choose which API style best suits their integration needs.

Cúram provides a model-based REST development environment allowing developers to readily expose REST APIs. REST API resources can be modelled using the Cúram Application Development Environment (ADE) to provide integration with Cúram SPM. The model-based approach helps validate secure, consistent APIs can be developed with only minimal coding required; boilerplate REST code is generated by the ADE. The REST services are packaged into a separate application archive allowing for easy deployment and administration.

Service Bus

A common solution to the integration challenge is to shift the responsibility for data transformation and error handling from the application program to an external ESB product such as IIB. The benefits of using this approach include visual modeling of complex inter-system data mapping, reduction in the number of system interfaces, generation of adapters and centralized implementation and management of the runtime environment. Our service bus for IE-BM is the IIB, which provides the following components:

- Security and access control for communication.
- Protocol adapters (for web services, SQL connections, JMS).
- Message transport.
- Message transformation (including from SOAP to REST, and vice versa).
- Auditing.
- Error handling.

The following diagram depicts how an IE-BM Cúram interfaces with external systems through the ESB. Using this approach, the complexity involved in integrating multiple systems with Cúram is greatly reduced. The mechanics of connectivity, protocol mediation and message transformation are handled by the Service Bus. The interaction between Cúram and the Service Bus runs on a single API, with a single transport and message protocol.

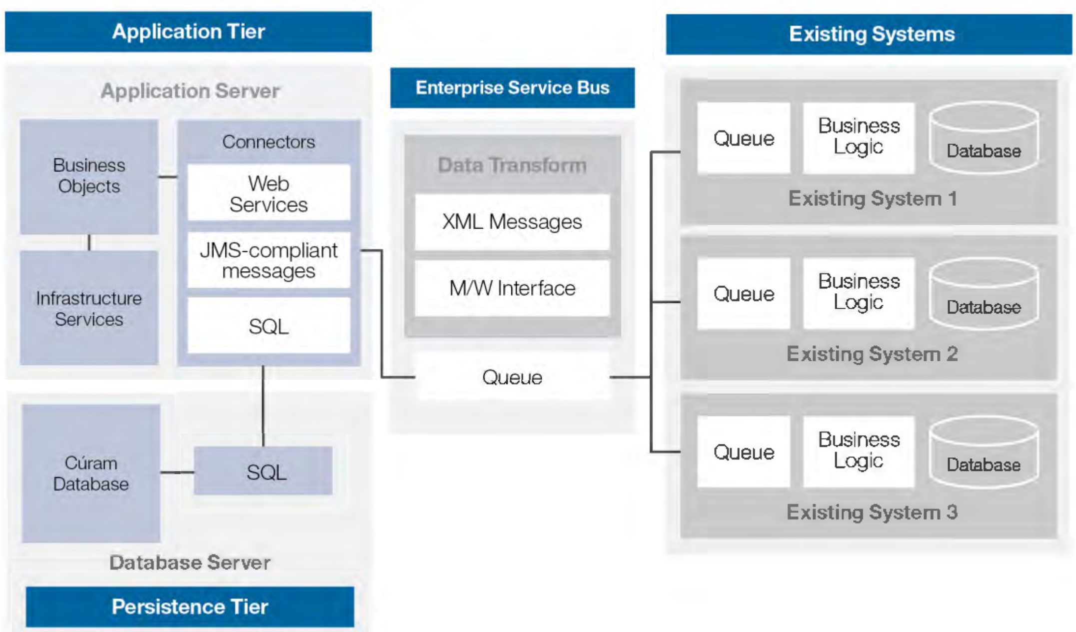


Figure 18: Interfacing with other systems using an ESB

[G4.1,G4.2,G4.3,G4.4, G4.5, G4.6, G4.7, G4.8, G4.9, G4.10, G4.11, G4.12, G4.13, G4.14, G4.15, G4.16, G4.17, G4.18, G4.19, G4.20, G4.21, G4.22, G4.23, G4.24, G4.25, G4.26, G4.27, G4.28, G4.29, G4.30, G4.31, G4.32, G4.33, G4.34, G4.35, G4.36, G4.37, G4.38, G4.39, G4.40]

2.5 Scalability and Extensibility

Instructions: Describe the Vendor's approach to the scalability and extensibility of the System. Describe how the Vendor's System would scale for multiple business units with different missions. For example, if Department 'x' and Department 'y' both want to take advantage of automated case management, how would the System handle increasing users while maintaining responsiveness and ensuring security, privacy and compliance? At a minimum, describe the ability of the Vendor's System architecture to support:

- Ability to meet future growth
- Configurability
- Flexibility to keep up with changing technology and regulatory needs
- Ease of maintenance

IBM recognizes that client organizations need systems capable of handling current and projected user volumes, while maintaining a level of performance that fully meets organizational and user expectations. The Cúram application includes a high degree of configurability to enable non-technical administrators to implement system and organizational changes through an easy to use web application and assist with ease of maintenance.

The scalability of Cúram has been proven within production environments at various client sites; many of our clients have internal user populations of several thousand users and hundreds of thousands of public access users. The operational model for Cúram separates the system into four components for deployment; thin client (browser), web server, application server and database server, as illustrated in the following graphic:

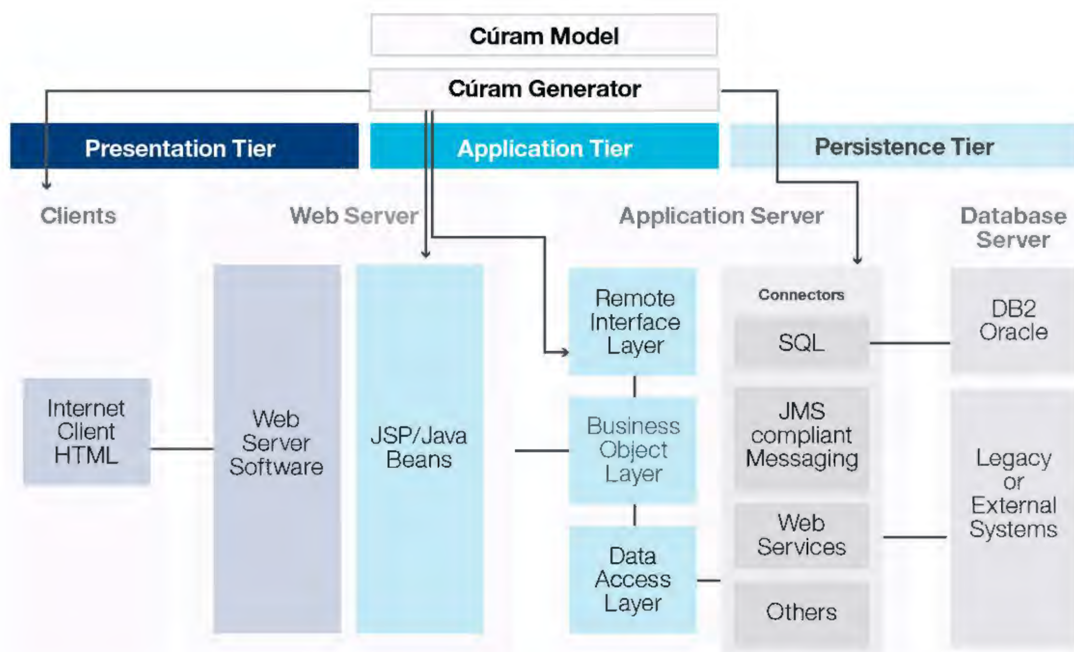


Figure 19: Cúram Architecture Overview

A common system deployment practice is to separate the Web Server and Application Server from the Database Server. As a further deployment refinement, the Web Server, Application Server, and Database Server can be deployed on separate partitions or machines using a mix of different platforms for different components. Because of the range of platforms supported by Cúram, a large number of physical configurations are possible.

The Cúram n-tier architecture makes it possible to scale across each of the three main application tiers, that is, the presentation tier, the application tier and the persistence tier. For the Web Server and Application Server, it is possible to scale both horizontally, by adding additional servers and vertically, by adding more processors, memory, and by increasing the I/O and networking capacity. For the Database Server, scalability is provided by using platforms with higher performance characteristics. For each of these platforms, additional multiprocessors provide scaling within the platform.

The IBM team plans to continue using the WebSphere ND Application Server to take advantage of the flexible deployment options plus high availability and scalability features. The DB2 database provides its own mechanisms for availability and scalability. It is worth noting that even though this is a leading solution, the deployment platform is homogenous. Every major product in the solution – Cúram, Cognos and MDM – is a JEE application running on WAS, connecting to a DB2 database. This makes the solution easier to maintain. When the need arises to scale up, the same WebSphere and DB2 mechanisms can be used across products as shown in the following full system architecture diagram:

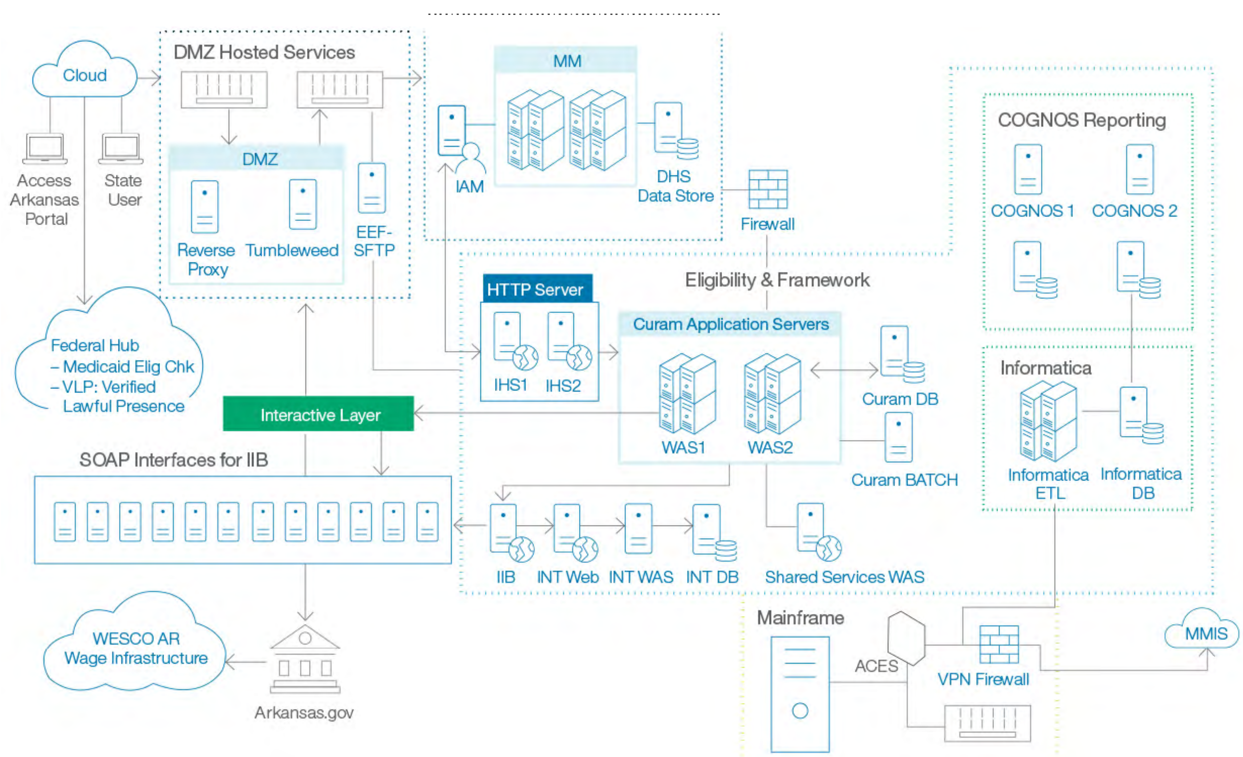


Figure 20: System architecture overview

[G5.3]

In conjunction with the Application Server features described previously, the IBM team will use the capabilities of the IIB, an industry standard ESB as the backbone of our architecture. This will provide great flexibility to support future functional enhancements by exploiting a SOA that supports modularity and interfaces with loose coupling. The Cúram rules infrastructure is designed so that application logic is kept separate from rules processing. This helps to reduce complexity, and Cúram also validates that there is a clear separation between rules and the actual data, and evidence that is evaluated by those rules. The use of Cúram solution modules and OOTB rulesets means that future changes to regulation may be implemented and released by Cúram, which will assist with dealing with future changes in regulations. Also, many states now discuss and share approaches, design and even code or rule sets for regulation changes, which will also help with absorbing future regulatory changes.

The IBM team will use the Cúram workflow engine to support workflow related to case management, collaboration and scheduling. IBM will further extend this capability, and will enable workflow and Business Process Manager (BPM) across the various products in the IE-BM portfolio.

To assist with system maintenance, the IBM Cúram platform provides an administration portal containing a suite of features and tools to enable agencies to configure their Cúram-based system. The Cúram administration application enables non-technical administrators to implement system and organizational changes through an easy-to-use web application. This greatly reduces dependency on specialized software development staff for ongoing system maintenance. Cúram provides functions for maintaining a broad range of system facilities including the agency's organization structure, user security profiles, workflow, rules, program definitions, rate tables, assessments, outcome plans, bank accounts, currency exchange data, payment schedules, correspondence templates, batch processes and code tables.

The Cúram application development environment simplifies user interface development by generating user interfaces based on simple platform-independent definitions known as User Interface Metadata (UIM). This helps reduce repetitive development tasks and results in consistent and intuitive user interfaces. Screens can easily be extended to add customized fields, re-label or re-position existing fields, or remove fields. Each screen has a corresponding business processing object (BPO) – a java method that invokes the call to modify data in the system, where validations currently exist as appropriate for all OOTB screens. When developing custom screens, the same pattern is followed. In addition to screen development, much of the system processing involves the intake process, which is accomplished with the Cúram IEG tool. IEG provides an alternative approach to the traditional form-based method of collecting information. It uses a dynamic questionnaire capability to maximize the efficiency of data collection and to reduce the likelihood of redundant or irrelevant data being requested. Cúram IEG presents questions to the user through a series of screens known as a "script". Agencies can use Cúram IEG to design and configure both the questions in a script and the script execution path. The IEG framework allows non-technical staff to configure sophisticated screens and collect data with minimal technical development.

[G5.1, G5.2, G5.4, G5.5]

Priority, complexity and risk (PCR) rating is a feature in Cúram that analyzes specific attributes relating to a case including clients on the case, and then determines a rating based on factors relating to priority, complexity and risk. Based on a PCR rating, Cúram can determine a course of action to be carried out for the case, such as assignment of the case to a special work unit. PCR processing uses Cúram Express Rules (CER) to determine the rating to calculate for each case. This functionality can be used to externalize the safety and risk determination for the State as a re-usable component.

[G5.6]

The Cúram platform supports the business processes involved in managing clients and their cases, through various stages such as triage, intake, application, eligibility determination, and service delivery. When creating a delivery, benefit cases go through a series of status changes, such as open, submitted, approved, active; if the case is not in a complete state, the case homepage and evidence workspace clearly indicate missing data items and current state of the case.

[G5.7, G5.8]

In summary, the Cúram n-tier architecture is well suited to meet the need of future growth, as the State of Arkansas expands the user base of the Cúram application. In addition, the capabilities of the WAS and IIB products are also well suited for future scalability and growth. The administration portal for Cúram will greatly assist with the ease of maintenance and configurability of the system. Cúram business and technical functionality can be composed and deployed as new functionality, or it can be extended or altered to suit future functional enhancements to meet the needs of a project.

2.6 Regulatory and Security

2.6.1 Regulatory and Security

Instructions: Describe the Vendor's approach to harmonizing the regulatory requirements, audit compliance and security needs of the System. At a minimum, describe the ability of the Vendor's System architecture to support:

- Adhering to, harmonizing, and enabling the listed Federal, State and local regulations
- Protecting and securing the information assets within the System
- Enabling Identity and Access Management

State data may include personally identifiable information, tax information or HIPAA protected information. Describe the Vendor's approach to ensure State data will be isolated and protected. Please explain the architecture and the related security model to support PHI (Personal Health Information) an PII (Personally Identifiable Information)

Adhering to, harmonizing, and enabling the listed Federal, State and local regulations

IBM's security plan adheres to NIST guidelines. The IBM team treats the NIST 800-53 control definitions, at a FIPS 199 Category of Moderate, as the common bedrock for the IE-BM security requirements. As per the RFP, IE-BM security controls are drawn from many sources, including the following list:

- NIST.
- CMS and HITECH guidance.
- HIPAA.
- IRS 1075.
- ACA.
- MARS-E.

IBM harmonizes these control sources to the NIST 800-53. For example, the HIPAA Security Rule references controls defined in the NIST 800-53, as per the NIST 800-66 HIPAA crosswalk. One of the first steps in IBM's security controls analysis is to establish the NIST 800-53 as the bedrock of the System Security Plan (SSP). Once the SSP is established and approved by the

State, IBM will then move forward with technical design, development, and assessment of security controls. The following diagram explains our overall approach:

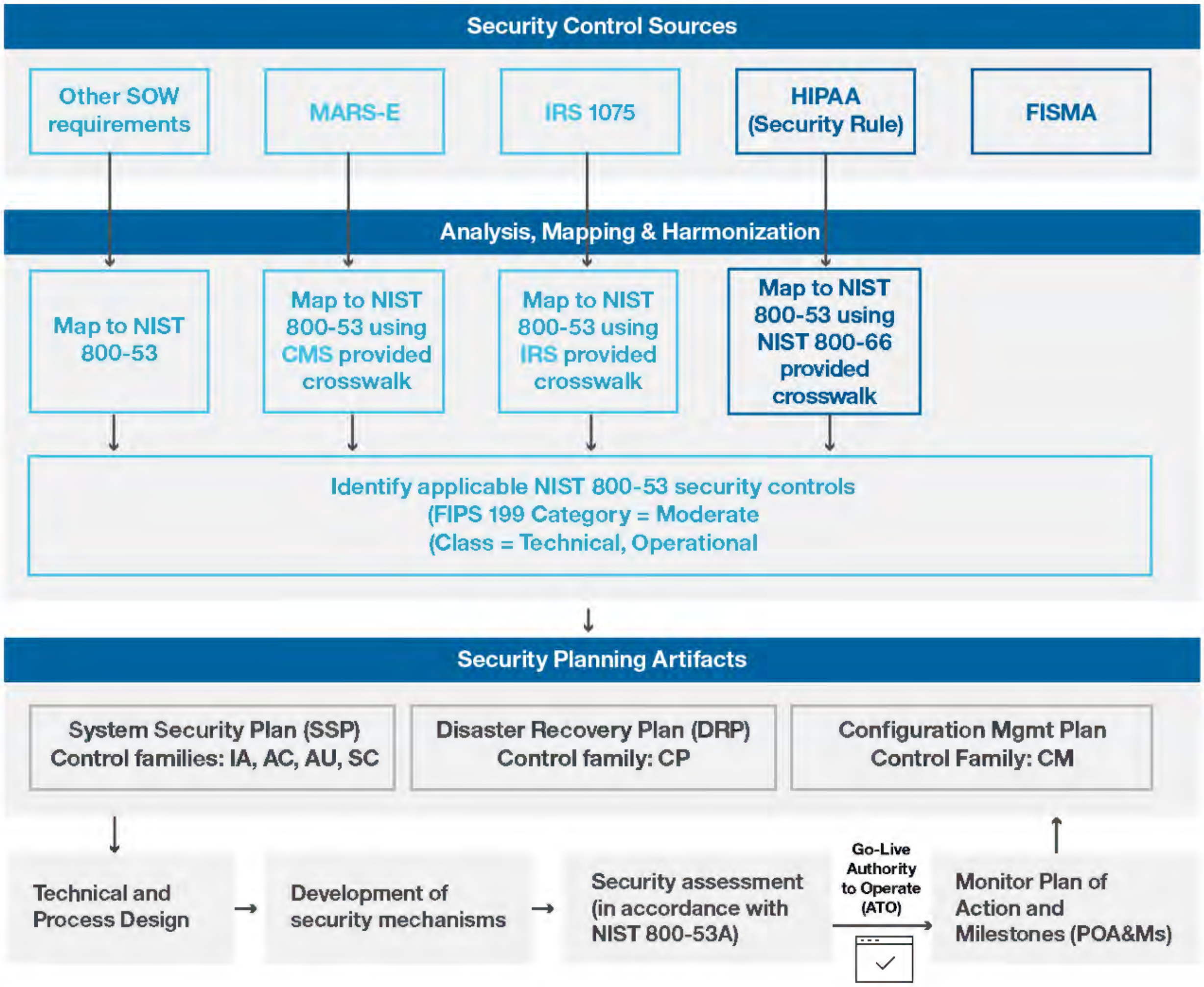


Figure 21: Harmonizing Federal, State, and Local regulations into a System Security Plan (SSP)

Protecting IE-BM information assets: Identification, access and other controls

IBM uses the widespread capabilities of our COTS portfolio to implement technical controls pursuant to the NIST SP 800-53 Rev. 4 at the FIPS 199 Moderate level.

Identification and authentication (IA)

IE-BM will authenticate users through SSO with the State's CA IAM system. Cúram supports a range of authentication providers, including local authentication, Lightweight Directory Asset Protocol (LDAP), and Security Assertion Markup Language (SAML). Cúram is a pure JEE application that can use the Java Authentication and Authorization Service (JAAS) module of the WAS to integrate with a range of Identity Providers. For IE-BM, IBM will configure Cúram in "identity only" mode. This means that the user just needs to be defined in Cúram but is authenticated using credentials stored in CA IAM. Cúram basically delegates the verification of credentials to the WAS, which is configured to look up CA IAM. Once the user enters Cúram through SSO, he or she can seamlessly access Cognos through the integrated authentication between Cúram and Cognos, a special feature of IBM's IE-BM solution.

Access Control (AC)

IE-BM supports role-based access, separation of duties, and least necessary privileges. The Cúram security profile model is both flexible and granular. Each Cúram user is assigned a security role, consisting of one or more security groups, which are in turn composed of multiple security identifiers (SIDs). This allows for configuration of highly specific user roles to control the users' access to workflows, tasks and activities. AC includes the following authorizations:

- **Product-based authorization.** Product based security restricts user access to specific products or programs so users are limited to what they can do with cases based on those programs.
- **Location-based authorization**. Cúram location-based authorization determines whether or not a user can access information or perform business operations based on a comparison of the user's location (or the location associated with the position they hold in the organization) with the location associated with the case or client information.
- **Field-based authorization**. Field-based security governs the user's ability to view information in specific fields. Once security for a field has been enabled and the associated SID is available, the SID may be added to the appropriate user profiles.
- **Sensitivity-based authorization**. Sensitivity-based authorization restricts access to "sensitive" data items. A range of record types, such as users, participants, work queues, and notes, can be designated a sensitivity level. For a user to have access to a record that has sensitivity associated with it, the user must have a sensitivity level equal or greater than the record in question.

Audit and Accountability (AU)

IBM's solution meets mandated requirements for AU. The following list includes some of the activities supported within IBM's solution:

- Define auditable events.
- Define audit record content.
- Generate audit.
- Analyze and report on audit logs.
- Protect audit information.
- Non-repudiation for the following areas:
  - IBM will use the delivered capabilities of Cúram to capture an audit trail on identified transactions. IBM will configure Cúram to recognize certain events as auditable and to write audit logs for those events to the database. These audit logs will capture user ID, date and time, nature of change, before and after values, program name, and other relevant information. Business rules can be configured to process audit logs and issue alerts or initiate workflow where the event hits certain thresholds.
  - Cognos captures audit logs related to query, report, or dashboard execution and also modification of Cognos objects.
  - MDM maintains a complete history of changes to the Master Person Index (MPI).
  - Guardium is used as a cross cutting safeguard between IE-BM applications and databases. Where a privileged user, or potentially an attacker, has bypassed the

application layer, Guardium will exercise policy-based ACs and may either block the database connection or gather a fine-grained audit trail. Guardium provides real-time dashboard and alerts to report such activity.

System and Communications Protection (SC)

IBM understands the importance of safeguarding the Protected Health Information (PHI) and Personal Identifying Information (PII) in the system. IBM's solution safeguards data in motion and at rest including the following components:

- Transmission integrity and confidentiality: Users will connect to applications using HTTP over Secure Socket Layer (SSL) and Transport Security Layer (TLS). SSL or TLS certificates on the Web Servers will support FIPS 140-2 compliant encryption. These certificates will conform to the X.509 standard, and will be issued by a certificate authority (CA) approved by the State.
- Protection of information-at-rest: IBM will use DB2 native encryption to secure data-at-rest. Guardium policy-based controls offer an additional layer of protection regarding data-at-rest.
- Other data safeguards: Data in user devices will be protected in accordance with NIST 800-111. End-of-life data will be destroyed as per State policy, project requirements, and controls prescribed in NIST 800.88. Backups are stored in a separate, secure location in encrypted volumes.

2.6.2 Security Architecture and Design

Instructions: Describe the Vendor's approach to support technical controls and technology solutions that must be secured to ensure the overall security of the System including, but not limited to:

- Providing security-related input into IT infrastructure, system and application design
- Leveraging published industry and Federal government standards and models to apply security best practices
- Supporting, enabling and extending the security policy by providing specific security-related guidance to decision makers
- Addressing the capability to provide user and site authentication
- Supporting VPN access
- Recovering from a failure of any single element
- Easily serviceable
- Supporting the establishment and active management of data sensitivity levels
- Application and system hardening processes

DHS considers the use of the State of Arkansas's security infrastructure (including CA Identity and Access Manager etc.) mandatory for the Integrated Eligibility and Benefit Management System.

Providing security-related input into IT infrastructure, system, and application design

The IBM team will provide all initial design and architecture services for the security program. Additionally, on an ongoing basis, the IBM team will assess the State's security controls and their effectiveness in light of an ever-changing threat landscape. IBM will collaborate with State security leadership to build a roadmap for security throughout the contract, and we will provide security policy development services during transition and policy engineering services during steady state.

System design activities are preceded by a security assessment, data classification, PII and PHI inventory, and an identification of the security controls required. These controls may be management, operational, or technical controls. Technical controls may manifest at the application or infrastructure layer. Our security analysts will take a holistic view of the security landscape and use their experience monitoring, investigating, and responding to security threats for our thousands of managed security services clients around the world. This global visibility gives our analysts a broader perspective on the threat landscape and a larger understanding of different attack vectors leveraged, different variants of various threats, and trends across multiple markets and industries.

Leveraging published industry and Federal government standards and models to apply security best practices

IBM used the following standards and guidelines to formulate our security approach and design for the State:

- NIST 800-53 r4: Recommended Security Controls for Federal Information Systems and Organizations, at a FIPS 199 Category of Moderate:

  http://nvlpubs.nist.gov/nistpubs/SpecialPublications/NIST.SP.800-53r4.pdf

  - Control baselines.
  - Control specifications and enhancements.
  - Supplementary guidance.
- NIST 800-53A: Guide for Assessing the Security Controls in Federal Information Systems - Building Effective Security Assessment Plans:

  http://csrc.nist.gov/publications/nistpubs/800-53A-rev1/sp800-53A-rev1-final.pdf

  - Assessment objects: Specifications, mechanisms, activities, individuals.
  - Assessment methods: Examine, interview, test.
  - Assessment attributes: Depth, coverage.
  - Minimum assurance requirement.
- NIST 800-66: An Introductory Resource Guide for Implementing the Health Insurance Portability and Accountability Act (HIPAA) and Security Rule:

  http://csrc.nist.gov/publications/nistpubs/800-66-Rev1/SP-800-66-Revision1.pdf

  - Specific guidance for HIPAA Security Rule implementation.
  - Crosswalk to 800-53 r4.
- NIST 800-122: Guide to Protecting the Confidentiality of Personally Identifiable Information (PII):

  http://csrc.nist.gov/publications/nistpubs/800-122/sp800-122.pdf

  - Guidance on data classification.

- NIST 800-34: Contingency Planning Guide for Federal Information Systems:
  http://csrc.nist.gov/publications/nistpubs/800-34-rev1/sp800-34-rev1_errata-Nov11-2010.pdf
  - Guidance on alternate site processing.

Supporting, enabling, and extending the security policy by providing specific security-related guidance to decision makers

In addition to integrated technology components, the IBM team solution will bring the right talent and skills to complement the State's staff and resources. IBM's security analysts will be reviewing the State's vulnerability data and correlating it with other threat intelligence sources. IBM's Security Lead will be making recommendations to the State on remediation actions that need to be taken to reduce the impact of a given vulnerability. Specific tasks that the Security Lead will perform will include the following activities:

- Conduct internal system and application vulnerability scans on an agreed to schedule.
- Research mitigation solutions for discovered vulnerabilities.
- Prioritize mitigation solutions for implementation based on security risks.
- Communicate and coordinate mitigation solutions with the appropriate State's personnel or asset owner.
- Report vulnerability management metrics and mitigation tracking results.

Addressing the capability to provide user and site authentication

IBM will use the CA IAM suite, which is the preferred solution by the State of Arkansas DHS. This will be integrated with the IBM Cúram solution. The IBM Cúram solution supports open standards (OAuth, SAML) for integration with various security products. The existing DHS and DIS LDAP (Active Directory) CA IAM functionality can be used to perform the initial authentication, passing credentials through WAS to Cúram through APIs. As an example, Cúram uses WAS and the JAAS functionality as its default authentication and authorization service. Cognos will authenticate through Cúram; a user authenticated on the Cúram portal will navigate seamlessly to the Cognos reporting tab through an integrated, behind the scenes sign-on. Further details on our user and site authentication solution are provided in Section 3.6.1.

Supporting VPN access

IBM will subscribe to the State's VPN provisioning method. Once the user or administrator has entered the State's network boundary through the State provided VPN, he or she will be able to access systems to the extent that he is authorized. IBM will provide the authentication into, and access control within, the IE-BM systems. The network boundary protection, including the VPN architecture, is assumed provided by the State data center.

Recovering from a failure of any single element

IBM's approach to overall system availability is one of highly reliable and redundant components in the infrastructure and clustering of major functional components in the web, middleware, and database tiers. There are no single points of failure within the IE-BM architecture. This architecture is comprised of four tiers: network, web, app, and database. At a minimum, each tier uses a redundant pair of resources. If a single element fails, such failure does not impact the user or system operations. In a clustered WAS-ND environment, if the current owner server instance of the session fails, then the WAS plug-in routes the requests to another appropriate server in the cluster, transparently preserving the session from the user perspective. Similar fail-over exists for clustered DB2 databases.

For capacity-related failures, recovery of the failed element is managed automatically by the PowerHA architecture. PowerHA V7.2 integrates and manages Power Enterprise Pools and Elastic Capacity-on-Demand (CoD) as part of fail-over operations, enabling the automated move of processor, memory, and software entitlements between partitions in the cluster. For other types of failures, administrators are notified, and they recover the failed element following standard operational procedures.

Easily serviceable

We will use the CA IAM suite to complete the following actions:

- Deliver broad identity management and access governance capabilities for business users in a unified, easy-to-use interface.
- Improve business user productivity by delivering identity and entitlement features in a common business language.
- Reduce administrative overhead and improve audit and compliance performance through centralized policy enforcement.

Administrators can use the CA Identity Suite to easily service the security management system. The product includes administrative features that help reduce administrative overhead and improve audit and compliance performance through centralized policy enforcement. It offers an easy-to-use, configurable user-centric risk model that identifies areas of risk within the organization caused by users with high risk scores. CA Identity Suite uses advanced provisioning and governance technology, while offering business users a lightweight, intuitive interface that users can access on a variety of devices. IBM will focus on enabling self-service to reduce administrative overhead; business users can request access to systems through a self-service portal, which provides an intuitive, shopping-cart experience.

Supporting the establishment and active management of data sensitivity levels

NIST Special Publication SP 800-122, Guide to Protecting the Confidentiality of Personally Identifiable Information (PII), defines information classification types and specifies commensurate levels of protection to be adopted for each sensitivity level. We use this NIST guidance to establish and manage data classification and sensitivity.

SP 800-122 defines PII as any information about an individual maintained by an agency, including any information that can be used to distinguish or trace an individual 's identity, such as name, social security number, date and place of birth, mother 's maiden name, or biometric records; and any other information that is linked or linkable to an individual, such as medical, educational, financial, and employment information. SP 800-122 defines a subset of PII as Sensitive Personal Information (SPI). SP 800-122 recommends that organizations should classify their PIII by confidentiality impact level that depends on several factors: identifiability (uniqueness), quantity, data field sensitivity, use context, obligations to protect, and access to and location of data.

Using this guidance, IBM classifies the data types processed in the IE-BM solution as ranking from most highly sensitive to least as: PHI, SPI, PII, and public information as defined by the State. The rationale is that individual's health information as covered by the HIPAA is protected at the highest level of confidentiality and is a subset of SPI, then PII, while still highly confidential a moderate level of integrity is acceptable, and finally, public data for which there is no reasonable expectation of confidentiality.

The following table shows the data sensitivity levels we expect to establish in the IE-BM solution:

Table 2: Data sensitivity levels

Data Types Processed	Confidentiality	Integrity	Availability	Sensitivity
Protected Health Information (PHI)	H	H	M	Protected
Sensitive Personal Information (SPI)	H	H	M	Sensitive
Personally Identifiable Information (PII)	H	M	M	Personal
Public Information as per State	L	M	M	Public

Application and system hardening processes

IBM understands the importance of protecting the State's applications and systems from unauthorized use, modification, disclosure, or destruction. The IBM approach for application and system hardening is based on the NIST 800-128 Guide for Security-Focused Configuration Management of Information Systems. The NIST 800-128 provides detailed guidance on assessing how specific security controls are implemented in the system and how changes might impact these controls. It also includes an assessment of risk and of the need for additional controls. During security impact assessment, we seek to confirm the following points:

- Mandatory or most restrictive (least necessary privileges) configuration settings have been implemented, consistent with operational requirements. Exceptions, if any, are documented.
- Only essential capabilities are provided. Prohibited or unnecessary functions, ports, protocols, or services are not provisioned.

IBM will work with the State's data center provider to apply hardening policies at the various layers of the technology stack, including the following policies:

- Operating system configurations in both the servers and client devices, including services, protocols, and functionalities, are reviewed on a periodic basis commensurate with the level of sensitivity and criticality of the information and business function.
- Unnecessary services and protocols are disabled. Unnecessary scripts, drivers, features, subsystems, and file systems are removed.
- Vendor supplied default passwords are changed. User accounts, including administrator accounts, have their passwords expired every 90 days. System passwords, including those used for authenticating system to system connections, are periodically recycled, following a validated and documented procedure that protects against system or interface breaks.
- Servers are deployed to the production environment only after hardening.
- Mobile devices, including laptops, notebooks, tablets, and in some cases, smart phones, and removable storage media devices have appropriate security controls. Mobile device installation and deployment comply with standard configuration and deployment standards that apply to that platform. These devices have a personal firewall installed and are configured to receive the latest software patches, antivirus pattern recognition file, and personal firewall patterns periodically.

- Mobile devices that contain and process PHI and PII implement full disk encryption. They are configured to use password-protected screen savers prior to deployment.
- Web Servers, regardless of location, use approved hardware and software with standard configurations to reduce likelihood of compromise due to exploitation of configuration vulnerabilities. For web design projects, the development and testing are conducted on specifically designated development web servers.

2.6.3 Database Security

Instructions: Describe the Vendor's approach to ensure the confidentiality, integrity and availability of the Database Management Systems responsible for managing data related to the proposed System.

The first line of defense for database security is authentication and authorization control in the application set that uses the database. These controls have been described in Section 3.6.1. Databases are hardened as per standard DB2 hardening procedures, whereby unnecessary services, protocols, or accounts are removed. Only applications and authorized privileged users (administrators) have accounts on the database system, and each account is restricted to the least necessary privileges.

Additionally, IBM uses Guardium for collection of audit information at the database level, independent of the application layer. Access to IBM databases, even access by DBA or system administrators, will be subject to policy controls, will generate audit trails, and will be included in audit reports. Guardium can transparently collect and consolidate audit data and present audit data in reports. With Guardium reports, alert notifications, and centralized audit policy management, external and internal threats to databases are significantly reduced.

IBM will also use the native DB2 security mechanisms. There are three main mechanisms within DB2 that allow a DBA to implement a database security plan: authentication, authorization, and privileges:

- **Authentication** is the first security feature that the State will encounter when you attempt to access a DB2 instance or database. DB2 authentication works closely with the security features of the underlying operating system to verify user IDs and passwords. DB2 can also work with security protocols like Kerberos to authenticate users.
- **Authorization** involves determining the operations that users or groups can perform and the data objects that they may access. A user's ability to perform high-level database and instance management operations is determined by the authorities that they have been assigned. The five different authority levels within DB2 are SYSADM, SYSCTRL, SYSMAINT, DBADM, and LOAD.
- **Privileges** are a bit more granular than authorities and can be assigned to users or groups. Privileges help define the objects that a user can create or drop. They also define the commands that a user can use to access objects like tables, views, indexes, and packages.

2.6.4 Software and Hardware Security

Instructions: Describe the Vendor's approach to development and implementation of security measures that will provide security and protection for the System including, but not limited to:

- Server OS Security

- Client OS Security
- Mobile Devices Security
- Web Server Security
- Browser Security

IBM will use existing DHS and DIS security standards, practices and implementations for securing servers, clients, mobile devices, Web Servers, and browsers. Where possible, IBM will make recommendations to further enhance the security posture of the environment.

IBM will follow applicable and relevant NIST guidelines for securing systems, primarily NIST.SP.800-53r4 Security and Privacy Controls for Federal Information Systems and Organizations in securing the solution.

Server OS Security

AIX

IBM will use existing DHS and DIS security standards, practices and implementations for securing servers. IBM will use key features of the AIX OS to implement a secure environment, including, but not limited or exclusive to the following components:

- Secure system installation and configuration:
- **Trusted Computing Base** enforces system-wide information security policies.
- **Trusted Execution** used to verify the integrity of the system and implement advanced security policies.
- **EAL4+ options** place restrictions on the software that is installed during BOS installation and restricting network access.
- **Login control** change login screens after installation.
- **Stack Execution Disable protection** thwart attacks due to buffer overflow based execution.
  - Users, groups, and passwords.
  - Role-based access control.
  - Access control lists.
  - Auditing subsystem.
  - Lightweight Directory Access Protocol support.
  - EFS Encrypted File System.
  - Public Key Cryptography Standards #11.
  - Pluggable Authentication Modules.
  - OpenSSH and Kerberos Version 5 support.

AIX Security Expert

IBM will employ the security expert tool included with AIX to harden and protect the applications, middleware, and database software of the solution. AIX Security Expert provides simple menu settings for high-level security, medium level security, low level security, and AIX standard settings security that integrate over 300 security configuration settings, while still providing control over each security element for advanced administrators. AIX Security Expert can be used to implement the appropriate level of security, without the necessity of reading a large number of papers on security hardening and then individually implementing each security element.

AIX Security Expert can be used to take a security configuration snapshot. This snapshot can be used to set up the same security configuration on other systems. This saves time and verifies that all systems have the proper security configuration in an enterprise environment.

PowerSC

IBM is assuming DHS and DIS will use IBM PowerSC software, which provides a security and compliance solution optimized for virtualized environments on Power Systems servers, running PowerVM and AIX or Linux.

PowerSC provides the following features and benefits:

- Security and compliance automation: Reduces administration costs for complying with industry security standards.
- Real-time compliance monitoring: Uses continuous monitoring and alerting if changes occur that cause AIX systems to be non-compliant to security policies.
- Compliance reports: Reduces time and cost to provide security and compliance reports to auditors.
- Preconfigured profiles for PCI, DOD STIG, HIPAA, NERC, COBIT security standards and database servers: Saves time, cost, and risk associated with deploying industry security standards.
- Web-based User Console: Provides data center wide awareness of a data center's security compliance posture.
- Trusted Boot: Reduces risk of compromised security by guaranteeing that an AIX operating system image has not been inadvertently or maliciously altered.
- Trusted monitoring: Validates high levels of trust by displaying the status of all AIX systems participating in a trusted system configuration.
- Trusted logging: Prevents tampering or covering security issues by storing AIX virtual machine system logs securely on a central PowerVM Virtual I/O Server. Reduces backup and archive time through storing audit logs in a central location.
- Trusted network connects and patch management: Verifies that site patch levels policies are adhered to in virtual workloads. Provides notification of non-compliance when back-level systems are activated.
- Trusted firewall: Improves performance and reduces network resource consumption by providing firewall services locally with the virtualization layer.
- Trusted Surveyor: Provides visibility to validate segregation of virtual networks to maintain security compliance:
  - AIX, Linux.
  - AIX for all profiles, Linux for PCI and HIPAA only.
  - VM Type, AIX or Linux.

Linux

IBM will use existing DHS and DIS security standards, practices, and implementations for securing servers. IBM will use key features of the SELinux kernel module to implement a secure environment. IBM will harden Linux servers by following the similar guidelines presented for AIX previously.

Client OS Security

IBM will use existing DHS and DIS Security standards, practices and implementations for securing clients.

DHS and DIS can evaluate, at a later date, the use of an endpoint security and patch management tool, such as IBM BigFix.

At a high-level, IBM BigFix provides the following capabilities:

- Detect: See, understand, and act upon malicious activity.
- Comply: Continuous policy enforcement and reporting.
- Manage: Full lifecycle software patching, distribution, and provisioning.
- Track: Inventory of installed software, auditing and usage analysis.
- Patch: Highly efficient (98%) firstpass success rate.

Mobile Device Security

IBM will use existing DHS and DIS security standards, practices, and implementations for securing servers, clients, mobile devices, Web Servers, and browsers. Where possible, IBM will make recommendations to further enhance the security posture of the environment.

DHS and DIS can evaluate, at a later date, the use of an end-point security and patch management tool, such as IBM MaaS360.

MaaS360 is an enterprise mobility management solution that makes working in a mobile world more simple and safe. It provides powerful mobile device management with widespread, integrated protection to enable applications, content, email and devices, without compromising the user experience, data security, or privacy.

Web Server Security

IBM will use existing DHS and DIS security standards, practices, and implementations for securing web servers. Where possible, IBM will make recommendations to further enhance the security posture of the environment.

IBM will follow leading practices as described in NIST.SP.800-44v2 Guidelines on Securing Public Web Servers.

Browser Security

IBM will use existing DHS and DIS security standards, practices, and implementations for securing browsers. Where possible, IBM will make recommendations to further enhance the security posture of the environment.

IBM will employ the use of secure protocols (HTT) and communications (SSH and TLS) to verify security at the browser level.

[G6.1,G6.2,G6.3,G6.4, G6.5, G6.6, G6.7, G6.8, G6.9, G6.10, G6.11, G6.12, G6.13, G6.14, G6.15, G6.16, G6.17, G6.18, G6.19, G6.20, G6.21, G6.22, G6.23, G6.24, G6.25, G6.26, G6.27, G6.28, G6.29, G6.30, G6.31, G6.32, G6.33, G6.34, G6.35, G6.36, G6.37]

2.7 Interface List

Instructions: Describe the Vendor's approach and any experiences the Vendor has in integrating with external data sources similar to those listed in Template T-8 – Technical Requirements Traceability Matrix, tab G7 Interface List, the technical challenges faced and how these challenges were overcome.

IBM has extensive experience integrating Cúram applications with external systems and understands the importance of the interfaces to the overall business processes.

IBM will use IIB, an industry standard ESB as the backbone of this architecture. This ESB will facilitate current and future integration needs of IE-BM. IIB provides a robust transport platform for the reliable delivery of message between the interface partners while the IBM Cúram SPM platform provides the necessary mechanism to connect Cúram workflows to external systems. The IBM Cúram SPM platform is designed to work with IIB seamlessly.

This will provide a unified, consistent, and flexible set of options for integrating IE-BM with external systems. The State has listed the following interfaces that need to be built to fully implement IE-BM solution:

- Department of Motor Vehicles System. **[G7.1]**
- Social Security Administration System. **[G7.2]**
- Public Assistance Reporting Information System (PARIS). **[G7.3]**
- Department of Labor System. **[G7.4]**
- Electronic Disqualified Applicant System (eDRS). **[G7.5]**
- Child Support Enforcement Agency System. **[G7.6]**
- Department of Public Safety/Corrections Division (State prison, Federal prison, and Juvenile Detention) System. **[G7.7]**
- National Directory of New Hires (NDNH) System. **[G7.8]**
- Department of Homeland Security - SAVE System. **[G7.9]**
- US Census Bureau System (to validate census tract). **[G7.10]**
- Postal Service System (to validate address). **[G7.11]**
- Asset Verification System (Accuity). **[G7.12]**
- Division of Workforce Services (Wage/Unemployment — ESD) System. **[G7.13]**
- Federal Data Services Hub. **[G7.14]**
- ADH WIC System. **[G7.15]**
- Department of Workforce Services Welfare-to-Work System (ARWINS). **[G7.16]**
- MMIS System. **[G7.17]**
- Medicare Premium (SOLQ) System. **[G7.18]**
- EBT Vendor's system. **[G7.19]**
- OASIS System. **[G7.20]**

- State Accounting System. **[G7.21]**
- State Data warehouse. **[G7.22]**

Connection methods

Our IE-BM solution supports a range of approaches to enable integration with these systems, including the following approaches:

- Cúram Enterprise Application Integration (EAI) Connector
- Web Service Connector
- JMS Compliant MOM Connector
- SQL Connector
- Customer Information Control System (CICS) Transaction Gateway

EAI Connectors

Cúram EAI Connectors provide integration capabilities to enable other systems to interface with Cúram applications. The Cúram EAI Connectors architecture provides for the technical connectivity between Cúram business objects and existing legacy and/or external systems. They allow application developers to work with objects representing data obtained from, or persisted on, legacy and other application platforms in exactly the same way that they use other Cúram business or entity objects. The following graphic shows EAI Connectors:

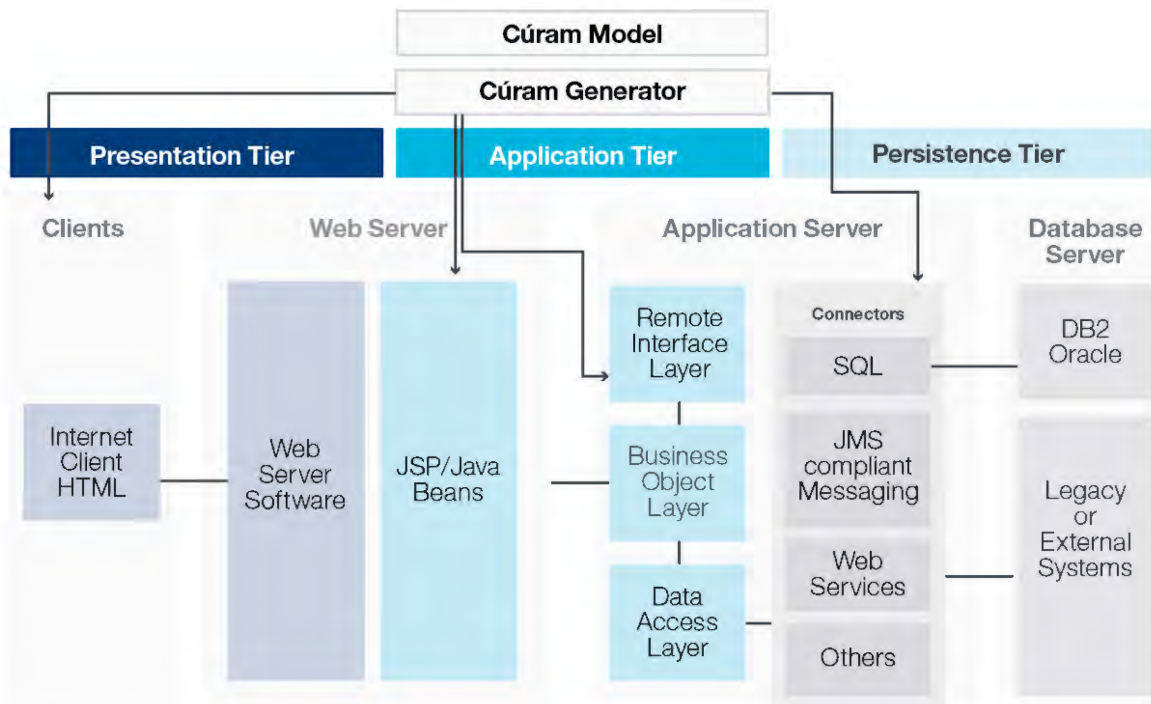


Figure 22: EAI Connectors within the context of the overall Cúram architecture

Web Service Connector

Cúram provides in-built support for Web Services. Cúram business objects can be exposed as a Web Services, and Cúram business objects can in turn consume externally defined Web Services. Organizations looking to create or provide Web Services merely have to identify the components of Cúram functionality to be exposed. Once identified, Cúram generates the required code and deployment information. Implementations that require the use or consumption of external Web Services only have to provide the WSDL for those Web Services, and Cúram generates the functionality needed to call them.

JMS-compliant MOM Connector

Cúram provides a JMS-compliant MOM Connector. Where required, the Cúram generator produces code that converts the relevant operation parameter into a JMS-compliant message, places the message on a queue, and optionally waits for another message in response which is then converted back into a Cúram structure and returned to the caller. For many operations, queue connectors can be implemented without writing handcrafted code. However, if required, it is possible to customize connectors with the use of handcrafted code.

SQL Connector

The Cúram SQL Connector enables DBMS connectivity to a range of SQL databases that support Java Database Connectivity (JDBC) drivers. This provides standard JDBC connectivity.

CICS Transaction Gateway

Our proposed solution includes the CICS Transaction Gateway, whereby, we can transact with mainframe systems from Cúram, IIB, and other products that support Java binding environments.

Common MDM driven-approach to eligibility check interfaces

IE-BM solution incorporates MDM to keep demographic data and program participation data for persons that are known to programs administrated by the State. This MDM system is used for eligibility checks by Cúram, using a Cúram-MDM search and lookup API transferred from our County of San Diego project. External systems such as PARIS, eDRS, Child Support, and BENDEX that provide eligibility verification data are part of the MDM index. The use of a single, probabilistic, MDM-based API for eligibility verification reduces duplication of benefits and improves program integrity. Using this approach, persons can be matched through multi-dimensional and fuzzy logic even though their name may be spelled differently in different systems. The interface data flow includes the following sequence:

- Cúram creates the request file.
- IIB transforms the data to conform with the destination data format.
- If the interface is online, IIB opens a communication channel with the destination and transports the file. If the interface is in asynchronous mode, IIB sends the request file through secured FTP.
- When the response is received by IIB, it routes the demographic and program participation data to MDM and the other data to staging tables in Cúram.
- Cúram does a MDM lookup during MDM verification. It obtains additional data from the staging tables as required.

The following figure explains this approach:

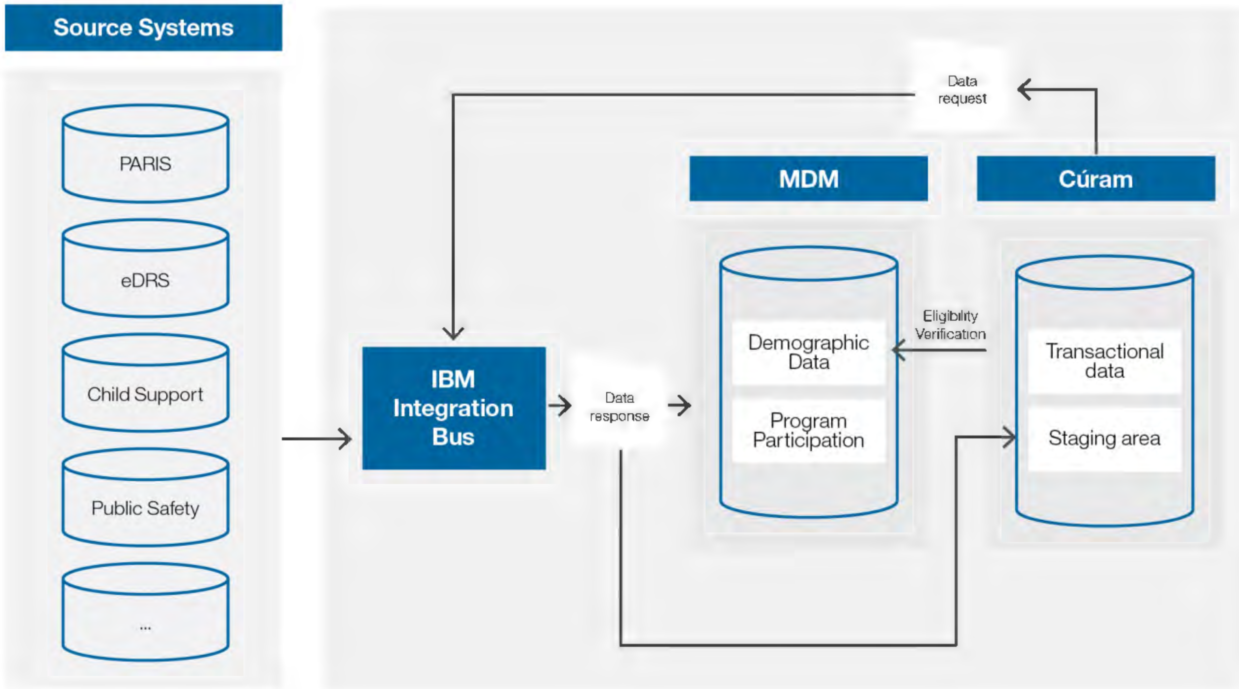


Figure 23: Cúram – MDM interaction

2.8 Solution Administration and Management

The Vendor should ensure that the responses to this section are in alignment with the requirements set forth in Template T-8 – Technical Requirements Traceability Matrix, Tab G8.

IBM proposed solution administration and management

Overall Solution Administration and Management will be accomplished based on logical divisions between the application (all environments), the middleware (web, application, and database) servers and the hardware and network infrastructure.

In general, our approach includes the following elements:

- Application functionality will be managed by the Cúram Administrative Console.
- The middleware (Web, Application Server, and Database Server) will be managed by their respective administrative consoles (IBM HTTP Server, IBM WAS, and IBM DB2 Server).
- The development environment will be managed by the various tools (JIRA, Jenkins, Rational Test Manager, and Sharepoint.
- The infrastructure will be monitored by Nagios and Ganglia, which will be integrated over time.
- Reports and dashboards relevant to Operator, Administrator, and Manager roles will be provided from the Systems Management perspective.

[G8.31, G8.43]

2.8.1 Solution Administration

Instructions: Describe the Solution Administration tools and procedures that are included in the Solution to ease the administration of the System, including any required customizations and third-party tools, and how these would be integrated into the DHS Platform environment. Describe the proposed overall management framework, including:

- Application management and monitoring
- Web services management
- Systems management and monitoring
- Event management
- Identity and Access Management
- Network management and monitoring
- Performance monitoring
- Print Prioritization & Management
- Workload Management

Application management and monitoring

IBM will use the CA's Application Performance Management product (formerly known as Wily Introscope – see Technical Requirements Assumptions). **[T7.6]**

For overall application management, IBM will use the Cúram Application Console.

Similarly, IBM will use administrative consoles for the IBM HTTP Server (web), IBM WAS (app) and IBM DB2 Server (DB) to manage those environments.

From a monitoring perspective, CA Introscope captures transaction data regarding run-time activity in Java web applications (Cúram) in the following ways:

- CA Introscope inserts probes into Java Virtual Machines (JVMs) which monitor application-component bytecode such as called classes, methods, and parameters. CA Introscope does not touch the source code. The probes report data to agents.
- The agents report data to the Enterprise Manager. Other subsystems, such as Java Management Extensions (JMX) and Performance Monitoring Infrastructure (PMI), report data that the agents collect. The agent also records and sends captured structural data about applications to the Enterprise Manager. This data displays in a graphical format as the application triage map. The application triage map also shows how the business transaction flows into the frontends that service the applications.

The Enterprise Manager compiles this data into metrics and uses the metrics data in the following components:

- APM database includes business service and business transaction data, which is used in the CA Introscope Investigator application triage map and for CA CEM incidents and defects. This database also stores all CA CEM-related configuration data.
- CA Introscope Workstation allows clients to control CA Introscope and access performance metrics. Clients can set alerts for individual metrics or logical metric groups, view performance metrics, and customize views for your own unique environment.

- CA Introscope WebView presents the CA Introscope customizable dashboards and Investigator tree views in a browser interface. WebView allows critical information to be viewed without the aid of the CA Introscope Workstation.
- CA Introscope SmartStor database records all application performance data (CA Introscope metrics). This database enables users to analyse historical data, to identify the root causes of application downtime, or perform capacity analysis without the need for an external database.

The following graphic shows a high-level view of how CA Introscope monitors applications to measure application health.

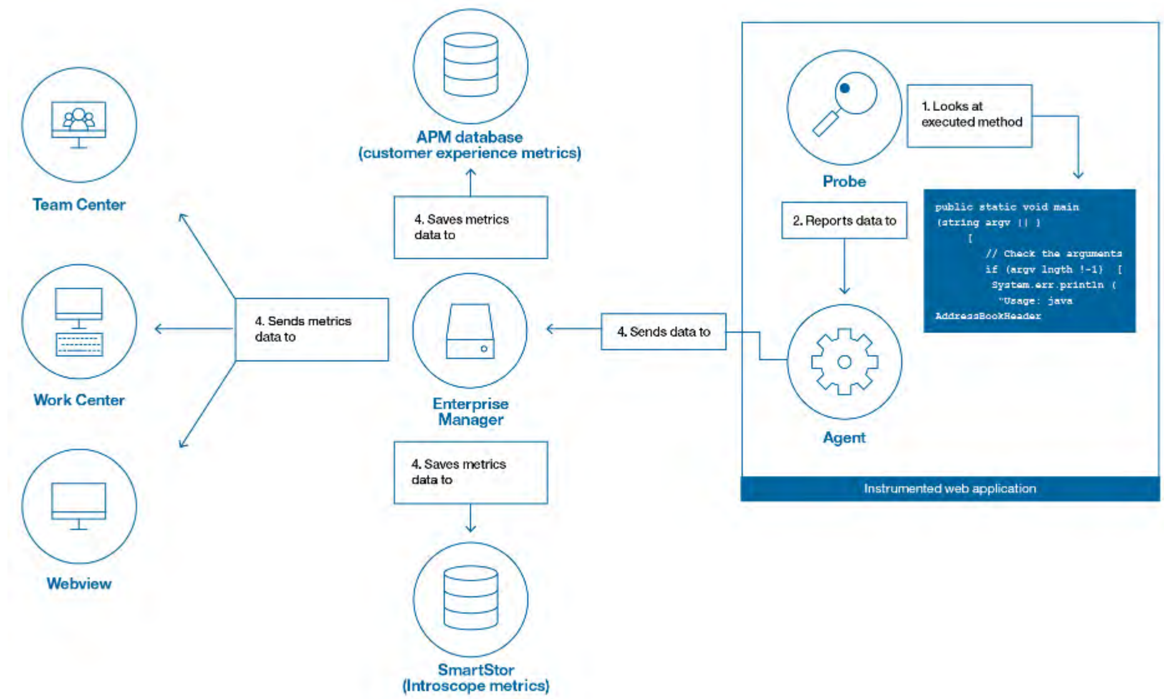


Figure 24: CA Introscope monitoring schematic: Processes and flows

[G8.32, G8.35, G8.39]

Web services management

IBM recommends the use of the IIB as the ESB to manage web services and interfaces. IIB, its usage and rationale for use is described in Section 2.4.

IIB is used to connect applications together, regardless of the message formats or protocols that they support. This connectivity means that diverse applications can interact and exchange data with other applications in a flexible, dynamic, and extensible infrastructure. IIB routes, transforms, and enriches messages from one location to another location.

IBM will manage the IIB-based Web Services by monitoring and collecting log, statistical, workload and activity data and using that data to improve performance of the IIB in any given area. Many parameters are available to be tracked and adjusted to optimally adapt the Web Services provided to a given workflow.

In general, IIB can be monitored and managed in the following areas:

- Performance - Provide an optimum configuration of your integration node

- Monitoring - Generate data and statistics to assess behavior and performance
- Statistics and accounting - Collect message flow statistics and accounting data to record operating details of message flows.
- Recording and viewing messages - Configure a message flow to capture some of the data that it processes. Such data can be viewed the web user interface or programmatically
- Activity logging - Help users and administrators understand what their message flows are doing by providing a high-level overview of how IIB interacts with external resources
- Workload management - Monitor and control the speed that messages are processed within message flows

In addition, IIB components use the local error log (also known as the system log) to record information about major activities within the system.

See Section 2.8.2 - Transaction Monitoring and Logging, for additional information.

Systems management and monitoring

IBM will use the DHS and DIS preferred solution, Nagios and Ganglia, for systems management and monitoring.

IBM will use Nagios as the base management and monitoring tool for the entire system. Nagios has many add-ons and plug-ins that can enhance its ability to manage networks and systems, monitor for anomalies, and issue alerts, create reports and display management dashboards. Nagios primarily does network, server, and application monitoring:

- **Network monitoring**: Nagios monitors the network for problems caused by overloaded data links or network connections, and monitoring routers, switches, and other devices. It monitors availability, uptime, and response time of every node on the network and delivers the results in a variety of visual representations and reports. Nagios provides network monitoring, network traffic monitoring, and network analyzer capabilities.
- **Server monitoring**: Nagios manages servers with both agent-based and agentless monitoring providing flexibility. Nagios has over 5,000 different add-ons available to monitor the individual services running on servers, so the environment can be customized as appropriate to the service levels, metrics, and capacity planning capabilities needed. In the case of the Power Servers, Nagios will be integrated with Ganglia, the popular cluster performance monitoring tool, discussed further in Section 2.8.1, to provide fine-graining monitoring and management capabilities.
- **Application monitoring**: Nagios allows for administrators to quickly detect application, service, or process problems and take actions to eliminate downtime for users. Nagios provides tools for monitoring of applications and application state, including Windows applications, Linux applications, AIX applications, and Web applications:
  - Application monitoring - Nagios provides complete monitoring of applications and application state, providing increased availability by faster detection of issues such as protocol failures, stopped services/processes and failed batch jobs.
  - Web Application Monitoring - Nagios provides complete monitoring of websites, web applications, web transactions, and web services – including availability, URL monitoring, HTTP status, content monitoring, hijack detection, etc., providing:
    - Increased website and web application availability

  - Increased website performance
  - Fast detection of outages, website defacement, and website hijacking
  - Capacity planning information for future web server and application upgrades

- **Log monitoring** - Nagios provides complete monitoring of application logs, log files, event logs, service logs, and syslog data. Nagios provides alerts when an “out-of-bounds” condition is detected. Nagios’ logging capabilities provide the following benefits:
  - Increased security.
  - Increased awareness of network infrastructure problems.
  - Increased server, services, and application availability.
  - Fast detection of network outages and protocol failures.
  - Fast detection of failed processes, services, cron jobs, and batch jobs.

[G8.24, G8.34, G8.39]

IBM assumes DHS and DIS using the IBM PowerVC product to manage the Power Servers that make up the majority of the solution from a server standpoint.

IBM PowerVC Virtualization Center is an advanced virtualization and cloud management offering, built on OpenStack, that provides simplified virtualization management and cloud deployments for IBM AIX and Linux virtual machines (VMs) running on IBM Power Systems. PowerVC is designed to improve administrator productivity and simplify the cloud management of VMs on Power Systems servers. PowerVC is designed to provide the following capabilities:

- Simplified virtualization and cloud management for IBM Power Systems.
- Easy-to-replicate VMs for consistency and fast deployment.
- Self-service portal that enables provisioning of new workloads easily into a cloud.
- Automated configuration of I/O resources that enables mobility and highly available configurations.
- Policy-based workload placement that simplifies and automates administration.
- Virtual image management, including virtual machine capture, deployment and catalog.

Event management

IBM will use Nagios, (preferred by DHS and DIS) as the primary event management tool. Event management in Nagios is accomplished through the event handler framework. The framework allows you invoke scripts or executable files to proactively fix an event whenever a host or service state change occurs.

Event handlers also have the following other uses:

- Restarting a failed service.
- Entering a trouble ticket into a helpdesk system.
- Logging event information to a database.
- Cycling power on a host.

The event handler framework logic uses a combination of parameters and status levels to determine corrective actions and notifications. The following key parameters and status indicators are included in the framework:

- Service and host check retries: Number of times to check the status before taking action.
- Soft states
  - When a service or host check results in a non-OK or non-UP state, and the service check has not yet been (re)checked the maximum number of times specified. This is called a soft error.
  - When a service or host recovers from a soft error. This is known as a soft recovery.
- Hard states
  - When a host or service check results in a non-UP or non-OK state, and it has been (re)checked the number of times specified. This is a hard error state.
  - When a host or service transitions from one hard error state to another error state (WARNING to CRITICAL).
  - When a service check results in a non-OK state and its corresponding host is either DOWN or UNREACHABLE.
  - When a host or service recovers from a hard error state. This is known as a hard recovery.

Depending upon other parameters set, the soft and hard errors are logged and notifications sent to allow for follow-up actions.

IBM understands that DHS is in the process of implementing Splunk to be used as an audit assistance tool. IBM will leverage Splunk capabilities to monitor and manage the IE-BM infrastructure, starting with the hardware layer, then building up to middleware and eventually the application layers over time, consistent with DHS/DIS policies and direction. IBM will work with DHS/DIS to determine the best approach to monitoring and management given that Splunk and Nagios can be integrated and both tools overlap in some functional areas.

IBM will initially use Splunk to collect and analyze log data from the server, storage and network infrastructure. IBM will use Splunk to accomplish event correlation to assist in problem determination and root cause analysis. Depending upon DHS/DIS direction and license availability, IBM can extend and enhance the Nagios/Splunk integration up the stack and across the IE-BM landscape as needed/desired.

A key strength of Splunk is its ability to significantly assist in event correlation - finding relationships between seemingly unrelated events in data from multiple sources to answer questions like, "how far apart in time did a specific set of events occur?" or "what's the total amount of time it took for a transaction to complete?"

Splunk software supports event correlations using time and geographic location, transactions, sub-searches, field lookups, and joins to:

- Identify relationships based on the time proximity or geographic location of the events. Use this correlation in any security or operations investigation, where you might need to see all or any subset of events that take place over a given time period or location.
- Track a series of related events, which may come from separate IT systems and data sources, together as a single transaction. Identify the amount of time it took to complete the transaction and the number of events within a single transaction.

- Use a sub-search to take the results of one search and use them in another. Create conditional searches, where you see the results of a search only if the sub-search meets certain thresholds.
- Correlate your data to external sources with lookups.
- Use SQL-like inner and outer joins to link two completely different data sets together based on one or more common fields.

See the Section Splunk Overview for a discussion of Splunk's capabilities.

[G8.34, G8.35, G8.36, G8.38, G8.40]

Identity and access management

IBM will use existing DHS and DIS security standards, practices and implementations for identity and access management, namely the CA IAM suite, which is the preferred solution by DHS.

The IBM Cúram solution supports open standards (OAuth, SAML) for integration with various security products.

As an example, Cúram uses WAS and the JAAS functionality, as its default authentication and authorization service.

The existing DHS and DIS LDAP (Active Directory) and CA IAM functionality will be used to perform the initial authentication, passing credentials through WAS to Cúram through APIs.

Cúram will still do the final authorization portion to retain fine-grained security within the logic and data structure of the Cúram application.

The following figure depicts how the Cúram application does additional, fine-grained security using roles, groups and SIDs for authenticated users. Ultimately, the SIDs control access to application functions and related data elements (down to the field level).

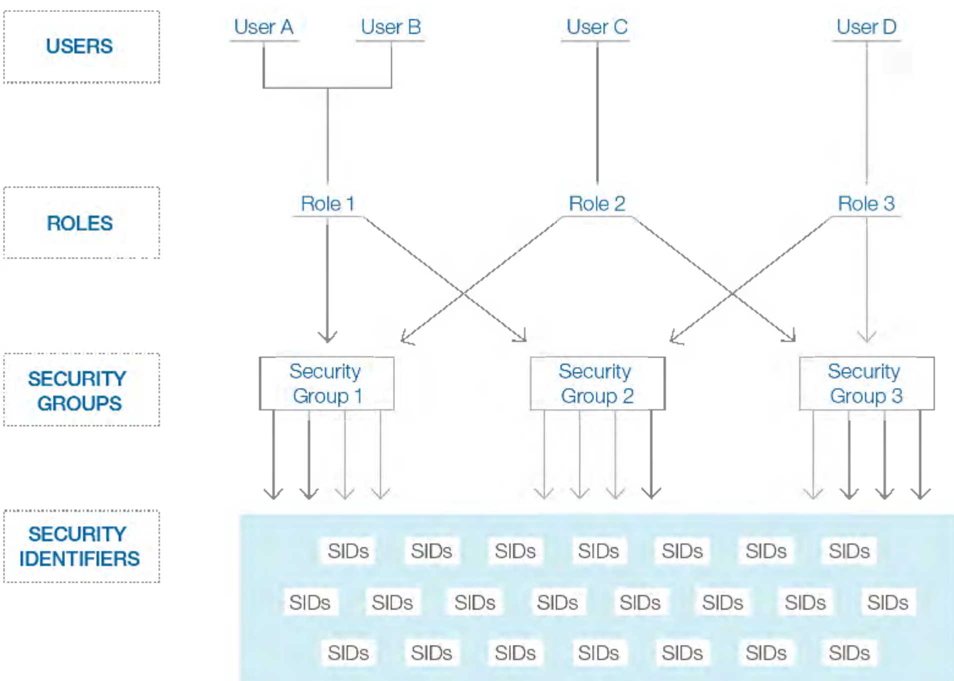


Figure 25: Cúram security: users, roles, security groups and security identifiers

[G8.7, G8.10]

Network monitoring and management

IBM will use existing DHS and DIS security standards, practices and implementations for network management and monitoring.

As noted in Section 2.8.7, IBM will use the existing Nagios functionality for the base of our systems management approach. The initial Nagios product focused on network management, which is still a core strength of the offering.

Nagios provides monitoring of all mission-critical infrastructure components including applications, services, operating systems, network protocols, systems metrics, and network infrastructure.

Nagios tool can provide the following key benefits:

- **IT infrastructure monitoring**: Monitoring of all mission-critical infrastructure components including applications, services, operating systems, network protocols, systems metrics, and network infrastructure.
- **Performance:** The powerful Nagios Core 4 monitoring engine provides users with the highest degree of monitoring server performance. High-efficiency worker processes allow for nearly limitless scalability and monitoring effectiveness.
- **Visibility**: Central view of your entire IT operations network and business processes. Multiple-view dashboards provide at-a-glance access to powerful monitoring information, data and reports. Individual views provide users with quick access to the information they find most useful.
- **Proactive planning and awareness**: Automated, integrated trending and capacity planning graphs allow organizations to plan for infrastructure upgrades. Alerts are sent to IT staff, business stakeholders, and users through email or mobile text messages, providing them with outage details, so they can start resolving issues immediately.
- **Configurability**: A flexible GUI provides the ability for configuration of layout, design, and preferences on a per-user basis, giving team members the information they want based on their role.
- **Ease of use**: Integrated web-based configuration interface lets admins pass control of managing monitoring configuration, system settings, and more to users and team members easily. Configuration wizards guide users through the process of monitoring new devices, services, and applications, all without having to understand complex monitoring concepts.
- **Multi-tenant capabilities**: Multi-user access to web interface allows stakeholders to view relevant infrastructure status. User-specific views validate clients only see the infrastructure components they're authorized for. Advanced user management simplifies administration by allowing you to manage user accounts easily and provision new user accounts with a few clicks; users automatically receive an email with their login credentials.
- **Extendable architecture**: Multiple APIs provide for simple integration with in-house and third-party applications. Thousands of community-developed add-ons extend monitoring and native alerting functionality. Custom interface development and add-ons are available to tailor Nagios XI to meet your organization's exact needs.

Performance monitoring

IBM will use existing DHS and DIS security standards, practices, and implementations for performance monitoring. IBM will use the Ganglia product for performance monitoring across the Power and x86 Cúram DHS and DIS landscape.

The combination of Ganglia integrated with Nagios provides a very flexible and powerful way to implement performance monitoring in a multi-platform, virtualized environment.

DHS and DIS, at a later date, can choose to augment the use of the Ganglia and Nagios combination with IBM PowerVP, a tool that provides real-time performance information, which identifies performance bottlenecks using a graphical display showing the performance health of virtualized workloads, mapping VMs to physical resources.

Another performance tool for Power Systems is the IBM Dynamic Platform Optimizer (DPO). DPO is a PowerVM virtualization feature that enables users to improve partition memory and processor placement (affinity) on Power Servers. Systems can become suboptimal in terms of processor and memory affinity when reassigning or moving resources.

DPO determines an optimal resource placement strategy for the server based on the partition configuration and hardware topology on the system. It then performs a sequence of memory and processor relocations to transform the existing server layout to the optimal layout. This process occurs dynamically, while the partitions are running.

On larger systems, resources relocation can improve the performance considerably depending on the configuration. DPO provides an affinity score to determine how optimal the system affinity is and what potential affinity can be achieved.

See Section 2.8.7 – Performance Monitoring and Management for a more detailed discussion.

[G8.32, G8.35, G8.38, G8.39, G8.40, G8.41]

Print prioritization and management

The Cúram solution landscape is transparent and agnostic relative to printing functions and management thereof.

IBM will use existing DHS and DIS practices and implementations for print prioritization and management.

The proposed IBM IE-BM solution can leverage print management capabilities from other vendors' products to enhance print prioritization and management.

As an example, the proposed IBM solution can work with the Ricoh InfoPrint Manager (IPM), which offers centralized control of the enterprise print and output environment.

IPM can manage multiple jobs for a single printer or a collection of print devices, even in remote locations.

The IPM offering has the following key highlights:

- Monitors and manages print jobs from a web- or Java-based GUI.
- Uses multi-vendor support: IPM uses the printer devices of all major print vendors.
- Provides multi-OS support: IPM supports AIX, Linux, Windows and MacOS operating systems.
- Transforms data streams in real time and increases your file input and output options.

- Improves device use by automating job flows and using load-balancing and job-scheduling capabilities.
- Provides enhanced security: IPM helps to prevent highly-sensitive print jobs from getting in the wrong hands. Authenticated users can retrieve print output anywhere onsite or at a remote location. The following list includes optional security features:
  - Pull print technology allows users to authenticate themselves when they submit a job and re-authenticate themselves when they arrive at a printer to pick up the job.
  - Follow me technology allows users to submit a job without targeting a specific printer and then locate the job at a later time by authenticating themselves on any supported printer in another location.

IPM also has the following additional enterprise features:

- Job, printer, and queue management.
- Validation of jobs prior to release.
- Job retention and reprinting.
- Printing of selected pages.
- Printing of multiple data streams including PCL6.
- Scalable, distributable output load balancing and control.
- Notifications and alerts.
- Archive solution support.
- Device status monitoring,
- Production, distribution, and POD output.
- Document delivery through email on Linux and AIX.
- Simple composition functionality without complex composition tools.
- Security.
- Mainframe integration.
- Job submission methods.
- Transformation.

Workload management

IBM will use the preferred DHS and DIS solution for workload management, CA's Workload Automation product (formerly known as AutoSys – see Technical Requirements Assumptions).

The IBM team is intimately familiar with the AutoSys solution, having used it in other Cúram implementations.

[G3.11]

2.8.2 Transaction Monitoring and Logging

Instructions: Describe any Transaction Monitoring and Logging capabilities of the Vendor's System. The Vendor's response, at a minimum, should take the following topics into consideration while providing the details:

- Fault Monitoring
- Performance Monitoring
- Configuration Monitoring
- Security Monitoring
- Management and Reporting
- Root Cause Analysis

The IBM Cúram environment allows for transaction monitoring and logging at all levels within the solution hierarchy, specifically the following levels:

- IBM Cúram Application.
- IBM WAS.
- IBM DB2 Database Server.

Various logs of different types from each of the sources listed above are used for avoiding or troubleshooting issues in the following:

- Fault monitoring.
- Performance monitoring.
- Configuration monitoring.
- Security monitoring.
- Management and reporting.
- Root cause analysis.

The various log files will be archived or purged automatically after an appropriate amount of time has elapsed to prevent uncontrolled growth of the log and historical records storage.

IBM will use the Splunk Enterprise tool, subject to DHS/DIS licensing restrictions (if any), to collect, analyze and issue alerts and relevant reports

In addition to the specific areas discussed below, the Cúram application creates batch processing logs and XML logs that may be used in understanding application behavior and in troubleshooting exercises.

[G8.4, G8.6, G8.33]

Fault monitoring

Fault monitoring in the Cúram Application

Logging for fault monitoring in the Cúram application is provided by the Cúram utility resources trace class that provides a convenient wrapper onto the Apache log4j API.

Logging allows developers to log any information without concerning themselves with whether the program is being run in online or batch mode. The destination of the trace information is highly configurable. It can be a log file associated with the application server, a stand-alone log file, a console, or a database.

The Cúram infrastructure supports a number of standard trace options that provide a convenient view on top of the trace levels. The following table includes the properties that might be set as described in Cúram Configuration Settings, and the level at which they are set at default (O is On, V is Verbose, U is Ultra):

Table 3: Diagnostic tracing options

Property name	Meaning	Enabled
curam.trace.servercalls	Trace server method invocations by remote clients. This information includes the name of the user who is requesting the invocation.	O
curam.trace.methods	Trace all business object method invocation.	V
curam.trace.method_args	Memory dump arguments, including their types, to business object method invocations.	U
curam.trace.sql	Trace SQL statements run by entity objects.	V
curam.trace.sql_args	Memory dump results of SQL select statements.	U
curam.trace.rules	Enables logging of rules	U
curam.trace.smtp	Trace the messages that are sent to the mail server.	

Fault monitoring in WebSphere

High Performance Extensible Logging (HPEL) is a log and trace facility that is provided as a part of WAS. HPEL provides a convenient mechanism for storing and accessing log, trace, System.err, and System.out information produced by the application server or your applications. HPEL has been designed and tested to significantly outperform the existing basic log and trace facility. One result is that the Application Server can run with trace enabled, while causing less impact to performance than tracing the same components using basic logging.

The HPEL log data repository is a storage facility for log records. Log data is typically intended to be reviewed by administrators. This includes any information applications or the server write to System.out, System.err, or java.util.logging at level detail or higher, including detail, config, info, audit, warning, severe, fatal, and any custom levels at level Detail or higher.

The HPEL trace data repository is a storage facility for trace records. Trace data is typically intended for use by application programmers or by the WAS support team. This includes any information applications or the server write to java.util.logging at levels below level detail including Fine, Finer, Finest, and any custom levels below level Detail.

Fault monitoring in DB2

On AIX and Linux, DB2 fault monitor facilities keep IBM DB2 server databases up and running by monitoring DB2 database manager instances and restarting any instance that exits prematurely.

The fault monitor coordinator (FMC) is the process of the fault monitor facility that is started at the UNIX boot sequence. The init daemon starts the FMC and will restart it if it terminates abnormally. The FMC starts one fault monitor for each DB2 instance. Each fault monitor runs as a daemon process and has the same user privileges as the DB2 instance.

Once a fault monitor is started, it will be monitored to validate it does not exit prematurely. If a fault monitor fails, it will be restarted by the FMC. Each fault monitor will, in turn, be responsible for monitoring one DB2 instance. If the DB2 instance exits prematurely, the fault monitor will restart it. The fault monitor will only become inactive if the db2stop command is issued. If a DB2 instance is shut down in any other way, the fault monitor will start it up again.

IBM DB2 produces a number of log files in day-to-day operations. DB2 produces the following primary logs:

- **Transaction log:** The file that records transactions with the database. The transaction log can be set up to be circular (overwrite previous log files) or archive (creates new log files without overwriting). DB2 also uses log control files to aid in recovery operations.
- **Administrative notification log:** A repository for information about numerous database administration and maintenance activities can be obtained. A database administrator can use this information to diagnose problems, tune the database, or monitor the database.
- **Diagnostics log:** This log is used to troubleshoot database issues. Primarily used by IBM Support.

Performance monitoring

IBM will use existing DHS and DIS standards, practices, and implementations for performance monitoring. IBM will use CA’s Application Performance Monitor product (formerly known as Wily Introscope) for performance monitoring across the Cúram application landscape.

Performance monitoring in Cúram

The Cúram application provides a way to collect performance statistics that imposes less processor usage than server tracing, so much so, that it is recommended to be implemented in scalability and performance testing and production environments.

The Cúram Java application framework includes the JMX, an open Java technology that supplies tools for managing and monitoring applications, system objects, devices like printers and service-oriented networks. Those resources are represented by objects called MBeans (for Managed Bean). In the JMX API, classes can be dynamically loaded and instantiated. The process also produces output in a format more amenable for automated processing as part of benchmark analysis efforts.

Furthermore, Nagios provides complete monitoring of JMX implementations, allowing monitoring of the Cúram application in near real-time from the enterprise console perspective.

The Cúram JMX Statistics capability includes the ability to do transaction tracing within the Cúram application, across the web, app, and database tiers. The use of transaction tracing is recommended to be used only when needed, as it may impact performance.

To avoid performance processor issues on the servers, output is written to separate log files, one per session bean (Cúram Facade) in the application. The statistics files are created in the directory that is specified by the curam.test.trace.statistics.location property if the curam.test.trace.statistics property is set. They are named

<MachineName>_<SessionBeanName>_0.<TimeStamp>. Each (tab-delimited) entry in the file contains the following format:

Table 4: Statistics file elements

Summary	Meaning
Timestamp	This time stamp is in a sortable format (ISO 8601 complete) and indicates the time at which the method was started. The International Standard for the representation of dates and times is ISO 8601. It displays the time stamp with the accuracy to seconds. The format of the time stamp is YYYYMMDDTHHMMSS.
Machine name	The name of the application server on which this function ran.
Session bean name	The name of the statistics class, Statistics, is always printed.
Process ID	Currently hardcoded to zero.
Server function signature	The function signature that includes class and method name, and method argument types.
Success indicator	A flag that indicates whether the server function succeeded with no errors returned to the client. A value of 1 indicates success. A value of 0 indicates failure.
Elapsed time in milliseconds	This number is the time (in milliseconds) that is spent running this function that excludes time that is spent by the middleware software in dispatching the function call and marshalling arguments.

[G8.32, G8.35, G8.41]

Performance monitoring in WebSphere

WAS provides a PMI that forms the core monitoring infrastructure for the WebSphere family of offerings. The performance data provided by WebSphere PMI helps to monitor and tune the application server performance.

PMI provides a widespread set of data that explains the runtime and application resource behavior. For example, PMI provides database connection pool size, servlet response time, Enterprise JavaBeans (EJB) method response time, JVM garbage collection time, and CPU usage. This data can be used to understand the runtime resource usage patterns of the thread pool, connection pool, and other resources, and the performance characteristics of the application components like servlets, JavaServer Pages (JSP), and EJB.

Using PMI data, the performance bottlenecks in the application server can be identified and fixed. PMI data can be monitored and analyzed by Tivoli Performance Viewer, State applications, or third-party tools, such as Nagios. Tivoli Performance Viewer is a graphical viewer for PMI data that ships with WAS. Performance advisors use PMI data to analyze the run-time state of the application server and provide tuning advice to optimize the application server resource utilization.

PMI data can also be used to monitor the health of the application server. Some of the health indicators are CPU usage, Servlet response time, and JDBC query time.

The Performance and Diagnostic Advisor provides advice to help tune systems for optimal performance and uses PMI data to provide recommendations for performance tuning. Running in the JVM of the application server, this advisor periodically checks for inefficient settings and issues recommendations as standard product warning messages to the administration console. Enabling the Performance and Diagnostic Advisor has minimal system performance impact.

[G8.41]

Performance monitoring in DB2

IBM DB2 provides a workload manager capability to help manage all aspects of the database performance. DB2 Workload Manager (WLM) introduces a significant evolution in the capabilities available to database administrators for controlling and monitoring executing work within DB2. This new WLM technology is directly incorporated into the DB2 engine infrastructure to allow handling higher volumes with minimal overhead. It is also enabled for tighter integration with external workload management products.

DB2 WLM is a powerful solution that addresses multiple issues in workload management. It allows the user to treat different workloads (applications, users, and so on) differently, and provide them with different execution environments in which to run. The quick, flexible, and robust methodology offered by WLM helps identify, manage, and control workloads to maximize database server throughput and resource usage from both a real-time and historical perspective.

DB2 WLM can be integrated with AIX WLM to provide even more capability to manage and control the workloads and resources on the database system. AIX WLM provides the capability of isolating applications, including DB2, with very different system behaviors. Based on the business objectives, AIX WLM can allocate CPU, physical memory, and I/O bandwidth to the classified applications.

The database system is usually considered to be the most important application running on the server. AIX WLM is an ideal solution for protecting database applications from being interfered with by the other applications running on the same server.

DB2 WLM also works with the DB2 Performance Expert (PE) function to monitor the database. DB2 PE uses the DB2 snapshot and event monitor capabilities to capture the performance data, and stores the data in DB2 tables on the PE server. You use the DB2 PE Client to view and work with the data.

DHS and DIS, at a later date, can consider the use of IBM InfoSphere Optim Performance Manager, which provides a web console that the State can use to isolate and analyse typical database performance problems. The State can view a summary of the health of databases and drill down for more details.

IBM InfoSphere Optim Performance Manager replaces the DB2 PE. Starting with IBM InfoSphere Optim Performance Manager Version 5.1, the DB2 PE Client component is deprecated. IBM InfoSphere Optim Performance Manager contains some of the same basic functionality provided by IBM Data Studio web console, plus more advanced monitoring functions.

The IBM InfoSphere Optim Performance Manager Extended Insight feature provides the capability to monitor the entire database application system from end-to-end.

[G8.41]

Configuration monitoring

Configuration monitoring in Cúram

A broad range of functions in the Cúram application can be administratively configured using the following application properties:

- Case audit selection queries.
- Communication templates.
- Batch processes.
- Security settings.
- Business intelligence reports.
- Target systems.
- Content management interoperability services.

These properties and settings are not monitored by the Cúram application, but changes to the properties and settings by system administrators are logged.

From the development and source code standpoint, IBM will use the DHS and DIS preferred subversion for version control.

For more advanced configuration management and monitoring across the hardware and software stacks, IBM assumes DHS and DIS employing one of the following service management products to assist in building and enforcing ITIL service configuration management leading practices:

- IBM Control Desk: https://www-01.ibm.com/software/applications/control-desk/.
- Saltstack: https://saltstack.com/configuration-automation/.

When DHS and DIS decides on a tool, they can consider integrating the same with Nagios for a complete enterprise monitoring solution.

[G8.36]

Configuration monitoring in WebSphere

WAS product configuration is managed through scripts, command line tools, the administrative console, or the Java programming interface. The State will be able to administer server processes, topological units referenced as nodes and cells, and the configuration repository, where configuration information is stored in Extensible Markup Language (XML) files.

Changes made to the configuration files are logged.

[G8.36]

Configuration monitoring in DB2

In DB2, a database configuration file resides on every database partition on which the database has been created.

The configuration file can be changed and monitored by the DB2 Data Studio Management application, which will record changes to the database configuration.

DB2 also has a Configuration Advisor to assist in setting up and maintaining a database configuration. It can be used to obtain recommendations for the initial values of the buffer pool size, database configuration parameters, database manager configuration parameters, and for on-going performance tuning activities.

[G8.36]

Security monitoring

Security monitoring in Cúram

The default security configuration of Cúram within WAS uses the default file-based user registry and a JAAS Login Module.

Cúram also supports use of other alternative security configurations such as an LDAP directory server or a SSO solution like CA IAM.

When trace options are turned on, Cúram provides assistance with security monitoring, online security process details that are captured and written to the server log file. Each log file message consists of the string SECURITY_DIAG followed by the below fields:

- operationName: The type of security check that has taken place.
- loggedInUser: The name of the logged in user.
- concernRoleID: The ID of the current concern role, if relevant.
- caseID: The ID of the current case, if relevant.
- locationID: The ID of the current location, if relevant.
- securityCheckType: The type of security check for a case that has taken place, if relevant. If applicable, a value of one, two, or three can be outputted:
  - One = Maintenance Security Check for a case.
  - Two = Approval Security Check for a case.
  - Three = Read Security Check for a case.
- locationAccessType: The location access type, if relevant. If applicable, a value of LA1 and LA2 can be outputted:
  - LA1 = Maintain.
  - LA2 = Read.
- caseSecurityCheckKey: A key that is used to identify records that have been added to the cache; can be used to add and retrieve records from the cache, if relevant.
- cacheDetails: A code depicting the current status of the cache.
- securityPermDetails: A code depicting the current security permissions.

Security monitoring in WebSphere

IBM WAS provides a security configuration report that gathers and displays the current security settings of the Application Server. Information is gathered about core security settings, administrative users and groups, CORBA naming roles, and cookie protection. When multiple security domains are configured, each security domain has its own report with a subset of the sections shown in the global security report that apply to the domain.

Security monitoring in DB2

Two modes of security control access to the DB2 database system data and functions. Access to the DB2 database system is managed by facilities that reside outside the DB2 database system (authentication), whereas access within the DB2 database system is managed by the database manager (authorization).

User authentication is completed by security facilities outside the DB2 database system, through an authentication security plug-in module. The authentication process produces a DB2 authorization ID. Group membership information for the user is also acquired during authentication.

After a user is authenticated, the database manager determines if that user is allowed to access DB2 data or resources. Authorization is the process, whereby the DB2 database manager obtains information about the authenticated user, indicating which database operations that user can perform and which data objects that user can access.

DB2 provides an audit facility to protect against and discover unknown or unacceptable behaviors from a security perspective. The monitoring of application and individual user access, including system administration actions, can provide a historical record of activity on the State's database systems.

The DB2 audit facility generates, and allows the State to maintain, an audit trail for a series of predefined database events. The records generated from this facility are kept in an audit log file. The analysis of these records can reveal usage patterns that would identify system misuse.

The audit facility provides the ability to audit at both the instance and the individual database level, independently recording all instance and database level activities with separate logs for each. There are different categories of audit records that will be generated. The following categories of events are available for auditing:

- Audit (AUDIT): Generates records when audit settings are changed or when the audit log is accessed.
- Authorization checking (CHECKING): Generates records during authorization checking of attempts to access or manipulate DB2 database objects or functions.
- Object maintenance (OBJMAINT): Generates records when creating or dropping data objects and when altering certain objects.
- Security maintenance (SECMAINT): Generates records in the following instances:
  - Granting or revoking object privileges or database authorities.
  - Granting or revoking security labels or exemptions.
  - Altering the group authorization, role authorization, or override or restrict attributes of an LBAC security policy.
  - Granting or revoking the SETSESSIONUSER privilege.
  - Modifying any of the SYSADM_GROUP, SYSCTRL_GROUP, SYSMAINT_GROUP, or SYSMON_GROUP configuration parameters.

- System administration (SYSADMIN): Generates records when operations requiring SYSADM, SYSMAINT, or SYSCTRL authority are performed.
- User validation (VALIDATE): Generates records when authenticating users or retrieving system security information.
- Operation context (CONTEXT): Generates records to show the operation context when a database operation is performed. This category allows for better interpretation of the audit log file.
- Execute (EXECUTE). Generates records during the execution of SQL statements.

For any of the categories listed previously, you can audit failures, successes, or both.

Archiving the audit log moves the active audit log to an archive directory, while the server begins writing to a new, active audit log. Later, you can extract data from the archived log into delimited files and then load data from these files into DB2 database tables for analysis.

Management and reporting

Management and reporting in the Cúram

In a systems context, in addition to the various logging capabilities discussed previously, the Cúram application provides an Administrative Workspace, where key operational aspects of the online and batch processes can be monitored.

Depending upon the log type, various log viewers and reporting tools can be used.

DHS and DIS can archive Cúram logs to provide historical perspectives.

For general management and reporting, the Nagios core and add-on products provide higher-level reports and dashboards based upon log information sent to it.

Management and reporting in WebSphere

WAS's Intelligent Management function provides a management dashboard, operational alerts, and broad reporting capability. With reports, the State can view the performance of your virtualized WAS environment and statistics on availability, response time, traffic, and throughput. The State can also view reports which display live data, or you can use charts displaying historic data logged over a period of days, weeks, months, or even years.

Management and reporting in DB2

All the management tools for DB2 described previously include technical and management reporting capabilities. Nagios can import and use management and monitoring data from DB2 to provide dashboard and reporting capabilities.

Root Cause Analysis

IBM has extensive experience in Root Cause Analysis (RCA) exercises given its worldwide experience in implementing Cúram and other Enterprise-level integrated systems (ERP, CRM, etc.).

IBM will use its documented RCA procedures when performing a Root Cause Analysis for a given issue involving the IE-BM solution. IBM's RCA procedure consists of 4 major sections:

- Investigate issue and plan for a situation analysis

- Analyze situation/issue root cause(s)
- Report conclusions and remedial actions
- Track remedial actions and make final report (stored)

Each one of the major tasks has 8-10 subtasks defined.

In addition to the management and monitoring tooling described above, IBM will also use the Splunk tool, described below, to assist in Root Cause Analysis efforts.

Splunk Overview

In addition to the individual platform/product logging and performance tooling mentioned previously in this section, IBM will initially use Splunk to collect and analyze log data from the server, storage and network infrastructure. IBM will use Splunk to accomplish event correlation to assist in problem determination and root cause analysis. Depending upon licensing structure, DHS/DIS can extend and enhance the Nagios/Splunk integration up the stack and across the IE-BM landscape as needed/desired.

Splunk Enterprise is a software product that enables organizations to search, analyze, and visualize the machine-generated data gathered from the websites, applications, sensors, devices, and so on, that comprise a given IT infrastructure.

Figure 26: Splunk Functional Schematic

Once relevant data sources are defined, Splunk Enterprise indexes the data stream and parses it into a series of individual events that can be viewed and searched for insights into operations. Splunk's search processing language or the interactive pivot capability can be used by DHS to create reports and visualizations.

The following table highlights seven key Splunk Enterprise features:

Table 5: Seven key Splunk Enterprise features

Feature	Description
Indexing	Splunk Enterprise indexes machine data. This includes data streaming from packaged and custom applications, application servers, web servers, databases, networks, virtual machines, telecoms equipment, operating systems, sensors, and so on, that make up your IT infrastructure.
Data model	A data model is a hierarchically-structured search-time mapping of semantic knowledge about one or more datasets. It encodes the domain knowledge necessary to build a variety of specialized searches of those datasets. These specialized searches are used by Splunk Enterprise to generate reports for Pivot users. Data model objects represent different datasets within the larger set of data indexed by Splunk Enterprise.
Pivot	Pivot refers to the table, chart, or data visualization you create using the Pivot Editor. The Pivot Editor lets users map attributes defined by data model objects to a table or chart data visualization without having to write the searches to generate them. Pivots can be saved as reports and added to dashboards.
Search	Search is the primary way users navigate data in Splunk Enterprise. You can write a search to retrieve events from an index, use statistical commands to calculate metrics and generate reports, search for specific conditions within a rolling time window, identify patterns in your data, predict future trends, and so on. Searches can be saved as reports and used to power dashboard panels.
Alerts	Alerts are triggered when conditions are met by search results for both historical and real-time searches. Alerts can be configured to trigger actions such as sending alert information to designated email addresses, post alert information to an RSS feed, and run a custom script, such as one that posts an alert event to syslog.
Reports	Reports are saved searches and pivots. You can run reports on an ad hoc basis, schedule them to run on a regular interval, and set a scheduled report to generate alerts when the result of a run meet particular conditions. You can add reports to dashboards as dashboard panels.
Dashboards	Dashboards are made up of panels/screens that contain modules such as search boxes, fields, charts, tables, forms, and so on. Dashboard panels are usually connected to saved searches or pivots. They can display the results of completed searches as well as data from real-time searches that run in the background.

Splunk Enterprise serves different types of users which DHS can provide where needed. There are five main personas that use Splunk:

Table 6: Five main personas that use Splunk

Persona	Role	Activities
Administrator	network engineer, system administrator	• Configures, administers, optimizes, and secures the Splunk Enterprise deployment. • Sets up user accounts and permissions. • Gets data into Splunk.
Knowledge Manager	data analyst, system administrator	• Oversees knowledge object creation, normalization, and usage across teams, departments, and deployments. • Gets the data into Splunk Enterprise, or works with the administrator to do so. • Creates and shares data models.
Search User	data analyst, IT professional, network engineer, security analyst, system administrator	• Uses Search to investigate server problems, understand configurations, monitor user activities, and troubleshoot escalated problems. • Builds reports and dashboards to monitor the health, performance, activity, and capacity of their IT infrastructure. • Identifies patterns and trends that are indicators of routine problems.
Pivot User	business professional, data analyst, executive, IT professional, manager, system administrator	• Uses Pivot to build reports based on data models created by the Knowledge Manager. • Creates reports and dashboards to monitor their businesses. • Identifies trends in the health and performance of their businesses.
Developer	system integrator, developer	• Integrates data and functionality of applications with Splunk. • Builds Splunk apps and add-ons with custom dashboards and data visualizations.

DHS can configure Splunk to collect the data from other machines, whether it is local (on-the-premises in a server room), remote (off-the-premises in a datacenter), entirely in the cloud, or a hybrid (such as on premise and in the cloud).

Users typically connect to Splunk Enterprise with a web browser and use Splunk Web to administer their deployment, manage and create knowledge objects, run searches, create pivots and reports, and so on. You can also use the command-line interface to administer your Splunk Enterprise deployment.

Splunk Enterprise supports a multi-user and distributed product architecture. This means that you can search and report on data spanning multiple Splunk Enterprise deployments within a single datacenter or globally across multiple datacenters and cloud infrastructures.

The following table describes Splunk's major components and functions.

Table 7: Splunk's major components and functions

Component	Description
Apps	Apps are a collection of configurations, knowledge objects, and customer designed views and dashboards that extend the Splunk Enterprise environment to fit the specific needs of organizational teams such as Unix or Windows system administrators, network security specialists, website managers, business analysts, and so on. A single Splunk Enterprise installation can run multiple apps simultaneously.
Forwarder	A forwarder is a Splunk Enterprise instance that forwards data to another Splunk Enterprise instance (an indexer or another forwarder) or to a third-party system. Most forwarders are lightweight instances, with minimal resource utilization, allowing them to reside easily on the machine generating the data.
Indexer	An indexer is the Splunk Enterprise instance that indexes data. It typically receives data from a group of forwarders. The indexer transforms the data into events and stores the events into an index. The indexer also searches the indexed data in response to search requests. In a distributed search deployment, you might have multiple indexers, also known as search peers. To provide high data availability and protect against data loss, or just to simplify the management of multiple indexers, you can deploy multiple indexers in indexer clusters.
Search head	In a distributed search deployment, the search head is the Splunk Enterprise instance that handles search management functions, directing search requests to a set of indexers and then merging the results back to the user. In a single-instance deployment, the one instance serves as both search head and indexer. To provide high availability and simplify horizontal scaling, you can deploy multiple search heads in search head clusters.

Splunk can be integrated by DHS into the security architecture as it supports:

- User and role-based access control
- Secure authentication and encryption (SSL and certificates)
- Auditing system activity
- Single Sign-on (SAML, proxy, reverse proxy)
- LDAP (Active Directory) integration with Splunk's built-in authentication functions.

Websphere Application Server also provides an automated collector tool to gather as much information about the Websphere Application Server installation and configuration as possible. The summary version of the output can be used as a report. The full version collects information in a JAR file to be sent to IBM support, if needed.

2.8.3 Data Archival

Instructions: Describe the processes used to retrieve data from operational databases, near online, and offline data archives.

The IE-BM solution will use the features of the IBM InfoSphere Optim Archive Open Data Manager (Optim) software to implement a strategic data archiving solution for the State of Arkansas. Optim will allow the State to extract sets of relational data from one or more databases and store the data for future use. The Optim software will allow the State to create and manage archives of relationally intact data from databases with any number of tables, interconnected with any number of DBMS. After creating an archive file, Optim selectively removes data from the production database to maximize database performance and response time. Archive files can be compressed to save disk space. An indexing feature will allow the State to quickly search archive files for needed information and, if necessary, restore either all data, or a precisely selected, referentially intact, portion of the data. The Optim security architecture will be used to define and implement the appropriate levels of access to archived data.

The IBM team will work with the State to identify the tables and relationships that define the set of referentially intact data to be archived, identify any data to be deleted from the production database after archiving, and identify indexing parameters to fully define archive actions. Based on history requirements, the data can be auto-purged at regular intervals to manage disk space and prevent uncontrolled growth of archive files. This will allow the State to purge data as necessary, while gaining the ability to read archived data in an ad-hoc manner for offline access or fully restore it to production databases or temporary staging databases for near online access.

[T5.1.24, G8.1, G8.2, G8.3, G8.4, G8.21, G8.22]

2.8.4 Data Backup

Instructions: Describe the Vendor's approach to support Data Backup including, but not limited to:

- Database and application backup procedures must be updated to include backups for the System
- Full online data backups must occur, as well as offline backups using tape storage

IBM will use existing DHS and DIS data backup environment, practices, and implementations to backup and preserve the data in the solution. IBM will review and update backup procedures as necessary.

IBM understands that DHS and DIS uses IBM Tivoli Storage Manager (TSM) software, now re-branded as IBM Spectrum Protect, an IBM 3584 Tape Library, and an HPE StoreOnce VTL as key components in the backup environment. In general, Spectrum Protect supports the use of both the HPE StoreOnce VTL and tape as backup targets.

Spectrum Protect will perform full online backups to VTL and offline backups to tape. Both database and file system (application) data will be backed up, according to extant DHS and DIS policies.

The IBM Spectrum Protect family of products offers a wide variety of capabilities across the data protection, daily operations, and DR environments. The Spectrum Protect Operations Center provides a single point of administration for the backup environment.

[G3.7, G8.20]

2.8.5 Disaster Recovery

Instructions: Describe the Vendor's approach to reestablishing operations in the event of a catastrophe, as well as its envisioned approach to developing a disaster recovery plan for DHS. Include the required components, configurations and procedures to enable a recovery.

IBM will use existing DHS and DIS metrics, standards, practices, and implementations for performing DR.

IBM understands that current DR services are supplied by DIS to DHS. IBM will use those existing DR capabilities and services.

IBM's approach towards DR planning is based on the NIST 800-34 Contingency Planning Guide for Federal Systems. As per this guidance, IBM team will go through the following steps for planning, with full participation and leadership from DHS:

- **Business Impact Analysis (BIA):** Analysis performed to identify relevant aspects of the solution which must be recoverable after a disaster declaration. This includes the establishment of RTOs and RPOs and provides for technology, facilities, and personnel considerations.
- **Technical solution development:** Based upon the BIA and other, usually budgetary, considerations, a technical solution (DR architecture) is developed to meet the RTO and RPO metrics.
- **Solution implementation:** Implementation of the DR architecture in a phased manner.
- **Training, Testing and Exercises (TT&E):** Training of personnel to respond to contingency situations. Periodic testing of the DR solution, and personnel's capability to use the solution, through periodic simulation exercises.

Re-establishing operations after a catastrophe is highly dependent on the nature of the catastrophe and the design of the DR environment. At a very high level, three minimum principles theoretically apply:

- **Data replication:** An available copy of the databases and filesystems from which to restore (including OS and application images).
- **Infrastructure:** Physical infrastructure to run the system and solution similar to the normal production environment.
- **Documented procedures:** Documented guidelines for bringing up the DR environment. These guidelines may be expressed in automation software, in a runbook or both.

IBM will work with DHS and DIS to maintain the current DR architecture and infrastructure pursuant to the guidelines presented above.

See Section 2.3.2 - Leveraging virtualization to expedite disaster recovery for some possible options for DHS to consider, at a later date to improve and automate DR operations.

[G3.8, G8.20]

2.8.6 Technical Documentation

Instructions: Describe the technical documentation that comes delivered with the Vendor's Solution.

Product documentation

A solution delivered by IBM comes with its own online technical product documentation in addition to the Project documentation to enable subsequent teams to continue with further design, development, implementation, maintenance, and operations activities.

Examples of online product documentation can be found at the following sites:

- IBM main documentation site: https://www.ibm.com/support/knowledgecenter.
- IBM Cúram Documentation Site: https://www.ibm.com/support/knowledgecenter/SS8S5A_7.0.0/com.ibm.curam.nav.doc/spm_700_welcome.html.
- CA Main Documentation Site: https://docops.ca.com/home.

In most cases, pdf versions of the documentation are available.

Project documentation

The IE-BM solution will be accompanied by the following project technical documents.

Architecture model

Implementation of the IBM proposed solution starts with an architectural model. The purpose of this document is to present the design for the solution architecture to be implemented in the current release(s).

The document will contain the following content:

- A specification level operational model presenting a specification of the functional and non-functional characteristics for all elements within this release of the target IT system:
  - The placement of specified components onto specified nodes.
  - The specified connections between specified nodes necessary to support the interactions between these specified components.
  - The non-functional characteristics of specified nodes and specified connections, acquired from the placed specified components and their interactions.
- A physical level operational model and supporting component model, documenting the overall configuration of the technologies and products necessary to deliver the functional and non-functional requirements of the IT system specified in the specification level. It provides a fully detailed, sized configuration, suitable for use as a blueprint for the acquisition, installation, and subsequent maintenance of the solution, and details:
  - Hardware and software technology and product selection, for computers and networks.
  - Hardware specifications, such as processor speed and disk configuration, or network bandwidth and latency.
  - Overall hardware configurations, such as fail-over or scalable arrangements.
  - Software product specifications (such as version) and detailed configuration, such as the need for multiple instances of a software product on a computer.

The business model

The business model documents the business environment relevant to the solution.

The purpose of the document is to provide the sufficient documentation of the business domains and their functions and processes relevant to the solution that is needed to support the determination of solution requirements. This includes business processes and rules that will be automated by the solution.

The document will include the following details relevant to this solution:

- Documentation of the existing operational business processes.
- Documentation of the applicable business rules that would need to be incorporated into the release.

Use case model

The purpose of this document is to document the finalized requirements relative to the scope of a specific release and to the extent necessary for the design of the solution's application model and architecture model.

The document will contain the following content:

- Solution scope.
- Functional requirements.
- Non-Functional requirements.
- Requirements validation approach and results.

The content in this document forms the baseline for the development of the application model, architecture model, release design specifications, and the solution plan deliverables.

The intent of this deliverable is to provide the requirements in sufficient detail to finalize the release design and identify the criteria needed for customer acceptance of the solution.

Data model

This document will include the following details relevant to the specific intended release of the solution:

- Component design models) showing the class structure, dependencies, and collaborations for the components comprising the solution.
- Guidelines used in the development of the application structures.
- Physical database design depicting the persistent data storage structures to be used in the solution.
- Data migration specifications showing how data will be loaded and extracted from the database.

Solution plan

The purpose of this document is to document the scope, approach, and expectations for the release phases of the IE-BM solution.

This will contain the following content:

- Release plan: Confirms the functionality intended for the current release.
- Deployment plan: Confirms the intended scope and approach for deployment of the current release.
- Operations and support plan: Confirms the organizations responsible for operations, training, and other support responsibilities of the deployed solution.

- Quality plan: Confirms the relative priorities of various attributes of quality that the project team will focus on.
- Test strategy and plan: Identifies the testing objectives and high-level approach to follow.
- Communication plan: Describes the approach to managing stakeholder communications.
- Data migration and conversion: Identifies data sources and specific conversion processes that the release is dependent upon.

Release candidate

The purpose of this document is to provide the technical artifacts that are needed to replicate the solution into the various testing and production environments.

2.8.7 Performance Monitoring and Management

The Vendor will be responsible for establishing the capabilities to monitor the performance of the system. DHS currently uses Wiley for Applications monitoring and Nagios and Ganglia for infrastructure monitoring and has a preference for leveraging these tools in the IE-BM Solution.

Instructions: Describe the Vendor's methodology for monitoring and reporting System performance, as well as the Vendor's approach to technology management. This includes the methods for centrally managing System resources such as servers, backup, archiving, and recovery equipment, databases and applications. Address methods for auditing, tracing and scanning the System. Provide details on the use of specialized tools the Vendor will use to automate and track monitoring and management activities.

The Vendor's response, at a minimum, should take the following topics into consideration while providing the details:

- System and Platform activities, components and configurations monitored and logged
- Monitoring metrics provided as reports, dashboards and alerts
- Catering for a variety of Performance Monitoring stakeholder roles

The response should also include a discussion of the tools proposed, how they will integrate into the Vendor's approach to technology management and the appropriate justification if the Vendor is proposing tools other than DHS' preferred tools.

IBM will use the existing preferred DHS and DIS tooling for performance monitoring and management, specifically CA Application Performance Management (formerly known as Wily Introscope), Nagios and Ganglia.

IBM's approach to monitoring and management comprises two levels, addressing major system components. The two levels may be thought of as general (overall system) and specific (individual platforms).

The higher level, or system approach, monitors the major system components from more of a macro standpoint, using summary metrics to develop an overall system health dashboard and reports.

The lower level, or platform approach, monitors each major system component in more detail and reports on each component in isolation.

Similar to the approached discussed in Section 2.8.2 - Transaction Monitoring and Logging, IBM will monitor the system across the hardware infrastructure, the middleware infrastructure and the application environment. IBM will use existing DHS and DIS standards, practices, and implementations for performance monitoring.

The combination of Ganglia integrated with Nagios provides a very flexible and powerful way to implement performance monitoring in a multi-platform, virtualized environment.

[G8.38, G8.39, G8.40, G8.41, T7.7]

System monitoring

System monitoring: Power platforms

Ganglia's historical development as a monitoring tool for high-performance computing clusters makes it ideal for monitoring collections of VMs in both the Power and x86 environments.

Ganglia uses three logical groupings to organize the monitored environment:

- Node: An individual machine or OS instance (VM).
- Cluster: A group of nodes.
- Grid: A group of clusters.

In the virtualized environment, the three organization levels will map to the following areas:

- Nodes: LPARs or VMs.
- Cluster: A virtualized physical machine.
- Grid: A group of physical machines.

The following figures show dashboards and drill-downs for the monitoring of a set of Power LPARs:

Figure 27: Sample Ganglia dashboard - Grid and cluster graphs

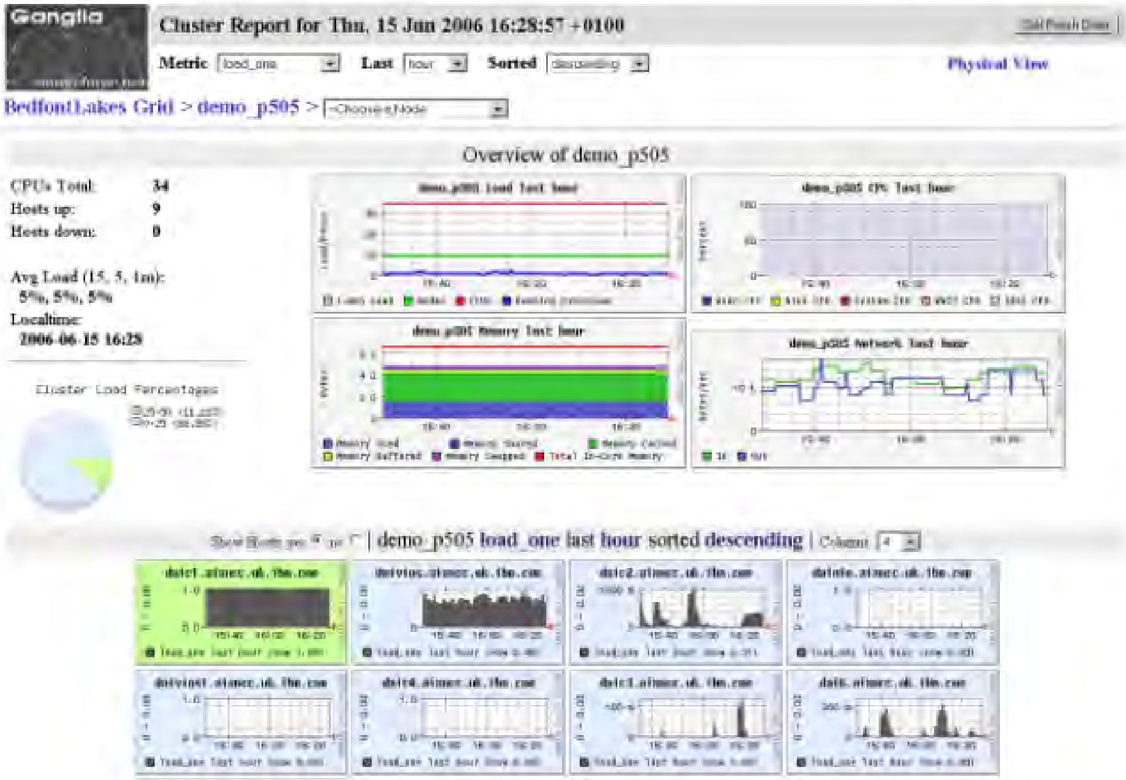


Figure 28: Sample Ganglia dashboard - Cluster and nodes graphs

The following figure shows some of the metrics which are monitored and viewable:

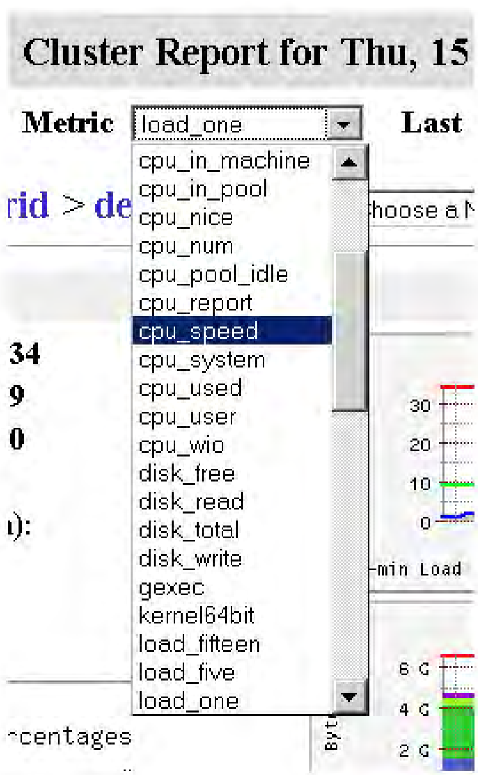


Figure 29: Node metrics capable of being monitored by Ganglia

The following figure shows the viewable timeframes displayable by Ganglia monitoring:

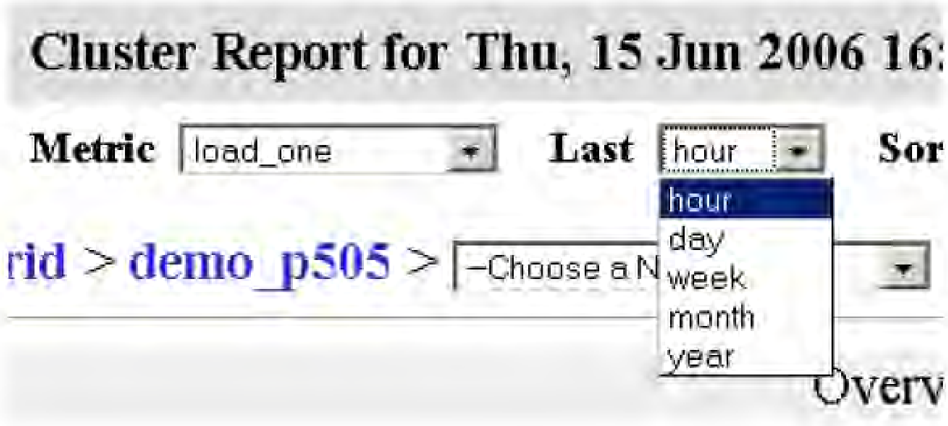


Figure 30: Timeframes displayable by Ganglia

Ganglia also features an extensive list of plug-ins to enhance its functionality. The following figure is an example of a calendar extension that provides more flexibility and granularity in viewing performance data:

Figure 31: Ganglia calendar plug-in for enhanced capability

The following two tables list the basic and advanced metrics collectable by Ganglia:

Table 8: Basic metrics collected by Ganglia

Metric name	Description
boottime	System boot timestamp
bytes_in	Number of bytes in per second
bytes_out	Number of bytes out per second
cpu_aidle	Percent of time since boot idle CPU
cpu_idle	Percent CPU idle
cpu_nice	Percent CPU nice

Metric name	Description
cpu_num	Number of CPUs
cpu_speed	Speed in MHz of CPU
cpu_system	Percent CPU system
cpu_user	Percent CPU user
disk_free	Total free disk space
disk_total	Total available disk space
load_fifteen	Fifteen-minute load average
load_five	Five-minute load average
load_one	One minute load average
location	GPS coordinates for host
machine_type	CPU Architecture type
mem_buffers	Amount of buffered memory
mem_cached	Amount of cached memory
mem_free	Amount of available memory
mem_shared	Amount of shared memory
mem_total	Amount of available memory
mtu	Network maximum transmission unit
os_name	Operating system name
os_release	Operating system release (version)
part_max_used	Maximum percent used for all partitions
pkts_in	Packets in per second
pkts_out	Packets out per second
proc_run	Total number of running processes
proc_total	Total number of processes
swap_free	Amount of available swap memory
swap_total	Total amount of swap memory
sys_clock	Current time on host

Table 9: Additional metrics collected by Ganglia

Metric name	Description
capped	Boolean 0=false (is not capped SPLPAR), 1 = true (is capped SPLPAR)

Metric name	Description
cpu_entitlement	CPU entitlement of the LPAR (OS instance) in physical units
cpu_in_lpar	The number of pCPUs or vCPUs (for SPLPARs)
cpu_in_machine	The number of physical CPUs (cores)
cpu_in_pool	The number of pCPUs in a shared pool
cpu_pool_idle	The fractional number of pCPUs not being used in the shared pool
cpu_used	The fractional number of pCPUs used in the shared pool
disk_read	KBytes read by whole system
disk_write	KBytes written by whole system
kernel64bit	Boolean 0=false, 1 = true
lpar	Boolean 0=false (is not LPAR), 1 = true (is LPAR)
lpar_name	The LPAR name as defined on the HMC
lpar_num	The partition ID of the LPAR as defined on the HMC
oslevel	The OS version and release
serial_num	Serial number of the machine
smt	Boolean 0=false, 1 = true - Simultaneous Multi-Threading
splpar	Boolean 0=false, 1 = true - Shared Processor Logical Partition
weight	The weight (number value) of the LPAR running in uncapped mode

All the data generated monitoring metrics using Ganglia can be used to set alerts in Nagios. Integration is accomplished by the Ganglia plug-in for Nagios.

System monitoring: x86 platforms

Similar functionality as described previously for Power machines is available for x86 machines. Nagios, through the use of plug-ins, provides the capabilities to monitor an assortment of metrics on the various VMware platforms including VMware Workstation, ESX Hosts, vSphere, or vCenter Servers. At a high-level, Nagios can monitor the following metrics (and more) on VMware servers:

- CPU usage.
- Memory.
- Networking.
- Input and output.
- Datastore usage.
- VM status.
- Services.

System monitoring: Network infrastructure

Using plug-ins and or add-ons, Nagios can monitor network devices such as routers and switches using SNMP, sFlow or NetFlow technologies, in the same manner Ganglia monitors servers and issues alerts based on the metrics collected.

IBM will work with DHS and DIS to enhance the monitoring of the middleware infrastructure as appropriate.

[G8.24]

System monitoring: Web, Application, and Database Servers

Using plug-ins or add-ons, Nagios can monitor Web, Application, and Database Servers and issue alerts based on the metrics collected. Such monitoring will be done at a high-level and will serve as an “early warning system” to alert platform and system administrators that more in depth monitoring and management, using platform-specific tooling, may be needed to avoid performance issues and/or prevent outages.

[G8.24]

Web and Application Server performance tooling

As discussed in Section 2.8.1, Solution Administration, both IBM HTTP Server and IBM WebSphere ND provide platform-specific tools for auditing, tracing, and managing the respective platform. These tools will be used if an issue is identified by the Nagios monitoring infrastructure.

To monitor synthetic transactions (those with external web interfaces, like the citizen portal), IBM will use the DHS/DIS preferred tool Selenium integrated with Splunk. This integration is accomplished via a Splunk Add-On that uses the Selenium web testing/simulation tool output to provide input to Splunk which can then predict external user experiences with the application.

Selenium has an IDE (installed as a Firefox add-on) that will be used to record simulated user interactions and generate the corresponding script in various languages such as Java, Ruby, C# or Python. This abstracts the complexity of writing test scripts from scratch turning the experience into a “record-replay” one.

The test scripts are then exported in Python and imported into Splunk. Splunk can then measure various metrics and create visualizations of performance.

The Splunk Add-On invokes the Selenium scripts and calculates metrics like transaction response time, network latency, the browser used in the emulation, the location, etc. It leverages the Splunk Universal Forwarder and Splunk Deployment manager to run scripts from various locations (where the universal forwarders are located) to generate metrics.

The following are a subset of the information that can be captured and analyzed in this manner across geography, application and network realms:

- Errors
- SLAs
- Availability
- Performance
- Network Latency

- Network packet loss
- Transaction Response Time
- Transaction Error Count

[G8.29]

Database performance tooling

As discussed in Section 2.8.1, Solution Administration, the IBM DB2 database provides platform-specific tools for auditing, tracing, and managing the respective platform. These tools will be used if an issue is identified by the Nagios monitoring infrastructure.

Nagios monitoring and management overview

The Nagios core software provides the following capabilities:

- **Monitor:** Nagios will monitor critical IT infrastructure components, including system metrics, network protocols, applications, services, servers, and network infrastructure.
- **Alert:** Nagios will send alerts when critical infrastructure components fail and recover, providing administrators with notice of important events. Alerts can be delivered through email, SMS, or custom scripts.
- **Respond:** IT staff will acknowledge alerts and begin resolving outages and investigating security alerts immediately. Alerts will be escalated to different groups if responses to alerts are not acknowledged in a timely manner.
- **Report:** Standard and custom reports provide a historical record of outages, events, notifications, and alert response for later review. Availability reports help verify SLAs and SLRs are being met.
- **Plan:** Trending and capacity planning graphs and reports allow identification of necessary infrastructure upgrades before failures occur.
- **Maintain:** Scheduled downtime prevents alerts during scheduled maintenance and upgrade windows.

The Nagios core product can be enhanced with a variety of web and mobile front-ends to provide management dashboards. Nagios dashboards and reports can be customized for a variety of stakeholder roles.

IBM will work with DHS and DIS to enhance the monitoring and reporting capabilities of Nagios as appropriate.

[G8.24, G8.26, G8.28]

Nagios and Splunk Integration

IBM will integrate Splunk Nagios via an Add-On app which leverages inputs from the Splunk Supported "Splunk Add-on for Nagios Core" and it has been tested successfully with Nagios XI and Nagios Core 4.x.

Features of the app include:

- Schedule Saved Searches in Splunk to send alerts to Nagios
- Status Dashboard for recent Alerts and Notifications

- Overview Dashboard featuring Alerts & Notifications over time
- Recurring Alerts dashboard
- Calendar Heatmap dashboard (D3)
- Network Map (D3)
- Host Availability Dashboard & Top 100 Alerts
- Host Dashboards with Graphs of metal level metrics (CPU, Memory, Swap, Load, Disk Usage, Network Interface Utilization, Processes, etc.) sourced from Nagios Plugin Performance Data
- Integration with MK Livestatus - feat. various dashboards updated with live status data from Nagios
- Acknowledge Host & Service Alerts and Schedule Host & Service Downtime in Nagios directly from Splunk (via MK Livestatus)
- CMDB report

2.8.8 Performance Metrics

Instructions: Describe the Vendor's approach to capture and monitor performance metrics and take appropriate action to improve performance. The Vendor's response, at a minimum, should take the following topics into consideration while providing the details:

- Approach to capturing system performance metrics and take timely action
- Approach to logging System transactions.
- Approach to detecting performance issues as well as any major errors related to one or more components
- Approach to monitoring critical performance parameters such as response time, resource availability, CPU Utilization, etc.
- Approach to Role Based Access
- Approach to providing useful information and both real-time and snapshot views.

DHS has not yet identified a preference for a performance management toolset. The Vendor should propose one or more monitoring tool(s) to proactively monitor the performance of key infrastructure components of the proposed System as well as the overall end user experience.

As discussed in Section 2.8.7 – Performance Monitoring and Management, many performance metrics across the infrastructure, middleware, and application structures can be monitored and data collected for management and reporting purposes.

The challenge, in such a complex, multi-tier environment as the IE-BM environment, is to capture the most relevant data points to be responsive to issues but not be overwhelmed by too much data.

At a high-level, the IBM approach is to collect the minimum necessary metrics from the application, middleware, and infrastructure realms and distill them into a summary set of metrics that must be monitored system-wide to verify basic overall system performance.

By capturing relevant system performance metrics from the infrastructure, middleware, and application framework, and processing them against meaningful parameters, proactive alerts can be issued such that systems administrators across the solution spectrum can be notified in a timely manner and take corrective action prior to an issue escalating into a problem or outage.

See Section 2.8.2 – Transaction Monitoring and Logging for a discussion of IBM's approach to logging system transactions across the various IE-BM solution environments.

Nagios supports role-based access through plug-ins for LDAP authentication, which provides Role-based Access Control capabilities for system administration personnel.

As noted previously, IBM will develop the minimum necessary metrics to provide an efficient and effective monitoring infrastructure. The same approach will be taken to provide useful information in both real-time and snapshot views. Different Nagios users with different access controls will be able to see and use relevant information in real-time snapshots and historical views depending upon their role.

3.0 DHS IE-BM Solution Alignment

Instructions: The DHS IE-BM Solution preferred approach is to use multiple COTS applications and infrastructure technologies. DHS has defined a series of mandatory and preferred technology components and services, and it would like to leverage these investments (to the extent the Vendor's proposed design allows for it) as the foundation of the technology approach and architecture for the DHS Integrated Eligibility and Benefits Management (IE-BM) Platform.

DHS preferences and investments in the existing technology components has been captured in Template T-8 – Technical Requirements Traceability Matrix, Tab T0 – Technology Solution Stack.

In this section, describe the Vendor's proposed Solution's architecture and its alignment to DHS Enterprise Standards and preferences, while providing the details of how it will meet or exceed the Components and Software Products Technology Requirements set forth in Template T-8 – Technical Requirements Traceability Matrix, Tab T0, with respect to key software technology components.

If the Vendor is proposing to use alternative technologies (in variance with DHS preferences), for any of the technology components listed in Template T-8 – Technical Requirements Traceability Matrix, Tab T0 – Technology Solution tab (except those components which are marked mandatory), the Vendor should provide the rationale and detailed justification for using the alternative technology component as part of their Solution design as well as justification of how the proposed alternative would serve to be a better fit than what was stated as a DHS preference. This only applies to Technology products that DHS has stated their preference and are not mandatory.

The following definitions apply in specifying DHS preferences for each of the Technology Products:

- **Mandatory** – This is a DHS mandated technology product. This product has been deployed at the Enterprise level as part of other implementations. This technology product **must** be built into the proposed solution architecture.
- **Preferred** – DHS has made significant investments in this technology product. This product has been deployed as part of one or more Systems. This technology product

is preferred to be built into the proposed solution architecture, unless the Vendor can justify a more suitable alternative product providing detailed justification. ■ **No Preference** – DHS has zero or minimal investments in this technology product. Vendor can either leverage the existing investment (If any) or must propose an alternate technology product that fits the overall solution architecture.
Instructions: The Vendor should provide the complete list of their technology component stack that will be used to design and develop the IE-BM solution across each of the architecture domains as required in Template T-8 – Technical Requirements Traceability Matrix, Tab T0.

3.1 Presentation Layer

3.1.1 Portal

The Vendor should ensure that the responses to this section are in alignment with the requirements set forth in Template T-8 – Technical Requirements Traceability Matrix, Tab T1.1.

Instructions: Describe the Vendor's approach to using Portal technologies to enable access for the variety of internal and external end users of the System. The Vendor's response, at a minimum, should take the following topics into consideration while providing the details: ■ Multiple channel support ■ Single Sign-on to all required resources ■ Search capabilities ■ Accessibility considerations ■ Personalization ■ Usability best practices and Federal guidance For portal technologies, DHS currently uses Cúram Citizen Portal (part of Cúram SPMP) for the current EEF MAGI Medicaid deployment. DHS "does not have a preference" for this technical component; Vendors are encouraged to consider leveraging the investment made in proposing the best value solutions, focused on total cost of ownership and timeliness of the implementation. The vendor may propose a suitable technology with a compelling justification if it deems the alternative to be the best value approach to addressing DHS' needs and requirements, with the lowest total cost of ownership and is suitable within the overall solution architecture being requested. If the Vendor is proposing to leverage the existing investments in Portal technologies currently deployed as part of the EEF Project implementation (only for MAGI Medicaid), the Vendor should describe in detail how they intend to seamlessly integrate the current investments into the Vendor's proposed solution. However, if the Vendor is proposing to use alternative products, they should provide appropriate rationale and justification for the proposed technology component and approach.

To support the portal as described by the Technical Requirements in Template T8 Section T1.1, the IBM team plans to develop a custom portal using the Drupal open source Content Management System software. Drupal is a flexible and highly scalable content management system, which can be used to manage and publish content in multiple languages across multiple channels.

The content of a Drupal-based website is managed by one or more users who have been granted permission to post, edit, or delete content from the site. Drupal is a component based architecture that includes many optional modules, and the following modules can be used to satisfy corresponding requirements:

Table 10: Drupal modules

Personalization module	Provides a suite of extendable plug-ins and APIs for personalizing Drupal content.
Blog module	Allows authorized users to maintain a blog.
Node Expire	Allows site administrators to set a "timer" into content nodes. When it reaches zero, you can perform any type of action with the node, such as un-publishing it or sending an email to the author warning of expiration.
Wiki Tools	Allows site administrator to create, read, and modify Wiki pages.
Webform module	Allows site administrator to create custom forms with skip logic, allowing creation of surveys.
Drupal Chat module	Allows visitors to receive online support through chat and instant messaging.
MetaTag module	Allows visitors to receive online support through chat and instant messaging.
Taxonomy	Allows an administrator to automatically provide structured metadata, aka “meta tags”, about a website. The module provides support for meta tags (Open Graph Protocol from Facebook, Twitter Cards from Twitter) that allow control of how content appears when shared on social networks.
Web Service Client	Allows an administrator to connect, relate, and classify website content by category, tag, or metadata.
Search module	Provides an interface to consume external Web Services.
Google Analytics module	Allows users to search for specific content on your site. Drupal's search allows the user to create a very powerful search by adding a few key words or symbols and search, or search, “any of these words,” or phrase search.

The core Drupal functionality allows content to be published as an RSS feed, and the Aggregator core module can gather, read, and display news, text, images, and other content from external news sites and blogs. Portlet-like capabilities can be accomplished through blocks and regions in Drupal and PHP. Drupal recommends XHTML when creating new sites.

The IBM team plans to use the current investment in the Cúram Citizen Portal, taking advantage of the wide range of functionality including needs-based triage, multi-program screening, multi-program application, and referrals. These functionalities will be required when expanding the current functionality to allow citizens to screen or apply for SNAP and TEA benefits. We will integrate the Cúram Citizen Portal with the new Drupal portal through SSO technology for a seamless user experience (SAML 2.0).

[T1.1.1, T1.1.3, T1.1.4, T1.1.5, T1.1.6, T1.1.7, T1.1.8, T1.1.9, T1.1.10, T1.1.11, T1.1.12, T1.1.14, T1.1.15, T1.1.16, T1.1.17, T1.1.18, T1.1.19, T1.1.20, T1.1.21, T1.1.22]

The following screenshots provide an idea of our vision for the content the State wishes to publish and make available to clients and case workers on the portal:

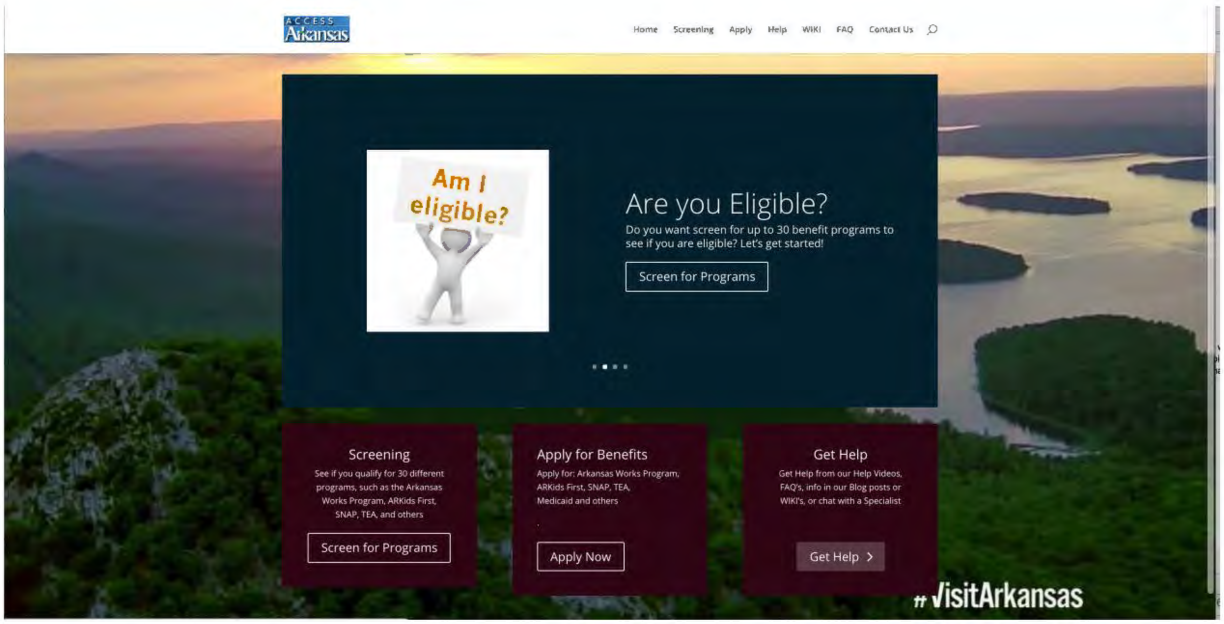


Figure 32: Sample page for a Drupal based Client Portal

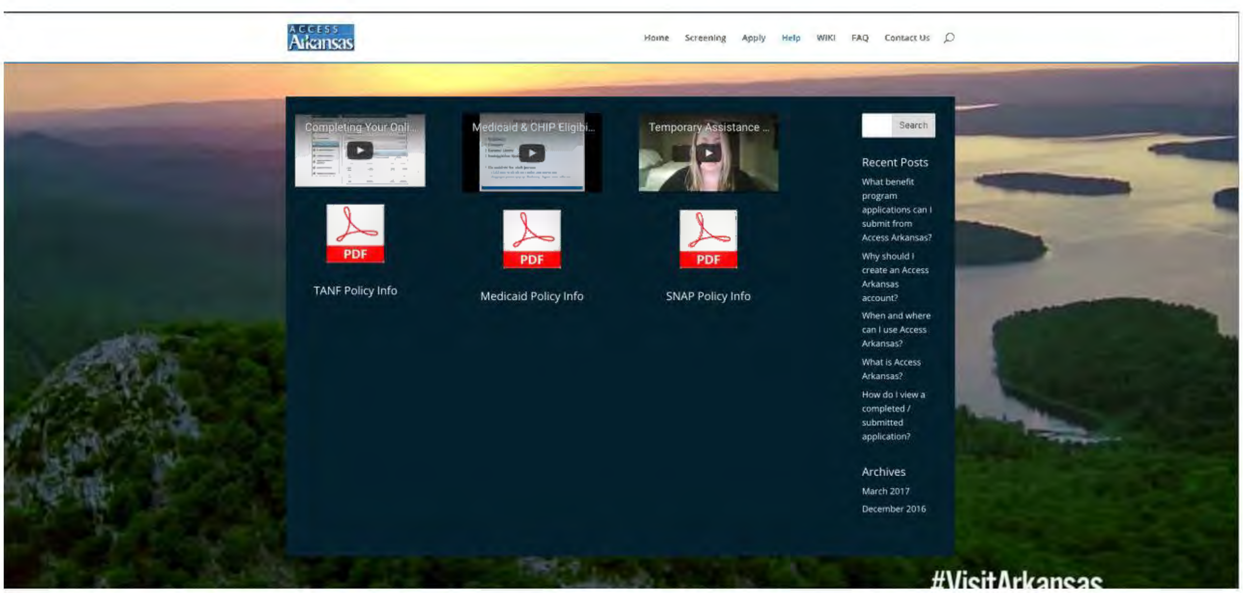


Figure 33: Help page showing video content, PDF, recent posts from blog and search capabilities

Multiple-channel support

Drupal allows an organization to easily publish, manage, and organize a wide variety of content on a website, including multi-media content. It is designed to separate content from presentation, and allow for easy modification of the layout of pages. Drupal websites are constructed from templates, and many responsive templates are readily available to allow the State to create a responsive website that is viewable on mobile phones, tablets, and desktops.

SSO to all required resources

The IBM team will integrate the Cúram Citizen Portal with the new Drupal portal through SSO technology for a seamless user experience (SAML 2.0) using the State's existing investment in Computer Associates Siteminder SSO technology.

[T1.1.2]

Search capabilities

The Drupal Search module allows users to search for specific content on the site. Users can search for particular words in the default rendering of node content on the State's site. Users can also perform "AND" searches to match a set of keywords, "OR" searches to many any of the words in a set of keywords, use the minus "-" sign for exclusionary searches, or use the "Advanced Search" option to look for "any of these words" or "this phrase," or both.

Drupal's search engine indexes the text content of the nodes (content) on the site at regular intervals, scheduled by the site administrator. Content-related actions on the State's site (creating, editing, or deleting content and comments) automatically cause affected content items to be marked for indexing or re-indexing at the next run.

Accessibility considerations

The Drupal Accessibility module can be exploited to verify that the site's design, interface, and content are available to all users on the internet, regardless of their abilities or the assistive technologies they use. The module checks all fields where users can enter formatting, such as the body field of an article. The site administrator can give users the option to turn these tests on or off using a tab that appears on the bottom of the page. These tests can be integrated the content editors, giving content authors a new button when editing content that checks their work for accessibility problems.

Personalization

Drupal includes a Personalization module, which provides a suite of extendable plug-ins and APIs for personalizing Drupal content. Two guiding principles of this module are that it should be just as easy to personalize content for anonymous users as it is for authenticated users and that personalization should continue to work even when pages are fully cached.

Usability leading practices and Federal guidance

To enhance usability and meet Federal guidance such as Section 508 or WCAG compliance, the IBM team recommends the use of a professionally designed Drupal theme, many of which are readily available on the internet. Drupal themes start from an existing HTML framework and allow users to make changes as needed by overriding and changing just the necessary templates. Themes are comprised of HTML, CSS, JavaScript, and other front-end assets to define the layout and flow of a website and can be customized at any level to meet the State's requirements for usability. The Drupal.org website contains a usability section for additional guidance on usability testing when customizing your theme.

3.2 Business Component Layer

3.2.1 CRM/Case Management Solution

The Vendor should ensure that the responses to this section address the requirements set forth in Template T-6 – Functional Requirements Traceability Matrix.

Instructions: Describe the Vendor's approach to leveraging Case Management technologies that will enable and support DHS strategic objectives and seamlessly integrate with the DHS IE-BM Solution. At a minimum, DHS expects that the Case Management Solution component shall provide the following capabilities –

- More modern, user-friendly user interface with easy access to required data to aid in decision support
- Shared capabilities for tracking life of the case of a customer
- Improved search capabilities
- Enhanced scheduling and alert functionality
- Improved employee efficiency through an improved process flow
- Improved processes, data, and collaboration in support of case work
- Ability to perform investigations, service requests, handling incidents, and taking streamlining processes to support decision across the life of the case
- Provide a holistic view into all data, files, tasks, actions, collaborations regarding a case

For Case Management technologies, the current EEF deployment uses Cúram Rules Engine (CER). However, DHS has "No Preference" to leverage this technology product as part of the solution design.

If the Vendor is proposing to leverage the existing investments in Portal technologies currently deployed as part of the EEF Project implementation (only for MAGI Medicaid), the Vendor should describe in detail how they intend to seamlessly integrate the current investments into the Vendor's proposed solution. However, if the Vendor is proposing to use alternative products, they should provide appropriate rationale and justification for the proposed technology component and approach.

The IBM team proposes an IE-BM Solution that leverages the existing investments currently deployed as part of the EEF Project implementation. A large component of our proposed solution, IBM Cúram, will support the case management functionality described within Template T-6 – Functional Requirements Traceability Matrix. Cúram provides widespread functionality to allow users and automated processes to manage case details. The following table provides a listing of features and their functions that can be captured and maintained using Cúram Case Management:

Table 11: Information which can be captured by Cúram Case Management

Feature	Functions
Case participants	Case participants are the various stakeholders involved in a case, for example, the individuals, employers, providers, and other

Feature	Functions
	contacts relating to a case. They are added by the system automatically by virtue of their role in relation to a case.
Attachments	Attachments are electronic documents that are linked to the case, associated with Clients and communications on the case including, for example, scanned licenses or legal documentation. Cúram allows for ease of integration with document management products such as Xerox DocuShare. As part of the IE-BM Solution, users will be able to view electronic documents within the case through a seamless integration with the State's DocuShare product.
Communications	Communications are the correspondence between DHS and participants on the case, including letters, emails, and phone calls.
Events	Events are significant milestones and events relating to the case life cycle. Such events may be created automatically by the system as a result of some action that has been carried out on the case (case approved, case suspended, case closed) or they may be created directly by a system user (case reviews, referrals, and calendar activities).
Notes	Notes are used to provide additional information about a case and to help a user see the progress history for a case. Notes can be entered by any user that is authorized to maintain the case. They can also be created by the system as a result of specific events occurring on the case. The details of a note are entered by users in a free text format. Notes may be assigned a sensitivity rating, so the note can only be accessed by certain users. All modifications to a note are maintained, so a history of the note details is preserved, including note version, the time and date the note was entered on the system, and the user who made the note modification.
Related cases	Related cases are other cases in the system that have something in common with the case being viewed. Case relationships are automatically added by the system where appropriate and can also be manually created by a Worker.
Tasks	In Cúram, a task is an instruction to carry out an item of work referred to within Template T-6 as work effort requests. Cúram workflow tasks may be created automatically by the system or manually by a user. Tasks that are associated with a particular case are displayed in the Tasks list.
User roles	These are users in the system who are assigned as either the case owner or case supervisor (or both). A single user may be assigned to both roles or different users may occupy each role.
Assessments	Assessments are simple rule-based determinations of specific characteristics relating to a Client, for example, medical assessments or at-risk assessments.
Contracts	A contract specifies a case member's responsibilities with respect to services or products received as part of the integrated case.

Feature	Functions
Products	Products are the programs that are being delivered as part of an integrated case.
Outcome Plans	Outcome plans are used to manage a Client or household towards achieving specific goals to improve their circumstances. They are created using the optional Cúram Outcome Management module.
Financials	The financials options display details of payments made and bills charged in respect of product delivery cases.
Deductions	Deductions enable a portion of a benefit payment to be allocated towards a third party or a debt.
Evidence	Evidence data is used by Cúram to determine eligibility and entitlement for a case. This option enables a Worker to capture and manage the personal and circumstantial data (evidence) relating to a Client and their household.
Certifications	Certification verifies that only certified cases and certified periods are paid. Certifications are proposed periods of eligibility that are used to validate evidence. For example, if evidence is entered for a six-month period but only three out of the six months are certified, the evidence entered for the remaining three months will not be validated until it is certified.
Appeals	Users can view details of any Appeals cases that have been created using the optional IBM Cúram Appeals module.

Modern User Interface

IBM Cúram Social Program Management (SPM) offers an intuitive and consistent look and feel that reflects modern aesthetics. The Cúram SPM User Interface has been developed in conjunction with our customers, delivering the exacting experience that they require. It is also highly configurable and accessible as it is designed in accordance with the World Wide Web Consortium's (W3C) Web Content Accessibility Guidelines (WCAG).

The Cúram SPM User Interface has the following benefits:

- Delivers a highly consistent look and feel, which is user-friendly and intuitive for new users to learn.
- Provides clear navigation that validates users have a sense of where they are, where they have been, and where they can go to in the system.
- Includes "tabbed" pages to provide an easily navigable way of viewing and accessing a large amount of information for various record types.

User home and landing pages are customizable according to a user's preference, so that the most commonly accessed menu options and features can be accessed straight after logging in. The collapsible and expandable shortcuts menu is available from any page to allow the user to navigate to any area of the application quickly and easily.

The SPM User Interface also provides high accessibility to enable users with disabilities to work effectively with the system. Cúram conforms to both the US Federal Section 508 requirements for accessibility for persons with disabilities and the Americans with Disabilities Act (ADA).

Shared capabilities for tracking life of a case

The IBM Cúram SPM system allows authorized users to update case details and carry out maintenance as required over the lifetime of the case. The case home page contains options that allow users to modify summary case details and to carry out actions such as marking the case as an item of interest, and moving the case through the stages of the case life cycle. Users can also view a list of "recent transactions" on the case, providing users a convenient audit trail of pertinent events on the case.

Throughout the life of the case, Cúram provides the ability for authorized users to carry out various actions on the case including the assignment of the case to other users. At each stage during the case life cycle or where significant events occur on the case, Cúram notifies the relevant users through alerts, and where user action is required through tasks, so the relevant Workers, Supervisors, or other DHS staff are kept up-to-date on the progress of the case, along with any obligations they may have in relation to the case. Similarly, case participants, such as the Client, employers, or providers will be notified of case-related obligations or events through email or through correspondence notices created automatically by the system.

Improved search capabilities

Cúram provides OOTB searching capabilities to allow users to quickly locate people or cases within the system. Cúram case searching functionality enables users to search for cases based on a range of criteria, such as Client name, Client reference number/ID, and case status or simply by case reference number. Similar search inputs for searching by people exist as well, such as searching by an identity number such as SSN or Driver's License. Phonetic search is also possible through the built in soundex searching algorithms. The IBM team plans to implement the same extension as we did on the County of San Diego project, where the OOTB Cúram Person Search page will be enhanced to search the MDM instead of the local database, allowing robust search capabilities and other advanced MDM search techniques, which will display a score or rank of the matching strength in the results list.

For cases, Cúram also supports the concept of saved searches referred to as "case queries". A case query enables a Worker to choose specific case search criteria that is important to them and they can then save the criteria used in the search as a personal query. This query can be run and rerun without the Worker having to specify the criteria each time.

Enhanced scheduling and alert functionality

IBM Cúram provides extensive calendaring functionality to enable social enterprise organizations and their Workers to record and keep track of appointments, activities, events, and meetings. Calendaring functionality is provided on a number of levels.

Each user within an agency has access to their own calendar to help track and manage their own appointments and events. Organization administrators can manage organization-wide calendar events and location specific calendars. Cases in the system have their own calendar, which users can use to manage and view appointments, meetings, and events relating to a case.

IBM Cúram calendaring functionality is fully integrated with other areas of the IBM Cúram solution and supports various business processes associated with cases, Clients, providers, and the agency in general. Calendaring functions can be integrated and synchronized with external applications such as Microsoft Outlook. This is made possible with the help of the iCalendar specification, which facilitates the exchange of information about appointments and schedules.

Alert functionality is discussed below in Section 3.2.2 - Notifications and Alerts Functionality.

Improved employee efficiency

IBM Cúram's person-centric approach provides Workers with a holistic view of the information relating to a case and the Clients involved, allowing for improved service to Clients. The intuitive case evidence management screens enable Workers to efficiently record and maintain the key customer data or "evidence" used to determine program eligibility and entitlement. The integration with the Cúram CER rules engine allows for automatic eligibility determination and entitlement calculation, which removes the burden of decision making from Workers and results in quicker and more consistent eligibility and entitlement decisions.

Improved processes, data, and collaboration

The IBM Cúram integrated case design will enable DHS to manage multiple programs and services to a Client or household through a single case, which helps avoid duplication of data and encourages organizational efficiency. The Solution will also include integrated workflow processing, which helps standardize routine case processes, enabling agency staff to spend more time on customers that require special attention.

The Cúram Evidence Management infrastructure allows Workers to efficiently record and maintain key data. Also, case evidence is effective dated to allow for "time slicing," so that retrospective case assessments can be carried out to detect overpayments or underpayments.

To assist with collaboration, Cúram notifies the relevant users using alerts (or tasks when user action is required), so the relevant Workers, Supervisors, or other agency staff are kept up-to-date on the progress of the case, along with any obligations they may have in relation to the case.

Ability to perform investigations and incidents

Cúram Investigation Management provides a mechanism for the State of Arkansas to manage and resolve reported allegations. It enables the State to initiate an investigation into a reported allegation, record details of the allegation, enter findings, and record an overall resolution for the investigation. A resolved investigation may result in other processes being put in place. For example, for substantiated allegations of benefit fraud, DHS may decide to withhold the perpetrator's benefit payments and put in place a process to recoup the money owed. Alternatively, if it is decided that an allegation is unfounded, the investigation may be closed.

Investigations can be created at the integrated case level, or against a Client, or they can be created as a standalone investigation case. Investigation functionality includes the ability to create action plans to describe the course of action that needs to be taken, provides milestone capabilities to track significant events that occur during an investigation, maintain detailed contact logs of interviews and meetings throughout the course of an investigation, track the progress of an investigation through its lifecycle of investigation status history, determine the need for a translator to mediate between Worker and Client, and manage legal actions for participants.

Holistic view into all data, files, tasks, and actions

Cúram Case Management enables relevant case data to be managed in a centralized, person-centric way. This validates that information relating to a case is easily accessible to DHS staff and enables the status of the case to be readily managed and tracked.

As mentioned in the previous sections, the IBM Cúram integrated case approach provides Workers with a holistic view of the household members and the benefits being received by various members of that household. The person-centered approach provides a holistic view of the information relating to a case and the Clients involved, allowing for improved service to Clients.

Integrated workflow produces tasks and alerts to keep all involved Workers informed of progress against a case or assignments waiting for them in order to progress the state of the case to the next level. Evidence Management allows for maintaining key data at a global level, and automatic eligibility determination and re-assessment capabilities remove the burden of decision making from the Worker.

The following table summarizes the State of Arkansas' use cases from Template T-6 – Functional Requirements Traceability Matrix Tab Use Case List and our proposed Solution's capabilities that will be used to satisfy those use cases:

Table 12: SPM capabilities to satisfy State use cases

#	Use case name	IE-BM Solution capabilities
1	Complete Self-Service Anonymous Pre-Screening	Cúram Intelligent Evidence Gathering and Cúram Express Rules allow the State to develop intake and screening processes to allow an individual or household to determine if they are potentially eligible for one or more programs. Screening can be done anonymously or on behalf of a registered person. Once a screening is complete, the user has the ability to continue on to apply for benefits based on the screening results. The IBM Cúram Global Income Support module includes scripts and rules to screen for more than ten (10) programs out-of-the-box.
2	Apply for Benefits Online	IBM Cúram Universal Access allows Clients to apply for programs and benefits by submitting an application through its online Client Portal. The online application process presents the applicant with a guided set of questions that are used to capture significant and relevant information about the Applicant and others listed on the application. This information is required in order to potentially grant one or more programs or benefits to the Client. Personal details and details about the household including the household's income, resources, and expenses may all be required. Data collected is dependent upon the program(s) selected on the application and is applied across programs based on program-specific policy. At any point in the application process, the Applicant can submit their application. The information provided becomes "evidence" on an application case which is then used to determine program and benefit eligibility. The out-of-the-box application process presents the Applicant with the ability to specify desired appointment times, as well

#	Use case name	IE-BM Solution capabilities
		as schedule an appointment once in contact with a Worker.
3	Apply for Benefits in Person	A Worker has access to the same screening and application scripts as those exposed on the Client Portal, and can work with a Client during an interactive session to enter the required application data and apply for benefits in person.
4	Apply for Benefits with a Paper Application	An Intake Worker can process paper applications submitted by Applicants by entering the information provided on the paper application into the system which becomes evidence used to determine eligibility for each program selected on the application. The Intake Worker can scan any documents provided with the application and attach them as verifications on the corresponding evidence records.
5	Conduct Eligibility Interview	An Eligibility Worker can meet with a Client to verify the submitted application data, review and explain any missing data still required, and attach verification documents provided by the client to the corresponding evidence to complete an application. When all data is complete, the Eligibility Worker can run eligibility and discuss the results with the Client – when eligible, the Eligibility Worker can finalize the application and initiate the benefit case.
6	Submit Additional Electronic Documentation	The IBM team plans to leverage the Document Upload asset to provide the capability for a Client to upload a document from their account within the Client Portal. The uploaded document can be used as a proof item for a pending verification for outstanding evidence and attached or linked with a case.
7	Process Documentation Received in Hard Copy	The IBM team will work with the State to enhance mailroom activities and the handling of hard copy documents. We will use Optical Character Recognition (OCR) to read paper application data and pre-populate information when possible. Existing mail room processes for scanning the paper application will be enhanced to pass the data collected through OCR to the IE-BM Solution through web services. In the case of an application, the legible data will be mapped into a Cúram IEG electronic application form and saved as an in-progress application, and a task will be created in an appropriate work queue or against an appropriate organization unit. This will allow an Intake Worker to examine and modify the data if necessary, and eventually complete and submit the application. Other hard copy documentation can be scanned and attached

#	Use case name	IE-BM Solution capabilities
		as evidence verifications, or simply attached and linked to the Client as appropriate.
8	Process Eligibility Determination or Redetermination	Upon submitting an application or redetermination application and, if required, upon completion of the eligibility interview, the Solution will identify and prioritize for the Eligibility Worker all cases requiring review. The Eligibility Worker will review all information required and determine the application or redetermination disposition and complete any benefit amount calculation. Using IBM Cúram Global Income Support™ (CGIS), the Intake Worker has the option to check the individual's or household's eligibility at any time after the application has been submitted. The eligibility check provides an indication of the individual's and household's potential eligibility. The Intake or other assigned Worker can check eligibility as often as required. Eligibility checking functionality is based on program specific eligibility rules. When applications are disposed, the data is mapped from the application to permanent evidence, benefit calculation is performed, and the ongoing case lifecycle is established.
9	Determine Spend-Down and Submit Expenses	The IE-BM Solution includes eligibility determination for spend-down Medically Needy programs as well as the calculation of the spend-down amount. Spend-down is a term used to describe an amount calculated for persons whose Household income is above the Medically Needy Income Level (MNIL) and resources are within the Medically Needy Resource Limit (MNRL). The excess income that is above the MNIL is called the spend-down amount and must be obligated or spent for medical services. Spend-down is calculated on a period basis, and both eligibility and the spend-down amount are re-determined each period. The Eligibility Worker will enter medical expenses as submitted by the Client, indicating that it can be applied to the Spend-Down amount. The Solution will maintain details of expenses applied.
10	Send Authorized Benefits Information to EBT Vendor	The IBM Cúram Social Program Management Platform provides financial management capabilities that support the creation and maintenance of financial schedules and transactions associated with program and service delivery. The out-of-the-box functionality includes batch programs which process payments, and produce a file of payment data that can be exported to the EBT

#	Use case name	IE-BM Solution capabilities
		vendor's system in a secure exchange at pre-determined intervals.
11	Complete the Redetermination Application/Semi-Annual Report online	The Client logs into the Solution through the Client Portal to complete their redetermination application or Semi-Annual Report (SAR) online. When completing this process online, the Solution will present a form pre-filled with available data as approved by DHS. The Client will review and update data and electronically sign and submit the form. Applying validated data recorded on the Determination or SAR, the IE-BM Solution will predetermine eligibility for all programs as noted on the form.
12	Complete the Redetermination Application/Semi-Annual Report with an Intake Worker	The Intake Worker assists Clients to complete the redetermination application or Semi-Annual Report. Clients initiating the Redetermination or SAR process online can request the assistance of an Eligibility Worker as needed. When this request is initiated online, the Solution will generate an alert to the Eligibility Worker notifying them of a new task. The Eligibility Worker will coordinate with the Client in order complete the Redetermination and SAR process in a timely fashion. Data collected throughout this process will be validated and used to re-determine eligibility for active programs.
13	Process the Semi-Annual Report (SAR) or Annual Review	The Redetermination or SAR is received directly by DHS and will be directed to the Eligibility Worker. The Eligibility Worker reviews the data provided, updating case data as needed. Once validated, this data will be used to re-determine eligibility for all active programs.
14	Complete the Redetermination Interview	When required by policy, the Eligibility Worker meets with the Client to review data provided on the Redetermination form or Semi-Annual Report. Results of this interview will be used to update case data triggering the validation process. Once data is validated, the Solution will automatically re-determine eligibility for all active programs.
15	Submit a Client Change Online	IBM Cúram offers Life event management, which provides the capability to configure events that may impact the Client's eligibility for the programs and services they receive. The life events feature is accessible from an account through the Client Portal. Marriage, change in employment, pregnancy, and birth are examples of a life event that must be reported to DHS. Life events may also be configured to provide information about other programs or community resources that are appropriate for that event. Life

#	Use case name	IE-BM Solution capabilities
		events typically create or modify active evidence – when these changes are applied, active benefits are automatically re-assessed by the eligibility and entitlement framework, and changes to benefit amounts are processed immediately.
16	Process Client Change	An Eligibility Worker can process changes from a client (or review updates from system interfaces if necessary) by updating the corresponding piece(s) of evidence. When applying changes to active evidence, the Cúram eligibility and entitlement framework will trigger case reassessments for all active benefit products using this piece of evidence. Benefit amounts are recalculated, and Over/Underpayment processing is applied when necessary.
17	Medical Review Team	The IE-BM Solution provides the functionality for the Medical Review Team (MRT) to establish disability for an Applicant where disability is an eligibility requirement. The Solution will assess data provided by the Applicant or Client concerning a disabling condition and generate an alert to the Medical Review Team informing them that a case meeting MRT review is available.
18	Establish Overpayment Information	When applying changes to active benefit evidence, the Cúram eligibility and entitlement framework will trigger case reassessments for all active benefit products using this piece of evidence. Benefit amounts are recalculated, and over or under payment processing is evaluated by comparing new decisions to previous decisions. Over and under payments are part of the OOTB financial processing, and this information will be communicated to and from OASIS and can be used to inform Overpayments Staff when necessary.
19	Conduct Quality Control Audit/Review	IBM Cúram Social Program Management includes a Case Audit feature, which has the ability to create an audit plan and specify scheduling details, the purpose of the audit, and the selection criteria to use in generating a sample list of cases for audit purposes. This includes the ability to assign cases being audited to auditors and document summary findings for the overall audit.
20	Track an appeal of an Eligibility Determination/Redetermination	The IBM Cúram Appeals module integrates seamlessly with case management, and provides pre-built business processes for handling appeals and legal action processes. The module offers flexibility to allow the State to define multiple levels of appeal, and includes three levels OOTB. Built in workflow capabilities provide

#	Use case name	IE-BM Solution capabilities
		efficient routing of information and work to DHS staff involved in appeals and legal actions processes. The IE-BM Solution will provide functionality to create appeals, schedule hearings, document when hearings are completed or decisions are rendered, and further appeal decisions to the next level.
21	Schedule an Appointment (Self-Service)	The Client schedules an appointment using the Client Portal. At application, or on an as needed basis, the Applicant or Client can schedule an appointment with their assigned Worker by accessing the integrated calendaring feature; this feature will provide the Applicant or Client with a view of available times to schedule the appointment. Once scheduled, the Solution will auto-generate a communication to the Applicant or Client, in their preferred language and through their preferred method of communication, confirming appointment details. The Worker's schedule will be updated to reflect the scheduled appointment.
22	Manage Caseload	The Cúram Supervisor Workspace presents workload information to agency Supervisors in an intuitive format and provides the options required to manage and distribute workload. A Supervisor can manage and distribute workload related to a case by reallocating tasks associated with a case. Additionally, a Supervisor can reassign cases to new case owners to keep the workload balanced.

3.2.2 Notifications and Alerts Functionality

Instructions: Describe the Vendor's approach to providing an enterprise approach to managing notifications and alerts which will enable DHS' vision for communicating with clients through multiple channels and becoming person/family centric (integrating programs). At a minimum, the response should include a discussion regarding:

- Multi-channel communications
- Compliance with federal regulations
- Communications rules management
- Integration with other components in the solution
- Integration of communications from multiple federal programs (e.g. Medicaid, SNAP)
- Archiving/logging of communications

DHS is currently in the initial stages of building the Notification and Alerts functionality through the Xerox DocuShare product.

If the Vendor is proposing to leverage the existing investment currently deployed as part of the EEF Project implementation (only for MAGI Medicaid), the Vendor should describe in detail how they intend to seamlessly integrate the current investments into the Vendor's

proposed solution. However, if the Vendor is proposing to use alternative products, they should provide appropriate rationale and justification for the proposed technology component and approach.

The IBM team will use the Xerox DocuShare product and continue to use it for generated communications to the State of Arkansas. The IBM Cúram workflow engine will be used to generate Tasks and Notifications to inform case workers and customers of progress and milestones related to their cases.

The IBM team's understanding of the current EEF Cúram application is that data required for client communications is sent from the EEF Cúram application to DocuShare and a communication record is recorded against the case in Cúram. However, the URL location of the generated document is currently not stored as part of the communication record. The IBM team recommends that the current communication generation be enhanced to properly record and store this URL location against a person or case, as appropriate. This will enable case workers to easily view the documents associated with a person or case, from within the Cúram application, as expected. This will return the IE-BM application to matching OOTB functionality when Cúram is configured to use an Enterprise Content Management system; when using the "Preview" functionality, the document is retrieved from the ECM as shown in the following graphic:

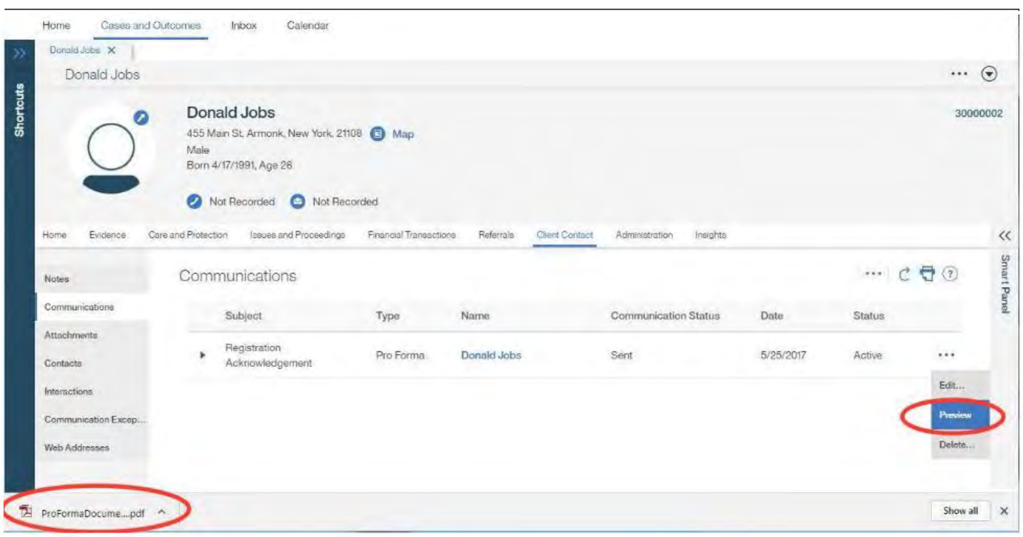


Figure 34: Cúram application retrieving communications from an ECM

Multi-channel communications

The IBM Cúram workflow engine's Notifications functionality provides the ability to inform users or clients about certain information when a particular step in a business process has occurred. Notifications can be attached to any activity in a workflow process and are delivered as alerts to a user's inbox, through email, or as both alerts and email.

Our notifications and alerts functionality also includes the ability to push messages to clients and users through SMS. This is supported by an integration between Cúram and AT&T's GSMS service, another asset transferred from the County of San Diego.

Communications produced on behalf of a customer or case can be viewed by the citizen on the Citizen Portal.

Compliance with Federal regulations

IBM Cúram workflow and rules will be configured to generate the notices and communications required to meet State and Federal regulations. For example, the IE-BM solution will be configured to auto-generate detailed notifications to customers concerning all eligibility determinations and entitlements decisions and scheduled meetings including those required to determine eligibility and entitlement.

Communications rules management

In line with the Federal regulations section, configurability will allow administrators and authorized staff to create and modify the rules and workflow used by the IE-BM system to monitor case processing and activities and auto generate communications or alerts and notifications to DHS Staff, applicants, customers, and authorized reps.

Integration with other components

The IBM team will integrate DocuShare with IBM Cúram by using the DocuShare API, exploiting web service based communication over SOAP and HTTP communication protocols between these two systems. IBM Cúram provides adapters that are used to integrate with any document content management system that is compatible with the Content Management Interoperability Services (CMIS) open standard. DocuShare being compatible with CMIS, IBM will use Cúram adapters to integrate with it to store communications and attachments.

Integration of communications with multiple programs

Communications produced on behalf of a client for multiple programs can be consolidated into a single mailing. Documents produced on the same day for the same client can be identified in DocuShare by searching by case or person for the given date and consolidating all documents found into a single package.

Archiving and logging of communications

The IBM team recommends that communication generation be enhanced to record and store the DocuShare document location as part of the Cúram application's communications record, properly linking the document to a person or case. We are also recommending the use of IBM InfoSphere Optim Archive Open Data Manager (Optim) software for all archiving requirements. Optim offers cross-database flexibility and can archive data concurrently from two or more different databases manage systems as a "federated" archive, which will allow the State to archive and purge referentially intact data.

3.3 Application Infrastructure Services Layer

3.3.1 Business Rules Management Engine

The Vendor should ensure that the responses to this section are in alignment with the requirements set forth in Template T-8 – Technical Requirements Traceability Matrix, Tab T3.1

Instructions: Describe the Vendor's approach to leveraging Business Rules Engine technologies that will enable and support DHS strategic objectives and seamlessly integrate with the DHS IE-BM Solution. The Vendor's response, at a minimum, should take the following topics into consideration while providing the details:

- Rules engine architecture

- Rules validation, calculation, decision and generation
- Performance tuning and debugging
- Rule storage and versioning

For Rules Engine technologies, the current EEF deployment uses Cúram Rules Engine (CER). However, DHS has “No Preference” to leverage this technology product as part of the solution design.

The Vendor should describe how DHS requirements will be satisfied by the technologies included in the proposed solution design. If the Vendor is proposing to use alternative products, provide appropriate rationale and justification for the proposed technology component and approach.

The IBM team plans to leverage the current investment in the Cúram Rules Engine (CER) and will extend the OOTB rule sets for Medicaid, SNAP, and TEA to meet the State of Arkansas’ policy requirements within the scope of this RFP. This pre-built rules content will greatly accelerate the ability to deliver these new benefit deliveries in an integrated system. CER can be used to define and execute business calculations to support a range of rules-driven business processes, including eligibility and entitlement determination, triage, screening, life event management, and user advice and guidance. Rules can also be exposed as a Web Service to create re-usable rule based components.

The CER Editor provides a user-friendly tool for business analysts and developers to storyboard, design, construct rules, and link rules to data. Each rule class can have a full text description describing the rule object, and the Editor provides a broad rule search function. This function enables the user to search for text in a rule set. Depending on the filters selected, the search function will look for the input search criteria within rules, within references to rules from other rules diagrams, within all descriptions, within folder names, and within any technical and code table data. This allows for research of where a rule is used, and impact analysis for how a rule is used if there are modifications to that rule.

The CER Editor is designed to help business and technical resources work on rules implementation (and ongoing maintenance), by providing graphical design aids, human language notation for rules elements, and advanced features for designers and developers. It enables a business rules user to draw a set of rules diagrams and to enable or disable existing rules, without programmer intervention, using an intuitive drag and drop approach. A rules diagram represents the derivation of an attribute, so a rules diagram is a graphical representation of CER Rules expressions, as depicted in the following graphic. The CER infrastructure includes widespread documentation for designing and maintaining rules.

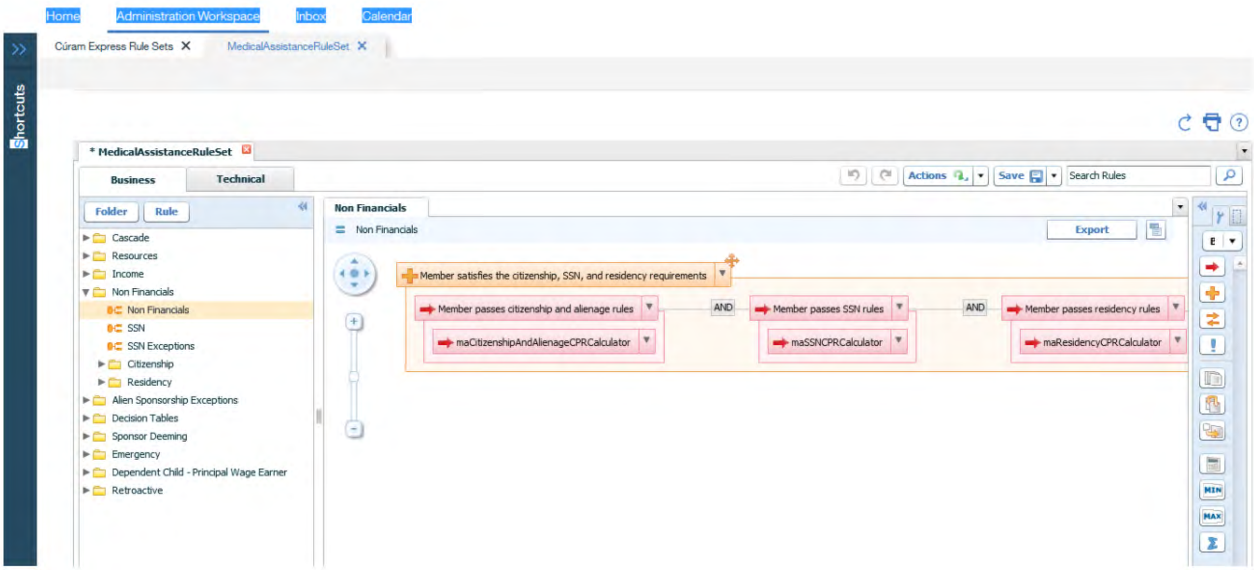


Figure 35: CER Rules Editor

The CER Engine executes rules on demand at run-time in order to output business-based calculations. The CER Engine is a backward chaining “calculation engine” that calculates “attributes”. An attribute can be calculated from other attributes, from data on the Cúram data model, or obtained from an external source. These calculations are used to drive the business processing path, which can include multi-step decision processing, and compute values such as benefit calculation. The processing of attributes in this manner helps resolve complex data and rule entity relationships. Rule sets are designed following object inheritance and rule aggregation patterns, and rules fire recursively when necessary. The OOTB rules are meant to be re-used or extended as necessary, and any rule can be copied to start a new rule, or be re-used by multiple rule sets and therefore re-used for multiple programs. Rules are separated from the rule engine and application logic.

[T3.1.2, T3.1.3, T3.1.5, T3.1.11, T3.1.13, T3.1.14, T3.1.16, T3.1.19, T3.1.20, T3.1.27, T3.1.28, T3.1.29, T3.1.30]

CER rule sets are ultimately captured as XML configuration documents. These rule configurations are treated as part of the development code line and become part of the project build and release procedures for tracking which version of the rules are being used. The XML documents are an extensible meta model, which developers extend to meet legislation requirements. All rule sets are saved with a unique version.

[T3.1.8, T3.1.15, T3.1.24, T3.1.26, T3.1.31]

To support changes in legislation over time, rule sets are effective dated, so the corresponding set of rules is used for the time frame being evaluated. Also, within a rule set itself, CER supports the “Legislation Era” tag, which allows different rules and logic to be selected depending on the time frame being evaluated.

The Cúram rules engine seamlessly integrates with other features of Cúram that facilitate a robust solution for eligibility and entitlement, which include the following features:

- **Cúram Evidence Management** provides intuitive features for recording and maintaining the key data relating to clients and families and their circumstances, which CER uses to make business calculations.

- **Rate Tables** allows business variables that are likely to change most often to be maintained outside of rules, for example, a poverty level threshold or a payment rate.
- **Cúram Verification** enables agencies to specify verification requirements for certain categories of evidence along with the means for recording verification details.

These features can be used to meet all the requirements for rules validation, calculation, and decision generation. For example, evidence can be configured to require "verifications," documents that substantiate and prove the data (evidence) being entered in the system and used for calculations and eligibility decisions. The system can be configured, so that evidence cannot be applied if verifications have not been satisfied, and if this is the case, then eligibility (for an active benefit) cannot be run. Once all required proof is supplied, the evidence can be applied, if this occurs against an active benefit delivery, the benefit will be re-assessed in real-time, as the application of new and modified data is detected as a change in circumstance; new decisions are compared to previous decisions, and over and underpayment processing is also performed when applicable. Rule changes themselves will also re-assess all associated benefit cases using that rule set. Rule decisions can be consumed and shown through Cúram display rules infrastructure, or the Cúram Eligibility Viewer as shown in the following graphic. Rule decisions can also be consumed by reporting mechanisms. When used with the intake process (such as benefit applications), partially completed data collection sessions can be saved and subsequently resumed; rules are not applied until the user reaches the end of the application and chooses to submit.

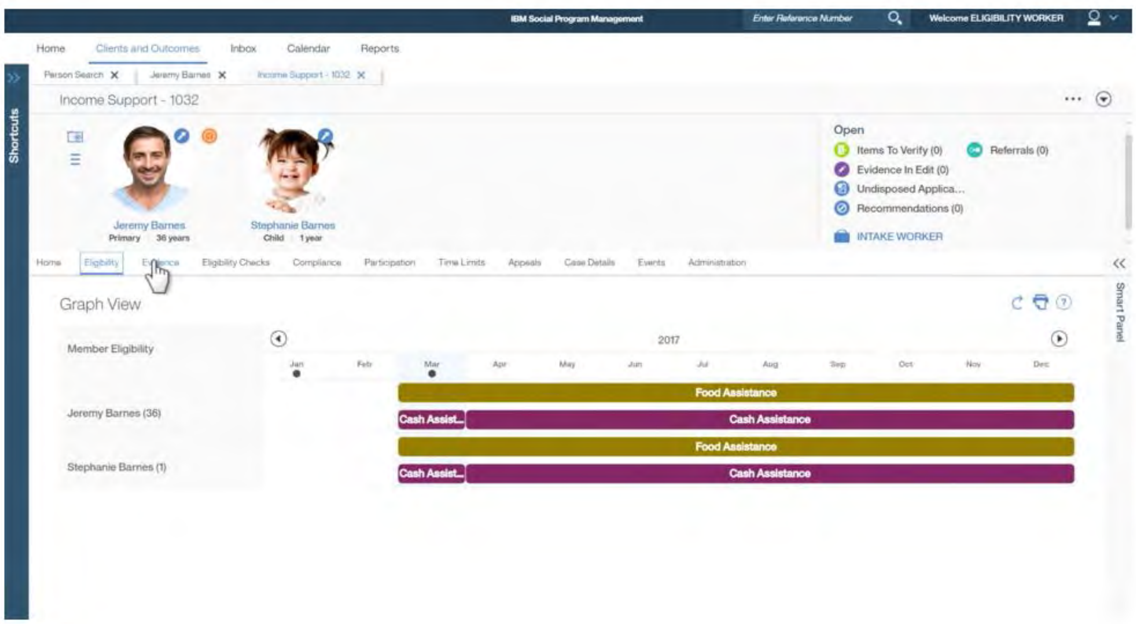


Figure 36: Cúram Eligibility Viewer

[T3.1.1, T3.1.4, T3.1.7, T3.1.9, T3.1.10, T3.1.14, T3.1.17, T3.1.18, T3.1.25]

The CER rules infrastructure also includes the CER test infrastructure, which provides support for unit testing and regression testing. When a unit test is executed, the CER test infrastructure outputs HTML documentation that documents this execution. When used in conjunction with the tests, this is a powerful debugging aid. Application properties can also be enabled to display varying levels of trace output when analyzing rules execution.

CER also includes the ability to output HTML documentation called SessionDoc during a session. SessionDoc provides a record of all the rule objects created during the session and can be used as both a debugging aid and a performance and tuning aid for tuning rule execution. The CER rules engine uses several caches to assist performance, which can be tuned by adjusting various OOTB properties. For rules documentation, CER RuleDoc, similar to JavaDoc, is an HTML representation of a CER-based vocabulary. It is a dictionary of words or attributes in the vocabulary. Inter-linked HTML pages enable the user to understand how an attribute is derived from other attributes and view dependency relationships between all attributes and rule objects that comprise a rule set.

[T3.1.6, T3.1.12, T3.1.22, T3.1.23, T3.1.24]

The current implementation of MAGI Medicaid is done in Cúram CER rules and is currently in production. Rebuilding these rules and re-implementing them in a different rules engine would require a major effort that comes with high risk and would be a huge loss of time and money: an external rules engine can only provide rules execution. The Cúram Eligibility and Entitlement framework is comprised of the CER rules engine, as well as the evidence infrastructure, verification engine, change of circumstance processing, and integration with financial processing engine for over/underpayment processing. Additionally, Traditional Medicaid, SNAP, TANF and similar assistance programs have already been implemented in other States which have leveraged OOTB rulesets, such that code re-use from these states is possible. Reusing Cúram CER rule sets from these efforts will be a major cost saver and reduce risk. The IBM team highly recommends using and continuing the investment in the Cúram Rules Engine (CER).

3.3.2 Workflow, Business Process Management / BPM

The Vendor should ensure that the responses to this section are in alignment with the requirements set forth in Template T-8 – Technical Requirements Traceability Matrix, Tab T3.2.

Instructions: Describe the Workflow and Business Process Management technologies and design approach supporting the IE-BM Solution. The Vendor's response, at a minimum, should take the following topics into consideration while providing the details:

- Process and System Integration in support of Case Management, Collaboration and Scheduling
- Business Activity Monitoring
- Process Modeling
- Workflow Engine Configuration and Execution

For Business Process Workflow technologies, the current EEF deployment uses Cúram Work Flow. DHS has "No Preference" to leverage this technology product as part of the solution design.

The Vendor should describe how DHS requirements will be satisfied by the technologies included in the proposed solution design. If the Vendor is proposing to use alternative products, provide appropriate rationale and justification for the proposed technology component and approach.

The State of Arkansas uses Cúram Workflow for business process workflow in the current EEF implementation. IBM will use this existing technology to support workflow and BPM related to case management, collaboration, and scheduling. IBM will further extend this capability and will enable workflow and BPM across the various products in the IE-BM portfolio, using IBM BPM.

IBM BPM supports Business Process Modeling Notation (BPMN), Business Process Execution Language (BPEL), XML Process Definition Language (XPDL), Business Process Modeling Language (BPML), and Web Services Flow Language (WSFL).

Process and system integration in support of case management, collaboration, and scheduling

IBM Cúram SPM platform incorporates extensive workflow management capabilities to support the automation of business processes and work allocation for case management, collaboration, and scheduling. An integral part of IBM Cúram SPM platform, Cúram Workflow provides a set of features to enable organizations to define reliable and repeatable work patterns to effectively support organizational business processes and service delivery capability. These features include a framework for defining and maintaining workflow processes and an integrated workflow engine to execute these processes at runtime.

Business process automation

Business process automation is achieved through the definition of workflow processes, which describe the activities in a workflow and the transitions between them. An activity in a workflow may be manual or automatic. Manual activities typically involve user intervention, whereas automatic activities are typically performed using system resources. Transitions describe the sequence of activities and how they are linked together. They may be associated with conditions that are used to determine a particular flow through the process. For example, data validations might direct the workflow to create a task in a work queue to instruct users to manually examine data in the system. Other data validations can be implemented as Java functions invoked as automatic activities.

Cúram Workflow uses an allocation strategy to determine how to assign tasks. The assignment can be directly to a user or work queue, or it can invoke the CER rules engine or Java code to determine a task or notification should be assigned. Deadlines can be set for activities to verify a user processes the activities in a timely fashion, with corresponding deadline strategies to handle if tasks become overdue, such as notifying a supervisor. Security for invoking rules or Java functions is controlled by the OOTB role based security mechanisms.

[T3.2.1, T3.2.6, T3.2.10, T3.2.11, T3.2.12, T3.2.23, T.3.2.15, T3.2.17, T3.2.19, T.3.2.22

Workflow definition

The Workflow Process Definition Tool (PDT), provided within the Cúram administration application, is used to define and maintain workflow process definitions. As with all configurable functions provided in Cúram, the PDT is presented as an online web application. The PDT incorporates a visualization tool, which provides a graphical image of a workflow. The following screenshot shows an example of a workflow as displayed by the visualization tool:

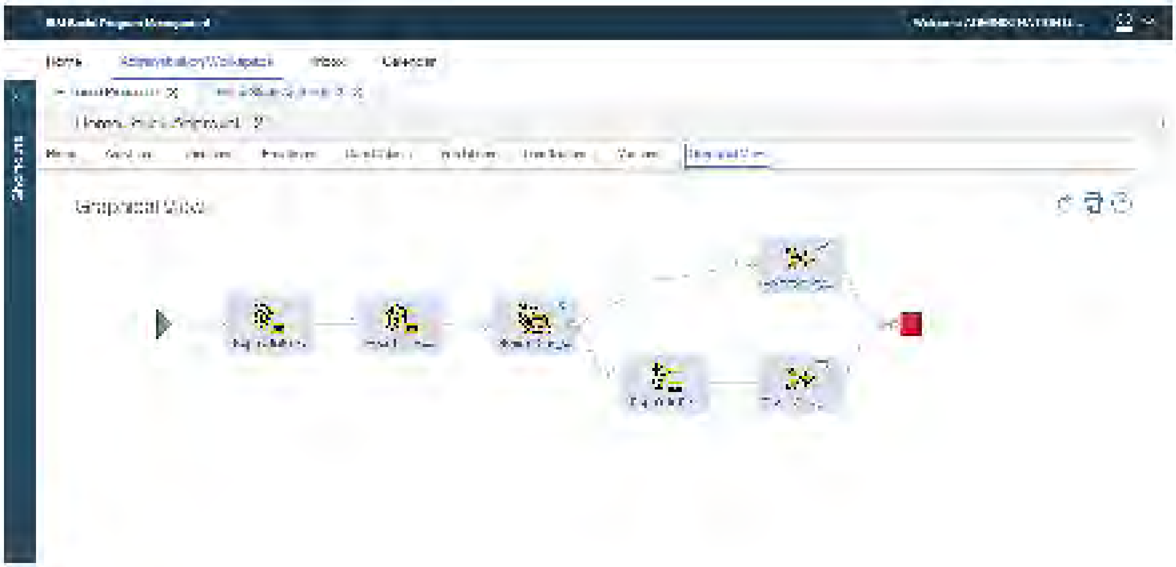


Figure 37: Sample workflow

Workflows can be defined as re-usable components known as sub flows, so that common workflow processing can be factored out and used across multiple workflows. All workflows and sub flows are listed in the Cúram administration screens, which act as a registry for all available workflows.

[T3.2.5, T3.2.8, T3.2.7, T3.2.9, T3.2.21, T3.2.24]

Work queues and tasks

Work queues are subscription-based queues to which tasks can be assigned. Using the Cúram administration application, authorized users can setup and manage work queues and define the users subscribed to a work queue. Optionally, if a work queue is setup, allowing for user subscription, users can manage their own work queue subscriptions and can therefore subscribe to one or more work queues, as appropriate. Work queues are typically accessible by groups of users. Work queues could, for example, be defined to route work to specialists who are trained to deal with circumstances that require a particular expertise. Once users are subscribed to a work queue, they can reserve a task from a queue, carry out the work required, reassign the task to the next appropriate user or queue if necessary, and carry on to the next task waiting in the queue.

Clicking on a particular item in the “My Tasks” portion of the inbox presents the user with a list page of the tasks associated with that item. The list of tasks can be sorted on the column headers. From the list page, users can quickly navigate to the relevant task home page by single-clicking on either the “view” or “task ID” links. Each task also has a graphical view option, to show the current state of the workflow and which activity the team is currently waiting on. The completed activities versus remaining activities are similar to a checklist of items to be completed for a business process.

Notifications and alerts functionality includes the ability to push messages to clients and users over email or SMS. This is supported by an integration between Cúram and AT&T’s GSMS service, another asset transferred from the County of San Diego. To satisfy reporting requirements, the State can exploit the fact that tasks can be associated with cases or person objects, which should allow reporting to be developed to calculate time to process applications, counts by status or type, historical performance, performance by office or by worker, and reports by zip code, office, program, and due dates.

[T3.2.16, T3.2.27, T3.2.14, T3.2.20, T.3.2.28, T3.2.29]

Business activity monitoring

Workflow process enactment will predominantly be transparent to business users of the system These users will typically interact with workflow through the tasks and alerts that are assigned to through their Inbox, where they can accept new tasks available for assignment and view tasks they are currently working on. As tasks are accepted and worked, events in the system will progress each workflow; task status will be updated or closed when appropriate and changes to case status and history are captured as part of OOTB processing.

Authorized administrators will use the Cúram administration application to monitor and maintain workflow process instances, process instance errors, and workflow events. In addition to the administrative functions of the PDT and work allocation features described previously, workflow administration also provides the following functions that enable an administrator to monitor and control business activities that are executed by the workflow engine:

- Search for business activities.
- View status of business activity.
- Suspend, resume, and abort activity.
- Handle exceptions and errors.

Additionally, the Cúram Supervisor Workspace assists supervisors with monitoring and managing the workloads of the users, organization units, and work queues that they supervise. The workspace allows a supervisor to defer, reserve, un-reserve, and restart tasks on behalf of a user. A supervisor can also reassign tasks to other users or work queues in an effort to re-balance the work load.

[T3.2.2, T3.2.8, T3.2.13, T3.2.18, T3.2.25, T3.2.26]

Process modelling

In addition to using the Cúram Workflow PDT for process modeling, the IBM proposed solution also includes IBM BPM, the leading tool for modeling at the IT portfolio level. The IBM BPM product will allow us to build a flexible architecture to enable the State to achieve your strategic goal of integrating disparate systems and orchestrate processes supported by these systems. The BPM solution will enable the State to choreograph processes and process steps across disparate applications, people, and systems. For example, an expected use case will be to use BPM for mail room activities involving scanning of documents. When receiving a paper application, an overall workflow will be started using BPM. Web Service calls to the Cúram application will be invoked to assign a task to a work queue or organization unit to process the scanned paper document; manual tasks of reviewing the scanned document, completing an electronic form of the application, and attaching the document(s) to the person or case will be, monitored within Cúram Workflow. In this case, the IBM team can monitor the process from the enterprise level when starting the BPM process, giving visibility into the handoff to Cúram, and ultimately if and when the Cúram application closes the communication loop, it will complete its corresponding workflow.

BPM uses a graphical Business Process Modeling Notation (BPMN) tool to model processes. Processes are modeled as a collection of service composites orchestrated through Business

Process Execution Language (BPEL). Service composites include protocol mediators, message adapters, business rules, XSLT transformation, and human tasks, all conformant with the Service Composite Architecture (SCA). The following diagram shows an SCA composite.

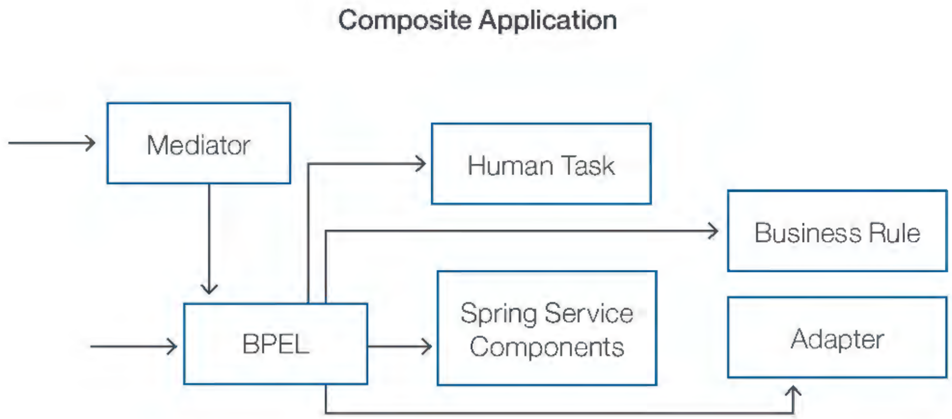


Figure 38: SCA composite diagram

BPM enables the business process layer in the IBM SOA reference architecture, described earlier, which will allow Cúram workflows to integrate and interact with enterprise data and content management solution components when necessary. The following diagrams depict cross-product business process orchestration in our County of San Diego project. The products involved are Cúram and Initiate MDM. The service composite shown is “Lookup Client”, which works across MDM and Cúram. This service composite is joined into end-to-end enterprise business processes using BPEL.

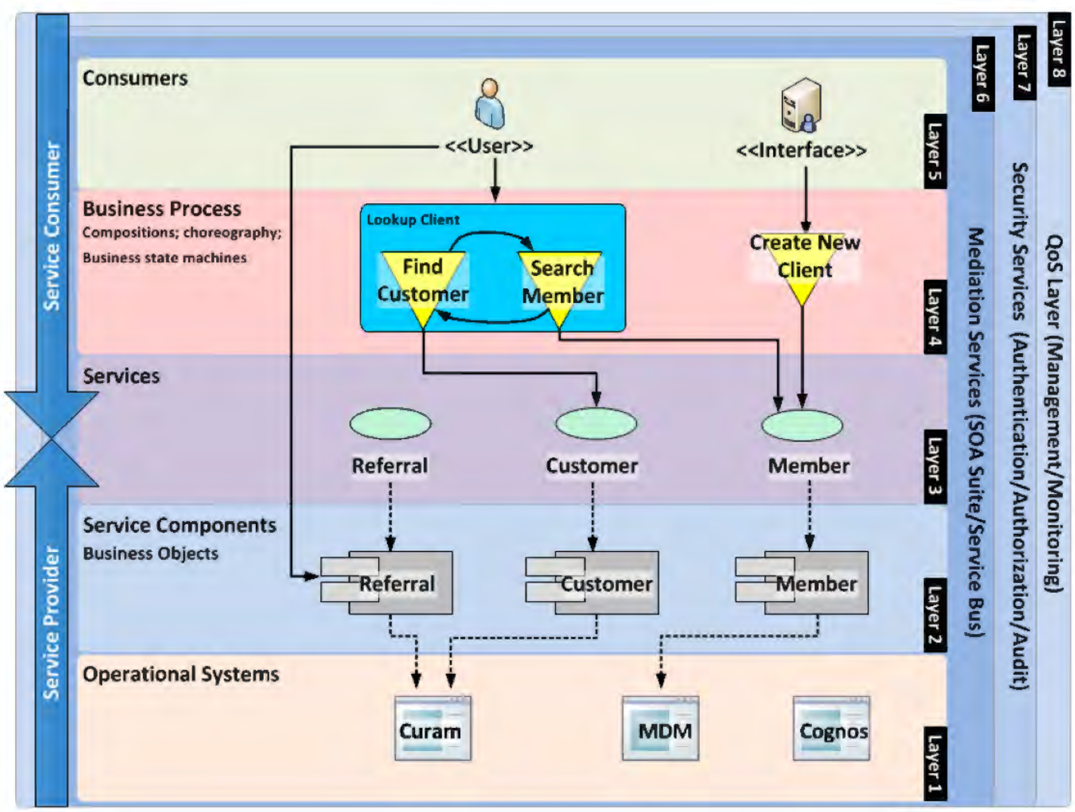


Figure 39: Composite service for Lookup Client

[T3.2.3, T3.2.4]

Workflow engine configuration and execution

In addition to the workflow management capabilities of Cúram, BPM provides extensive capabilities for workflow engine configuration and execution at an enterprise level. BPM is a consumable business process management platform that provides visibility and management of business processes. It allows IT to enable business users and managers to track their entire business operation on a single dashboard, receive alerts, and subsequently drill down to the lowest level of instance detail. BPM Process Center is a runtime environment that includes a repository for all process models, services, and other assets that are created through IBM Process Designer or IBM Integration Designer, the IBM BPM authoring environments. It has a console with the tooling to maintain this asset repository. The following diagram shows major components of BPM:

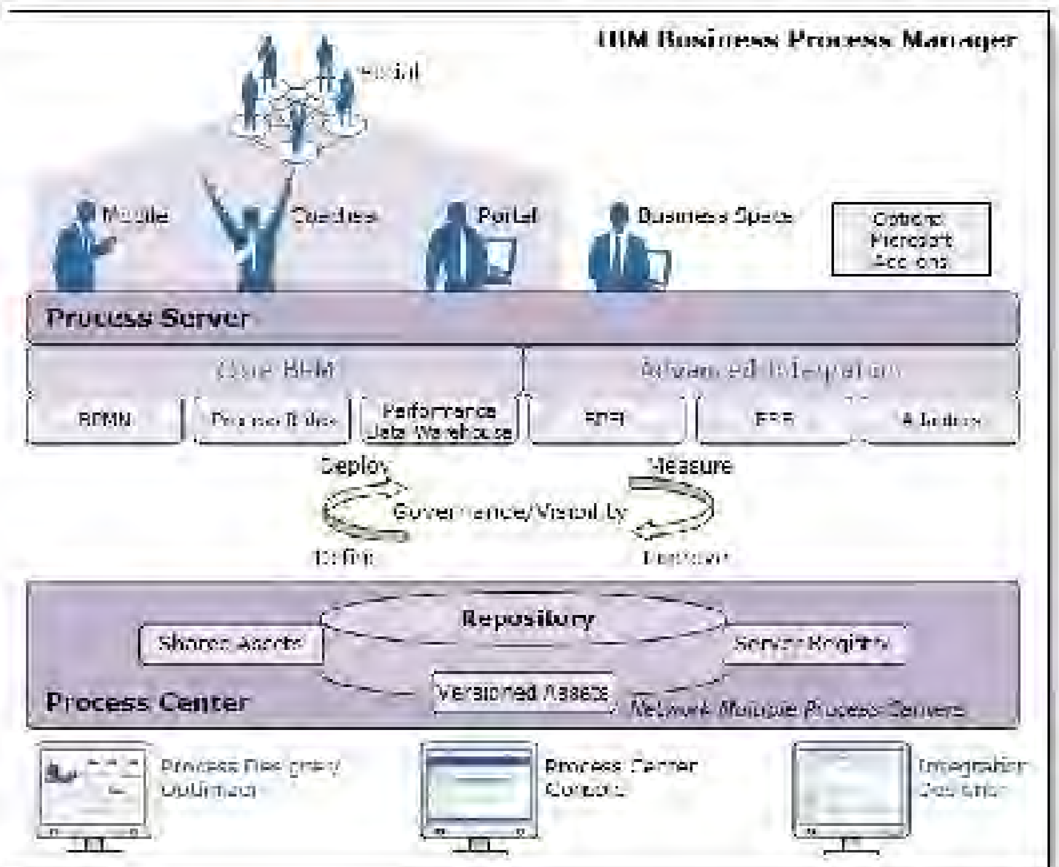


Figure 40: Major components of IBM BPM

3.3.3 Enterprise Content Management / ECM

The Vendor should ensure that the responses to this section are in alignment with the requirements set forth in Template T-8 – Technical Requirements Traceability Matrix, Tab T3.3.

Instructions: Describe the Vendor's approach to leveraging the preferred Enterprise Content Management technologies for the new IE-BM solution. The Vendor's response, at a minimum, should take the following topics into consideration while providing the necessary details:

- Store electronic forms
- Scan and store imaged documents
- Searching of documents
- Digital rights management capabilities
- Sharing of documents between programs

For ECM and Document Management technologies, DHS currently uses Xerox Docushare. DHS has "Preference" to leverage this technology product as part of the solution design.

The Vendor should describe how DHS requirements will be satisfied by the technologies included in the proposed solution design.

If the Vendor is proposing to use alternative products, the Vendor is expected to migrate and convert all the existing documents and artifacts from Docushare to the new technology. The Vendor should describe the appropriate rationale and justification for the proposed alternative technology component and their approach to how the migration will be undertaken.

IBM's integrated solution for IE-BM will allow extensive document processing capabilities, so the document processing staff workers can perform all the tasks required for the lifecycle of a document. At a high level, our document solution module architecture is shown in the following figure:

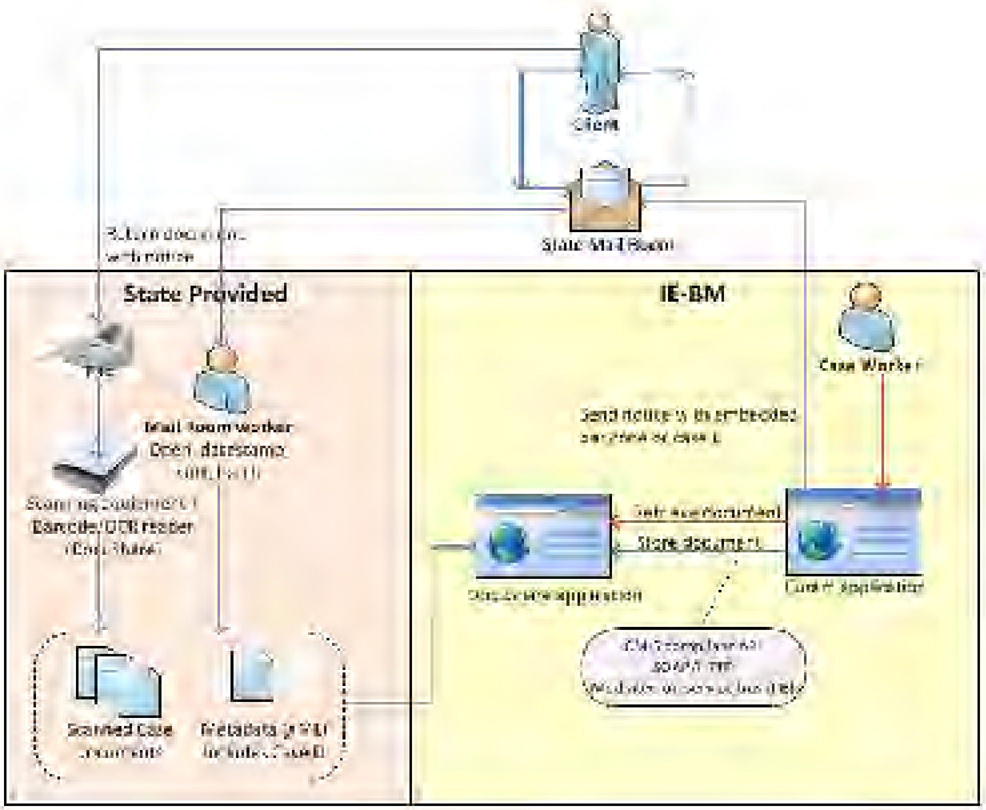


Figure 41: IE-BM document processing architecture

IBM will integrate DocuShare with IBM Cúram by using the DocuShare API. The communication protocol between these two systems is SOAP and HTTP. Web service based communication will be the mode of communication. IBM Cúram provides adapters that are used to integrate with any document content management system that is compatible with CMIS. DocuShare being compatible with CMIS, IBM will use Cúram adapters to integrate with it. As described in the solution architecture, the IIB mediates any communication between system components and IE-BM to any external system. This integration will enable the IBM team to search and store a document and update metadata of a document. The diagram above clearly depicts what IBM plans to implement and what IBM expects from the State.

The document process starts with a client sending paper documents to the State. The documents received in the State Mail room are scanned by the workers. IBM will use the State's existing mail room facility and products to process all incoming documents. IBM assumes that the State mail room workers scan and index incoming documents and upload them into DocuShare content management system.

IBM Cúram has an extensive document generation capabilities as described in section 1.6.1. As part of case management, IBM's solution will generate notices to clients when appropriate. The notice will contain a header page that will include a bar code. The bar code has the case and other pertinent information. This header page will also include instruction on how to send paper documents back to the agency. One of the instructions will be to attach the header page along with their other paper documents. The incoming documents are processed as per the following steps:

- When the document set arrives at the State mail room, the document processing workers will scan to produce the image of the document. It is our understanding that the State has this capability in place.
- The bar code information will be captured as metadata of the document.
- The image of the document will be processed through DocuShare Optical Character Recognition service to read the content of the document to produce a searchable PDF documents.
- The document will then be transported to IBM Cúram along with the document metadata. An enterprise level workflow may be initiated, utilizing both IBM Business Process Manager integrated with Cúram workflow for tracking manual review or processing of any documents when necessary.
- IBM Cúram will associate the document to the case number provided as part of the metadata of the document.
- When a document is successfully scanned and attached to the appropriate case in IE-BM, the system will generate a communication for the client indicating a document is received and it is being processed.

Our proposed solution fully exploits the document indexing, search, and OCR capabilities of Xerox DocuShare. Image capture, metadata generation, and version control are provided by DocuShare. Cúram provides the access control layer, such that documents can be shared between programs to the extent that users are authorized for such sharing using Cúram role based and attribute based access controls. IBM is assuming that DocuShare software has the capabilities described in Template T-8 – Technical Requirements Traceability Matrix, Tab T3.3, and our proposed solution will integrate with this software for enabling the capabilities in our proposed solution.

[T3.3.1, T3.3.2, T3.3.3, T3.3.4, T3.3.5, T3.3.6, T3.3.7, T3.3.8, T3.3.9, T3.3.10, T3.3.11, T3.3.12, T3.3.13, T3.3.14, T3.3.15, T3.3.16, T3.3.17, T3.3.18, T3.3.19, T3.3.20, T3.3.21, T3.3.22, T3.3.23, T3.3.24, T3.3.25, T3.3.26, T3.3.27, T3.3.28, T3.3.29, T3.3.30, T3.3.31, T3.3.32, T3.3.33, T3.3.34, T3.3.35, T3.3.36, T3.3.37, T3.3.38, T3.3.39, T3.3.40, T3.3.41,

T3.3.42, T3.3.43, T3.3.44, T3.3.45, T3.3.46, T3.3.47, T3.3.48, T3.3.49, T3.3.50, T3.3.51, T3.3.52, T3.3.53, T3.3.54, T3.3.55, T3.3.56, T3.3.57, T3.3.58, T3.3.59, T3.3.60, T3.3.61, T3.3.62, T3.3.63, T3.3.64, T3.3.65, T3.3.66, T3.3.67]

3.3.4 Application Server

The Vendor should ensure that the responses to this section are in alignment with the requirements set forth in Template T-8 – Technical Requirements Traceability Matrix, Tab T3.4.

Instructions: Describe the Application Server technology and design approach for supporting the new IE-BM Solution and future IE-BM Solution supported Systems. The Vendor's response, at a minimum, should take the following topics into consideration while providing the details:

- Enterprise ready and scalable
- Clustering
- Administration
- Security

For Application Server technologies, the current EEF deployment uses IBM WebSphere. DHS has "Preference" to leverage this technology product as part of the solution design.

The Vendor should describe how DHS requirements will be satisfied by the technologies included in the proposed solution design. If the Vendor is proposing to use alternative products, provide appropriate rationale and justification for the proposed technology component and approach.

IBM will use the preferred Application Server software, IBM WebSphere ND in the solution.

Enterprise-ready and scalable

WebSphere ND edition provides an advanced run-time environment for large-scale and mission-critical application deployments and offers near continuous availability and centralized intelligent management capabilities for deploying and managing thousands of instances.

[T3.4.1]

Clustering

WebSphere ND provides clustering capabilities across multiple instances to provide near-continuous availability of the application tier.

The high availability framework that is provided with WAS ND eliminates single points of failure and provides peer-to-peer failover for applications and processes running within the WAS ND environment. This infrastructure is managed by a high-availability manager and includes cells, clusters, core groups, and high-availability groups. Every high-availability group has a policy associated with it that the high-availability manager uses to determine which members of a high-availability group are active at a given time.

[T3.4.2, T3.4.3]

Administration

WAS ND provides a Web-based (browser interface) administrative console that is used to manage the WAS ND installation. The administrative console supports a full range of administrative activities using agent-based technology. WAS ND also provides the PMI data to help monitor the overall health of the WAS environment. PMI provides average statistics on WAS resources, application resources, and system metrics.

[T 3.4.8]

Intelligent management

Intelligent management provides application server virtualization, resource management, and a host of advanced operational facilities, such as performance visualization, health management, and application edition management. Intelligent management enhances operational efficiency by deploying dynamic operations, servicing high-volume transactional workloads with linear scalability and high availability, and managing large scale, continuously available application server environments.

Application edition management provides the ability to roll out new versions of applications without experiencing down-time for a maintenance window. Health management offers the ability to specify conditions to monitor and corrective actions to take when the conditions are met. Both of these capabilities improve the resiliency and availability of applications in an intelligent management environment. Dynamic workload management allows you to automatically change the application footprint during run-time, based on incoming application demand. As a result, multiple applications sharing a common resource pool can provision the average usage and can share a set of resources to handle peak usage scenarios. Configuration aspects of WebSphere ND such as Network Queues or the Autonomic Request Flow Manager can be used for overload protection or to prioritize worked based on runtime statistics.

[T3.4.4., T.3.4.5]

High-availability management

WAS ND includes a high-availability manager component. The services that the high-availability manager provides are applicable to the WAS ND environment.

The high-availability manager provides several features that allow other product components to make themselves highly available. A high availability manager provides the following elements:

- A framework that allows singleton services to make themselves highly available. Examples of singleton services that use this framework include the transaction managers for cluster members and the default messaging provider, also known as the service integration bus.
- A mechanism that allows WAS ND instances to easily exchange State data. This mechanism is commonly referred to as the bulletin board.
- A specialized framework for high speed and reliable messaging between processes. This framework is used by the data replication service when the product is configured for memory-to-memory replication.

[T3.4.9]

Security

IBM WebSphere security is based on the critical security principle of secure by default.

The Java EE specification and WAS provide a powerful infrastructure for implementing secure systems.

WAS provides a Security Configuration Wizard to guide administrators through the process of completing the basic requirements to secure the application serving environment.

WAS also provides a security configuration report which gathers and displays the current security settings of the Application Server. Information is gathered about core security settings, session security, web attributes, administrative users and groups, Common Object Request Brokerage Architecture (CORBA) naming roles, and cookie protection. When multiple security domains are configured, each security domain has its own report with a subset of the sections shown in the global security report that apply to the domain.

Administrative security

Administrative security can be thought of as a "big switch" that activates a wide variety of security settings for WAS. Values for these settings can be specified, but they will not take effect until administrative security is activated. The settings include the authentication of users, the use of Secure Sockets Layer (SSL), and the choice of user account repository. In particular, application security, including authentication and role-based authorization, is not enforced unless administrative security is active. Administrative security is enabled by default.

Administrative security represents the security configuration that is effective for the entire security domain. A security domain consists of all of the servers that are configured with the same user registry realm name. The basic requirement for a security domain is that the access ID that is returned by the registry or repository from one server within the security domain is the same access ID as that returned from the registry or repository on another server within the same security domain. The access ID is the unique identification of a user and is used during authorization to determine if access is permitted to the resource.

The configuration of administrative security for a security domain includes the following technologies:

- Authentication of HTTP clients.
- Authentication of IIOP clients.
- Administrative console security.
- Naming security.
- Use of SSL transports.
- Role-based authorization checks of servlets, enterprise beans, and mbeans.
- Propagation of identities (RunAs).
- The common user registry.
- The authentication mechanism.

SAML is rapidly becoming the technology of choice to provide cross-vendor, single application security.

Application security enables security for the applications in the WAS environment. This type of security provides application isolation and requirements for authenticating application users.

Administrative security is enabled by default. Application security is disabled by default. Administrative security must be enabled for application security to be enabled. Application security is in effect only when administrative security is enabled.

Java2 security

Java 2 security provides a policy-based, fine-grain access control mechanism that increases overall system integrity by checking for permissions before allowing access to certain protected system resources. Java 2 security guards access to system resources such as file I/O, sockets, and properties. Java 2 Platform, Enterprise Edition (J2EE) security guards access to web resources such as servlets, JSP files, and EJB methods.

Communications security

SSL and TLS is a key component of the WAS security architecture, used extensively for securing communication. SSL and TLS is used to protect HTTP traffic, IIOP traffic, LDAP traffic, MQ traffic, JDBC traffic, messaging traffic over the Integration Bus between WebSphere messaging engines, J2C, and SOAP traffic. SSL requires the use of public and private key pairs, and, in the case of WAS, these keys are stored in key stores.

Testing security

WAS provides some basic tests that show whether the fundamental security components are working properly.

Security standards support

WAS supports a number of open standards in security to provide flexibility in authentication. The following key standards are supported:

- OpenID and OAuth: OpenID Connect is a simple identity protocol and open standard that is built on top of the OAuth 2.0 protocol. It enables client applications to rely on authentication that is performed by an OpenID Connect Provider to verify the identity of a user.
- SAML: An OASIS open standard for representing and exchanging user identity, authentication, and attribute information SSO interoperability.
- LDAP: WAS supports LDAP directories, including MS Active Directory.

Security hardening

Security hardening is the act of configuring WAS, developing applications and configuring various other related components in a way to maximize security, in essence, to prevent, block, or mitigate various forms of attack.

IBM provides detailed guidance for hardening the WAS environment.

See Overview and Approach to Security Hardening:
https://www.ibm.com/developerworks/websphere/techjournal/1210_lansche/1210_lansche.html

and Advanced Security Considerations:
https://www.ibm.com/developerworks/websphere/techjournal/1303_lansche/1303_lansche.html.

[T3.4.7]

3.4 Integration Services Layer

3.4.1 Application Integration and Enterprise Service Bus (ESB)

The Vendor should ensure that the responses to this section are in alignment with the requirements set forth in Template T-8 – Technical Requirements Traceability Matrix, Tab T4.1 and T4.2.

Instructions: Describe the Vendor's approach to leveraging the application and data integration hub technologies and services for the DHS IE-BM Solution. The Vendor's

response, at a minimum, should take the following topics into consideration while providing the details:

- Application integration within DHS and across State Agencies
- Data integration, integrity and performance
- Messaging and standards support
- Workflow Engine Configuration and Execution

For Enterprise Service Bus and Application Integration technologies, the current EEF deployment uses Red Hat JBoss ESB, but in a limited footprint. For Data Integration technologies, the current EEF deployment uses IBM InfoSphere.

The State has a “Preference” for a Hybrid Integration Platform that combines traditional on premise ESB capabilities and the emerging iPaaS (Integration Platform as a Service). For ESB, DHS has “No Preference” and for iPaaS, the “Preference” is Informatica Cloud. The Vendor is free to suggest suitable ESB and Integration technologies that can meet the requirements specified in the RTM along with appropriate rationale and justification.

The Vendor should describe how DHS requirements will be satisfied by the technologies included in the proposed solution design. If the Vendor is proposing to use alternative products, provide appropriate rationale and justification for the proposed technology component and approach.

This section will describe the IBM team’s approach to data integration within the IE-BM solution. Our proposed solution enables the State of Arkansas to achieve their strategic vision of service oriented architecture for its IE-BM solution. IBM will start with the big picture of our proposed solution as the foundation of the topic, as shown in the following diagram:

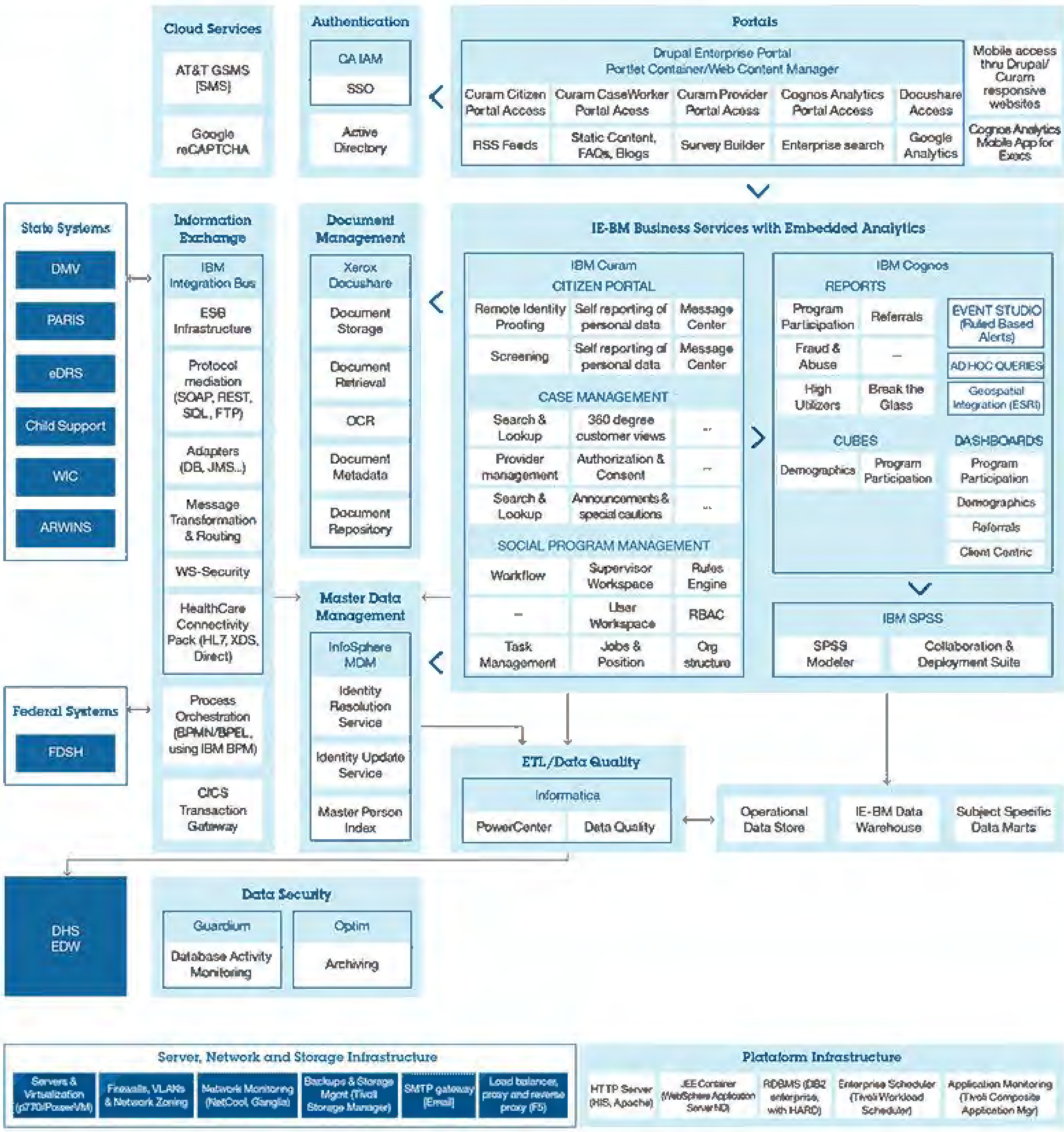


Figure 42: IE-BM solution

The following list includes some of the major solution components:

- IBM Cúram for case management.
- IBM Cognos for business analytics and reporting.
- Xerox DocuShare for document management.
- InfoSphere MDM.
- IBM DB2 for Operational Data Store and Data Warehouse.
- InfoSphere Guardium for data monitoring.

As with any large-scale enterprise solution, there will be continuous data flow between these components. Dataflow occurs within internal system components, as well as data flow between a number of external systems that an enterprise solution needs to communicate with. This is especially true for State of Arkansas' IE-BM solution, where the IE-BM will interact with various external systems, State and Federal agencies, to determine benefit eligibility and its continuous maintenance of benefit cases. This is where we introduce IBM Integration Bus (IIB), an industry leading enterprise service bus that connects applications together regardless of message format and protocol they support.

IIB is the central integration hub that will enable IBM to build an architecture that interacts and exchanges data with system components and external systems in a flexible, dynamic, and extensible manner. IIB routes, transforms, and enriches messages from one location to another location with the following support:

- Wide range of protocols: WebSphere MQ, JMS 1.1 and 2.0, HTTP and HTTPS, web services (SOAP and REST), File, Enterprise Information Systems (including SAP and Siebel), and TCP/IP.
- Broad range of data formats: Binary formats - XML and industry standards including SWIFT, EDI, and HIPAA.
- Many operations, including routing, transforming, filtering, enriching, guaranteed delivery, monitoring, distribution, collection, correlation, and detection.

[T4.1.1, T4.1.2, T4.1.3, T4.1.4, T4.1.5, T4.1.6, T4.1.7, T4.1.8, T4.1.9, T4.1.10, T4.1.11, T4.1.12, T4.1.13, T4.1.14, T4.1.15, T4.1.16, T4.1.17, T4.1.18, T4.1.19, T4.1.20, T4.1.21, T4.1.22, T4.1.23, T4.1.24, T4.1.25, T4.1.26, T4.1.27, T4.1.28, T4.1.29, T4.1.30, T4.1.31, T4.1.32, T4.1.33, T4.2.1, T3.4.6]

The following list includes examples of the data flow (or communication) of our IE-BM solution to illustrate how the IIB operates:

- When a client applies for a benefit online, the IE-BM system needs to verify if the person is already registered in IE-BM. The application request comes to IBM Cúram; however, all client indices are maintained in MDM. As we recall from our earlier description of system architecture, all person demographic data and their program participation information are in MDM. This means that IBM Cúram needs to communicate with MDM to check for existence of this client. If the client does not exist, IBM Cúram needs to register the person. Thus, IBM Cúram needs to send another request to create a new client index to MDM. The data format that IBM Cúram sends is different than what MDM can understand. There is a need for data transformation for communication between these two systems. IIB makes this task easy. IIB not only transforms the required data, it also guarantees that the data is delivered to the destination. In addition, it keeps all necessary log information needed for audit trace. This is a flexible architecture as this allows the State to go to another source for person demographic data without any changes to its case management solution, IBM Cúram.
- Clients send a paper application. The paper application gets scanned and OCRed in the document processing center by Xerox DocuShare components. The document image gets stored in the DocuShare content management. However, the application data needs to flow to IE-BM case management component, IBM Cúram. DocuShare sends the data to IIB, IIB transforms the data and delivers to IBM Cúram.
- IE-BM needs to communicate to Social Security Administration (SSA) to verify client attested data. This happens through an interface asynchronously. IE-BM generates a request file,

sends to IIB. IIB collects all the requests coming for a particular period of time, for example a day, merges all the request in a single file in a format acceptable by the SSA and sends the file through a secured FTP to the SSA. The response is handled in a reverse manner.

Instructions: Describe the Vendor's approach to SOA Governance for the DHS IE-BM Solution. The Vendor's response, at a minimum, should take the following topics into consideration while providing the details:

- Use of Metadata Repository and Service Registry
- SOA governance approach

For Enterprise Service Bus and Application Integration technologies, the current EEF deployment uses RedHat JBoss ESB, but in a limited footprint. For Data Integration technologies, the current EEF deployment uses IBM InfoSphere.

The State has a "Preference" for a Hybrid Integration Platform that combines traditional on premise ESB capabilities and the emerging iPaaS (Integration Platform as a Service). For ESB, DHS has "No Preference" and for iPaaS, the "Preference" is Informatica Cloud. The Vendor is free to suggest suitable ESB and Integration technologies that can meet the requirements specified in the RTM along with appropriate rationale and justification.

SOA Governance approach

The IBM proposed solution for IE-BM includes WebSphere Service Registry and Repository (WSRR) that provides governance, service registry and repository functions for service-oriented architecture (SOA) enterprise middleware and applications. WSRR is compatible and is proven to be a highly effective product in the space to work with IBM Integration Bus (IIB) which is our proposed product for the integration layer of IE-BM solution.

IBM strongly believes that the Service-oriented architecture (SOA) is a compelling technique for developing software applications that best align with business models. However, SOA increases the level of cooperation and coordination that is required between business and information technology (IT), as well as among IT departments and teams. This cooperation and coordination is provided by SOA governance, which covers the tasks and processes for specifying and managing how services and SOA applications are supported.

Governance is the means of establishing and enforcing how a group agrees to work together. Specifically, there are two aspects to governance:

- Establishing chains of responsibility, authority and communication to empower people by determining who has the rights to make what decisions.
- Establishing measurement, policy, and control mechanisms to enable people to carry out their roles and responsibilities

While governance determines who has the authority and responsibility for making the decisions, *management* is the process of making and implementing the decisions. To put it another way, governance says what should be done, while management makes sure that it gets done.

IT governance is about who is responsible for what in an IT department and how the department knows that the responsibilities are being performed.

Specifically, IT governance establishes:

- Decision making rights that are associated with IT

- Mechanisms and policies that are used to measure and control the way IT decisions are made and carried out

SOA adds the following unique aspects to governance:

- Acts as an extension of IT governance that focuses on the life cycle of services to provide the business value of SOA.
- Determines who should monitor, define, and authorize changes to existing services within an enterprise

Layer 9: The Governance Layer

The IBM SOA Architecture in our proposed solution is described with the diagram Figure 4: IBM SOA architecture found in *Section 1.0 General Technical Solution Approach*. As illustrated in the diagram, Layer 9 supports SOA governance that includes policy-time and run-time governance. Policy-time governance defines the SOA reference architecture, controls inherited from or defined by the enterprise, policy definitions and policy-based decision processes, and measure to maintain the relevance of the SOA governance model over time. Run-time governance supports a service registry, which stores various versions of a service and over time. The value of this layer is to provide mechanisms to define, monitor, and implement governance from an enterprise architecture perspective.

Governance has four main processes:

1. Compliance - Conformance or exception processes and policies
2. Vitality - Provide the continued relevance of key governance model constructs, such as reference models, life-cycle (activities, workproducts), etc.
3. Communication - Disseminate and educate the fundamental constructs of life-cycle, governance models, etc.
4. Life-cycle - Describe the activities, roles and workproducts as it relates to the modeling of services throughout the life-cycle.

At the heart of these processes is the Service Model, the unifying concept that binds these elements to together and makes them relevant.

Service Registry

WebSphere Service Registry and Repository (WSRR), part of IBM's IE-BM proposed solution, provides registry functions that support publication of metadata about the function, requirements, and semantics of services that enable service consumers to find services or to analyze relationships between services. It also provides repository functions to store, manage, and version service metadata. WSRR is a J2EE application that is based on IBM WebSphere Application Server and that uses a relational database as a backing store for service metadata.

The registry and repository component provides basic service metadata storage, update, and retrieval functions that support create, retrieve, update, delete, and query capability for service metadata that is stored in the database according to the WSRR content model.

WSRR uses DB2 relational database as a backend store for service information and metadata persistence. WSRR includes service information and metadata artifacts that are in the form of XML documents. WSRR accepts any form of XML document, but some types of XML documents, such as WSDL and XSD, are modeled. When one of these types of XML documents is loaded into WSRR, it is parsed into a finer-grained information model. WSRR can also store binary documents, for example, a service definition document written in Microsoft Word, that aid in the governance of services.

A more detailed explanation on this subject and solution fit per IE-BM requirements is covered under *Service oriented architecture (SOA) compliance and alignment with DHS technology standards* in *Section 1.0 Technical Solution Approach*.

3.4.2 Data Integration, Quality and ETL (Extraction, Transformation and Load)

The Vendor should ensure that the responses to this section are in alignment with the requirements set forth in Template T-8 – Technical Requirements Traceability Matrix, Tab T4.2.

Instructions: Describe the Vendor's approach to Data Integration and supporting technologies for Data Extraction, Transformation and Load (ETL) into appropriate reporting and analytics target systems. The Vendor's response, at a minimum, should take the following topics into consideration while providing the details:

- Connectivity/adapter capabilities (data source and target support)
- Data delivery capabilities
- Data transformation capabilities
- Metadata and data modeling capabilities
- Commonality, consistency and interoperability between components of the toolset
- Design and development environment capabilities
- Data governance capabilities (interoperation with data quality, profiling and mining capabilities)
- Deployment options and runtime platform capabilities
- Operations and administration capabilities
- Service enablement capabilities

For ETL technologies, the current EEF deployment uses Informatica PowerCenter. DHS has a "Preference" to use Informatica PowerCenter or IBM InfoSphere as the standard tools for data integration functionality.

If the Vendor is proposing to use an alternative product, provide appropriate rationale and justification for the proposed technology component and approach.

For ETL technologies, the current EEF deployment uses Informatica PowerCenter. DHS has a preference to use Informatica PowerCenter or IBM InfoSphere as the standard tools for data integration functionality. As part of the IE-BM solution, IBM is proposing Informatica PowerCenter as the ETL tool for data movement and integration. As detailed in the following section, Informatica contains a robust set of features that enable connectivity, transformation, metadata management, operational support, and efficient scheduling and administration.

Connectivity and adapter capabilities

Informatica provides an industry-leading set of data source connectivity to systems and formats such as RDBMS, XML, flat files, web services, email systems, LDAP, Microsoft Office, and other applications. Once connected, Informatica has a full array of functions and features to manipulate the data and can use capabilities within the data source, such as distributed queries, to complement its own. Informatica is set up to read, transform, and write data that has been structured based on industry standards, both through the standard connectivity and by providing pre-built solutions. Using Informatica within the IE-BM solution facilitates that all DHS data sources and types can be integrated into a single, cohesive, structure.

[T4.2.6, T4.2.10, T4.2.16]

Data delivery capabilities

For the same data sources Informatica can read from, it can write to as well. This delivery can be done using a variety of methods, bulk, change data capture, event-based, and others. Informatica can therefore be used in multiple situations across the IE-BM solution including nightly data loads to the Data Warehouse, processing interface flat files immediately after uploaded, or by continuing loading data for real-time or near-real-time analysis.

Informatica can be setup to deliver the same source data to multiple target locations. In addition to being loaded into production targets, data sourced from production data stores can be loaded into development and test systems through a separate flow. These secondary flows include masking and de-identification of the data to make it suitable for lower environments. This concurrent processing reduces development effort and maintenance, while providing a robust data set to facilitate quality development and test results.

[T4.2.8, T4.2.13]

Data transformation capabilities

Informatica has a wide array of data transformation functionality that is both OOTB and transformation functions that can be custom-built. Informatica provides standard data transformation abilities such as data type conversion, string manipulation, mathematical formulas, and summarizations. It also has data securing capabilities including masking, encryption, substitution, blurring, and others. Informatica can standardize values within fields by using find and replace, and whole message formats can be read and translated between systems.

Additional data transformation can be done through custom-built functions and routines. These functions can be developed and then re-used across all Informatica ETL jobs. Informatica can also execute external objects such as stored procedures or use database views to offload data processing to a different architecture tier. This technique has been used at the County of San Diego to great effect, where the source database does the heavy lifting of joining and organizing a data set, leaving Informatica free to provide the data movement capability.

These data transformation capabilities all serve to create a clean, standardized set of data which can be used within business processes and analytics. Informatica enables standardizing disparate code values, cleaning addresses, and enforcing business rules and other transformations that increase data quality and usefulness.

[T4.2.1, T4.2.4, T4.2.7, T4.2.9, T4.2.12, T4.2.14, T4.2.15]

Metadata and data modeling capabilities

Informatica PowerCenter repository metadata contains information and displays a visual map of the data flows that is highly valuable for users, administrators, and developers. This information is useful for many activities, such as quality assurance and optimization, taking proactive measures, and enforcing development standards. Various reports are available such as PowerCenter Mappings, Workflows, Sessions, Object Validation, Wellness, and Code Validation. In addition to the stock reports, the underlying metadata can be read or shared with other systems for further analysis or in support of business processes.

For developing ETL flows, when importing data from source systems, Informatica will read metadata from that source including column types, lengths, and keys. This gives the developer the ability to see lineage, do impact analysis, and view any data dependencies. These capabilities help facilitate high-quality data flows within the IE-BM solution

[T4.2.2, T4.2.39]

Informatica toolset and development environment

Informatica has a set of integrated tools that developers and administrators use to design, develop, deploy, and monitor ETL. These tools all connect to a common metadata repository, but each tool serves a different function. PowerCenter Designer is used to build mappings between sources and targets and include transformations. Workflow Manager connects the mappings and transformations built in Designer into an overall flow. Workflow Monitor allows for the scheduling and monitoring of the flows built in Workflow Manager and the capability to manually start and stop flows. Lastly, Repository Manager is an object administration tool, where users can move mappings, sessions, and workflows between folders or repositories. All four of these tools are Windows-based and developers can access them on a centralized server or install them locally to work with the ETL. Each of the tools can be launched from within the others, allowing developers to have all the needed capabilities readily available.

Data governance capabilities

Informatica's Data Quality product allows both technical and non-technical resources to analyze data and develop business rules to facilitate compliance and fix issues. These business rules are used to build transformations that improve or fix data issues, and these transformations can then be included within any ETL flow developed with Informatica. The same suite of tools validating data quality is the same suite used to develop the actual data movement.

Deployment options and run-time platform

Informatica has multiple deployment options. It has a manual import and export option to move objects between repositories. It also has a more robust option in the ability to create deployment groups. A deployment group contains folders, mappings, mapplets, reusable transformations, sources, targets, workflows, sessions, and tasks. These deployment groups are labeled for easy versioning, setup for easy rollback, can be deployed to multiple environments, and allow administrators to validate objects after deployment.

Each environment in the IE-BM solution (development, test, and production) will have dedicated Informatica repositories. These repositories exist within supported relational databases and are managed and updated by using the aforementioned PowerCenter client tools. Through these Windows-based tools, workflows are developed, deployed, scheduled, and monitored.

[T4.2.38]

Operations and administration

Informatica workflows are executed and scheduled through the Workflow Manager tool. Here workflows can be run on demand, scheduled, or setup to look for a specific trigger. Once executed, an administrator can review the progress of currently-running or historical runs of the workflows. Logging of workflow events can be done to flat files or RDBMS tables, and logs will capture environment statistics, load times, quantity of records, errors, and other commands.

Instructions: Describe the Vendor's approach to leveraging the preferred Data Quality technologies for the IE-BM Solution. The Vendor's response, at a minimum, should take the following topics into consideration while providing the details:

- Data Formats catered for
- Profiling capabilities
- Parsing
- Standardization, Cleansing and Enriching
- Stewardship Support
- Deduplication

For Data Quality and ETL technologies, the current EEF deployment uses Informatica PowerCenter. DHS has a “Preference” to use Informatica PowerCenter or IBM InfoSphere as the standard tools for data quality functionality.

If the Vendor is proposing to use an alternative product, provide appropriate rationale and justification for the proposed technology component and approach.

For Data Quality and ETL technologies, the current EEF deployment uses Informatica PowerCenter. DHS has a preference to use Informatica PowerCenter or IBM InfoSphere as the standard tools for data quality functionality. IBM is proposing Informatica PowerCenter as the tool to manage data quality within the IE-BM solution. Informatica Data Quality provides all of the functionality listed within the requirements. By continuing to use the suite of Informatica products, collaboration between developers and business users to create and implement data quality standards will be tightly integrated.

Data formats

As part of the IE-BM solution, Informatica supports a wide array of data format libraries that are pre-built and contain prepackaged data transformations. These libraries are aligned with the latest industry standards, support data validation, and improve the speed and quality of development. Of specific import to the IE-BM solution, HIPAA and HL7 libraries are among those available.

[T4.2.3, T4.2.11]

Profiling capabilities

The Informatica Data Quality tool allows business users and technical developers to collaborate on profiling data from DHS systems imported into the IE-BM solution. Data Quality will give users all of the variations and inconsistencies within the data and allow them to create rules to manage those. Examples of data profiling options include finding all variations of the data stored within a field, displaying the number of occurrences of each value, showing the minimum or maximum value, and identifying if there are any null values. In addition to looking at individual fields, Data Quality can examine relationships among the data to determine whether or not integrity is maintained between tables and that duplication or omission of codes does not exist.

As the data is being analyzed, Data Quality will allow users to create rules that will then be included within the ETL workflow that is developed. The group effort between business users and developers means that these rules are implemented as intended and not lost through translation or misreading of requirements. These rules can be run on an ad-hoc basis, but they can be preserved, scheduled, and executed to continuously monitor the data for anomalies and changes. If anomalies are found, exception handling will be put in place to facilitate that the overall data loads continue apace, while key parties are notified to remedy any issues.

To speed development, Data Quality has the ability to connect to data sources not yet brought into IE-BM databases. Remote source system profiling gets users looking at data and creating rules at the same time interfaces are being developed. Where common fields are being brought in from multiple source systems, Data Quality can easily read from merged exports in order to compare the full range of values that will be eventually loaded.

[T4.2.5, T4.2.17, T4.2.18, T4.2.19, T4.2.20, T4.2.21, T4.2.29, T4.2.30]

Parsing and de-duplication

Informatica will supply a range of functions to aid in parsing of data. This can include the ability to split fields and parse based on token sets for fields like zip code, SSN, and phone numbers, and pattern matching. Any parsing rules can be stored and re-used across all the ETL workflows, validating similar data is parsed in the same manner. Any changes or updates to a parsing procedure will just need to be made in one place but will propagate to all workflows.

[T4.2.3]

Standardization, cleaning, and enriching

Accelerators and built-in tools allow data within commonly-occurring fields to be standardized, cleansed, and enriched. The accelerators provided by Informatica will work to guarantee fields like addresses are valid, phone numbers have a single format, and that SSN have nine digits. Additional tools allow developers to develop custom, reusable, routines to handle unique and custom data fields. These routines, combined with reference tables, can standardize codes and values contained within and across DHS data sources.

Addresses, which are of specific utility and importance, can be validated, standardized, and geocoded using Informatica software. Addresses can be automatically fixed or flagged for further review.

[T4.2.4, T4.2.32, T4.2.35, T4.2.36]

Stewardship support

Informatica Data Quality provides auto profile reports based on standard functions included in the auto profile. These display metrics such as distinct value count, redundancies, row count, and more. Custom profile reports can also be created where more complex or multiple functions are used to analyze the data. Data from these profile reports can be viewed in a tabular form, graphically, or exported for further analysis.

Profiling of data can be run continuously, thus building a historical view of the data being loaded into the IE-BM solution. Data stewards will be able to view trends in data quality and changes to any data values being loaded within fields. For data issues requiring immediate attention, alerts and notifications will be setup to notify administrators.

Repository, logging, and profiling data will also be available for ad-hoc analysis, reporting, and dashboards using the IE-BM solution's Cognos software. A Cognos metadata model can be created on top of the Informatica data and be made available to business intelligence developers and data analysts through Cognos web-based client tools. Any reports or dashboards created can be emailed and viewed by key DHS stakeholders.

[T4.2.22, T4.2.23, T4.2.24, T4.2.25, T4.2.26, T4.2.27, T4.2.28, T4.2.34, T4.2.37, T4.2.40]

De-duplication

Informatica has multiple algorithms OOTB to identify and resolve duplicate values including Hamming Distance, Jaro-Winkler, Edit Distance, and Bigram or Bigram Frequency. These algorithms form a robust set of options for developers.

[T4.2.33]

3.4.3 Master Data Management

The Vendor should ensure that the responses to this section are in alignment with the requirements set forth in Template T-8 – Technical Requirements Traceability Matrix, Tab T4.3.

Instructions: Describe the Vendor's approach to leveraging the MDM technologies and/or services that will integrate with and support the Enterprise Master Person Index and Enterprise Master Provider Index strategy for the DHS IE-BM Solution. The Vendor's response, at a minimum, should take the following topics into consideration while providing the details:

- Intra enterprise EMPI
- Probabilistic record matching
- Tunable record matching
- Configurable interface capability
- Master Data Governance Support

There is currently no MDM deployment for the EEF solution.

DHS strategic direction for Enterprise MDM technology includes "Preference" for Informatica's MDM product or IBM InfoSphere Initiate product.

If the Vendor is proposing to use an alternative product, provide appropriate rationale and justification for the proposed technology component and approach.

Our MDM solution enables the person-centric model. It forms the core of the IBM Health and Human Services (HHS) Connect360 design pattern, which was first implemented in the County of San Diego and has since garnered interest nationally and internationally. In San Diego, we implemented this design pattern using InfoSphere MDM Initiate, Cúram, and Cognos. We propose this same integrated solution for the State of Arkansas. This gives the State a unique 360-degree perspective of your clients, in the transactional (Cúram) and analytical (Cognos) realms, using leading products and pre-built integrations. Importantly, this 360-degree perspective is not restricted to data within the IE-BM system alone, but can stretch to any system connected to the MDM.

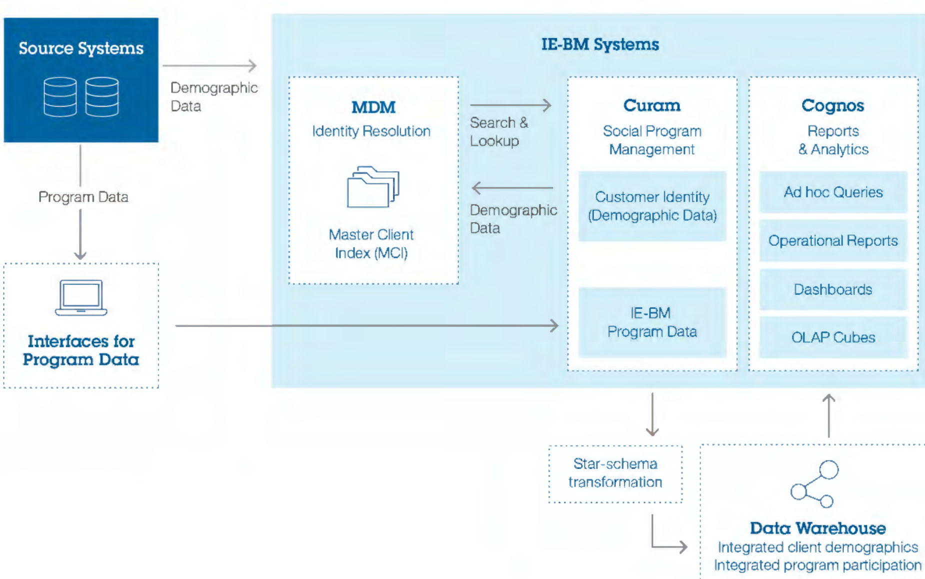


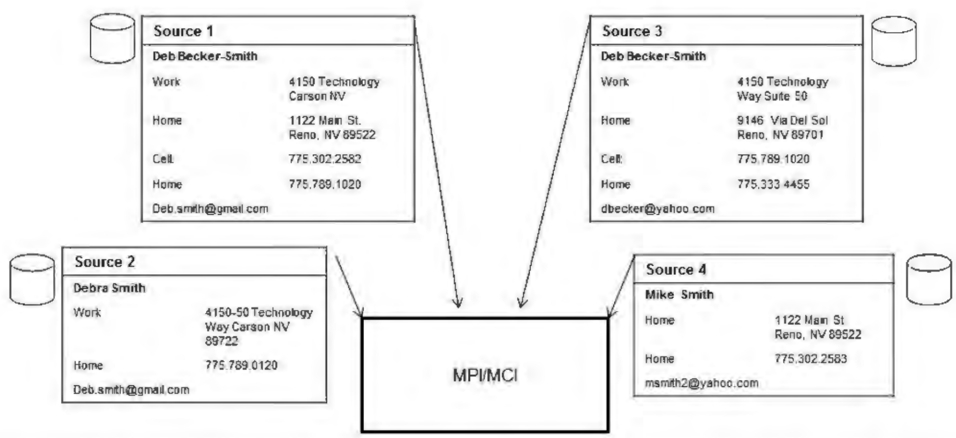
Figure 43: IBM MDM role in the Connect360 design pattern

[T4.3.32, T4.3.33, T4.3.34, T4.3.35]

Registry Style MDM

One of the unique features of IBM InfoSphere MDM and the reason it is so dominantly used in healthcare and public sector is its ability to align to the organization and its governance. Most MDM solutions offer only a traditional mastered approach to MDM, where a master copy of data is stored in a central hub and where other systems must subscribe to this hub. This traditional mastered approach is very invasive to the systems that subscribe to the master hub, since they must be changed to reference the master copy of data instead of their own copies. As a result, MDM initiatives that use the mastered approach tend to take many years, are costly and complex to implement, and invasive to existing systems.

To overcome this, IBM InfoSphere MDM offers a unique federated deployment style, known as the Registry Style. In this style, the key to meeting the Master Client Index challenge is the ability to effectively match client records. IBM InfoSphere MDM supports a library of probabilistic and tunable matching techniques that is the most widespread in the HHS industry. This allows conclusive matching despite discrepancies across the underlying systems. As shown in the following diagram, a composite view of the client can then be formed across multiple source systems, just by having the various systems contribute to the registry. Each system sends certain demographic information, which InfoSphere MDM uses to match the client across systems, thereby forming the most accurate composite view of the client – the “Golden Record”:



Composite View	Deborah Becker	1122 Main St. Reno, NV 89522	4150 Technology Way Suite 50 Carson NV 89521	775.333.4455	775.789.1020	775.302.2582	Deb.smith@gmail.com
Source ID	NAME	HOME ADDRESS	WORK ADDRESS	HOME PHONE	WORK PHONE	CELL PHONE	EMAIL
IDENT 23211	Debra Smith	9146 Via Del Sol Reno, NV 89701	4150-50 Technology Way Carson NV 89722		775.789.0120		Deb.smith@gmail.com
DOS 32323	Deborah Becker	9146 Via Del Sol Reno, NV 89701	4150 Technology Way Suite 50 Carson City, NV 89721	775.333.4455		775.789.1020	dbecker@yahoo.com
ICE 10021	**Deb Becker-Smith**	1122 Main St. Reno, NV 89522	4150 Technology Carson NV	775.789.1020		775.302.2582	Deb.smith@gmail.com

Figure 44: Example Federated cross-matching across systems

The Master Provider Index is built in the same way and leverages the same technologies.
[T4.3.1, T4.3.2, T4.3.3, T4.3.6, T4.3.11, T4.3.12, T4.3.13, T4.3.18, T4.3.21, T4.3.34, T4.3.35, T4.3.36]

Use of Registry Style MDM in the IE-BM solution

The MDM registry will be composed of the following systems:

- IE-BM (Cúram).
- Systems that will coexist with IE-BM and will be referenced by IE-BM during the eligibility determination process, PARIS, eDRS, Child Support, Public Safety.
- Legacy systems that will be absorbed into IE-BM and thereafter retired, till the time such retirement is complete.

Buildup of this MDM registry will be an early phase activity in the project, starting with adding Cúram as one of the source systems for MDM. The MDM system thereafter will not only enable the person-centric view of the client, even before project is complete, but will also become a key enabler for interfaces, conversions, analytics, and data quality. The following table describes how MDM is integrated into the IE-BM solution and the DHS portfolio:

Table 13: MDM integration into the IE-BM solution and DHS portfolio

System	Integration method	IBM Connect360 assets	Benefits
IE-BM (Cúram)	▪ Cúram person identifiers/demographic data will be added to the MDM index. Thereafter, updates to this data in Cúram will be synched with MDM through an API. ▪ The Cúram 'Person Find' function will be altered to search and lookup from MDM. If the person is found using MDM's probabilistic/fuzzy logic, that person is selected and Cúram transactions are performed against that person. If not found, a new person is created in Cúram and transmitted to MDM. ▪ The system will flag exceptions and act on them (if required) during 'no touch' processing where the person search and	All Cúram-MDM APIs referenced here will be brought in as assets from the IBM Connect360 implementation at San Diego.	▪ Elimination of duplicate persons in Cúram and across the DHS portfolio. ▪ Transact against a well formed and complete "Golden Record" for the person, comprised of demographic data from multiple systems. ▪ Saving on data entry effort, where the person is already defined in Cúram or another system. ▪ Enables a Person Centric Model of Practice extending across the State's system portfolio.

System	Integration method	IBM Connect360 assets	Benefits
	match identifies any issues.		
Systems that will coexist with IE-BM, and will be referenced by IE-BM during the eligibility determination process, e.g. PARIS, eDRS, Child Support, Public Safety	▪ Demographic data and program participation will be added to MDM. Thereafter, updates to this data will be synched with MDM through an API.	The MDM update API is OOTB, and will be configured for Arkansas systems through standard process.	▪ Elimination of duplicate persons in Cúram and across the DHS portfolio. ▪ When these systems interface to Cúram, MDM is a key enabler to the integration, in that the interface transaction is performed against a shared person identity. ▪ When Cúram does an eligibility check against these systems, e.g. PARIS, it performs a multivariate probabilistic search, with a pre-configured threshold beyond which the applicant will be flagged. This is a key differentiator, in that this sophisticated approach is effective in reducing fraud, error and duplication of benefits.
Legacy systems that will be absorbed into IE-BM and thereafter retired	▪ Demographic data and program participation will be added to MDM. Thereafter, updates to this data will be synched with MDM through an API.	The MDM update API is OOTB, and will be configured for Arkansas systems through standard process.	▪ Elimination of duplicate persons in Cúram and across the DHS portfolio. ▪ MDM is a key enabler to the conversion, and vastly improves conversion data quality. Our approach eliminates the creation of duplicate persons during conversion, the major defect in many IE conversions. In fact, industry recognizes MDM as a key early step in large-scale legacy conversion efforts.
IE-BM Reporting	▪ Using the IBM Connect360 data integration framework,	▪ Cognos-MDM API will be	▪ Enables a Person Centric Model of Practice.

System	Integration method	IBM Connect360 assets	Benefits
and Analytics (Cognos)	reports and analytics can be constructed that present a true Person Centric view cutting across programs and systems, even though when the systems are not integrated into Cúram. As long as the system is linked to the MDM registry, this Person Centric view can be constructed.	brought in from San Diego. ▪ The demographic and program participation dashboards and OLAP cubes, which present a key Person Centric view across programs and systems, will be brought in from San Diego.	▪ Deep analytics capability on customer demographics and program participation.

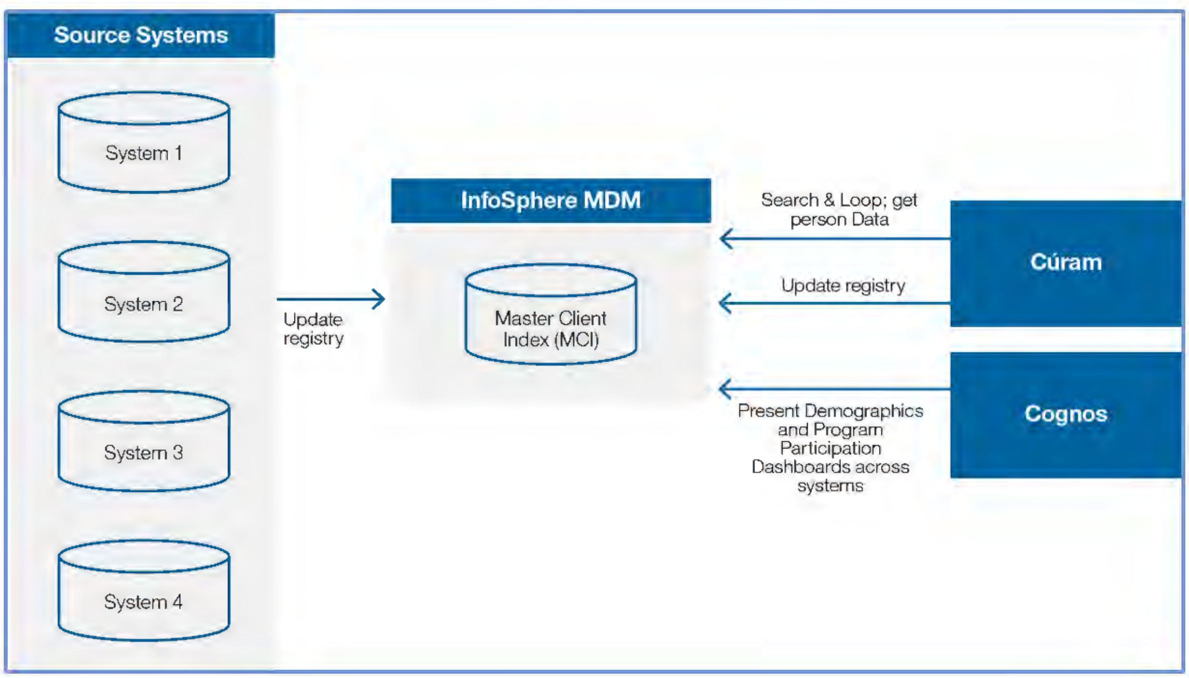


Figure 45: InfoSphere MDM data flows and interactions

[T4.3.1, T4.3.6, T4.3.7, T4.3.8, T4.3.9, T4.3.10, T4.3.11, T4.3.12, T4.3.13, T4.3.17, T4.3.18, T4.3.20, T4.3.21, T3.4.35, T3.4.36]

Details on probabilistic and tuneable record matching

Probabilistic matching

Our probabilistic matching engine can be configured to match on attributes in the State and includes individual algorithm components designed specifically for name, birth date, address, and other client or person attributes.

Matching is configurable and scores applied to potential matches are based upon the organization's data, not a generic weight table. Defining weights to a customer's data is very critical to organizations like the County of San Diego given the ethnic diversity of the population. IBM InfoSphere MDM automatically calculates these weights validating accuracy and reducing implementation time and risk.

IBM's library of fuzzy matching techniques is extensive. Fuzzy matches are scored against probabilistic weights based upon value frequencies in the data.

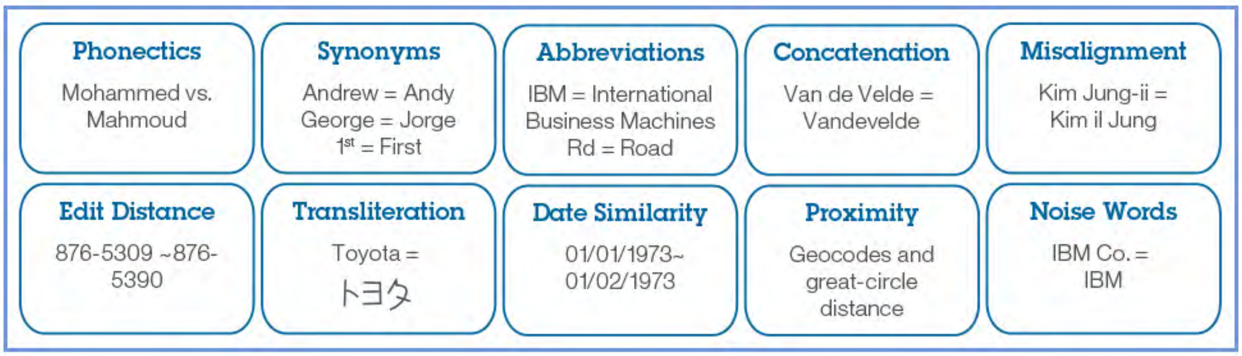


Figure 46: IBM InfoSphere MDM fuzzy matching techniques

IBM does multi-dimensional matching, most all others do only one-dimensional matching.

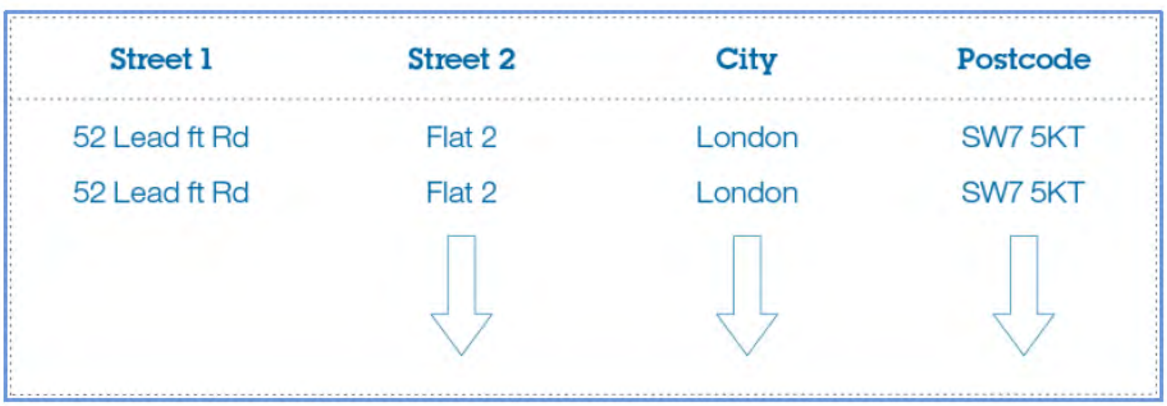


Figure 47: One-Dimensional Matching

Figure 48: IBM InfoSphere MDM Multidimensional Matching

[T4.3.14, T4.3.15, T4.3.17, T4.3.31]

IBM InfoSphere MDM includes a range of OOTB APIs, including Java and Web Service APIs, which can be configured to meet any specific situation. Our APIs have been used in the HHS industry to build interfaces with thousands of systems. At the State of Arkansas, as in other implementations such as the County San Diego, IBM will mediate these interfaces through an IIB that provides an extra layer of configurability. Also, note that the Cúram-MDM and Cognos-MDM APIs will be brought in as ready-to-use assets. The MDM component will track and maintain detailed records on all changes via interfaces and authoring to support audit requirements.

IBM InfoSphere MDM includes data modeling capabilities that are configurable, customizable, extensible, and upgradable. The data model is able to support the State's standards for data content and coding where they exist, and the data model can be expressed using commonly accepted logical data model conventions.

[T4.3.5, T4.3.8, T4.3.9, T4.3.10, T4.3.16, T4.3.18, T4.3.19, T4.3.20, T4.3.23, T4.3.32, T4.3.33, T4.3.34]

The following diagram shows InfoSphere MDM APIs, interfaces, and data flows:

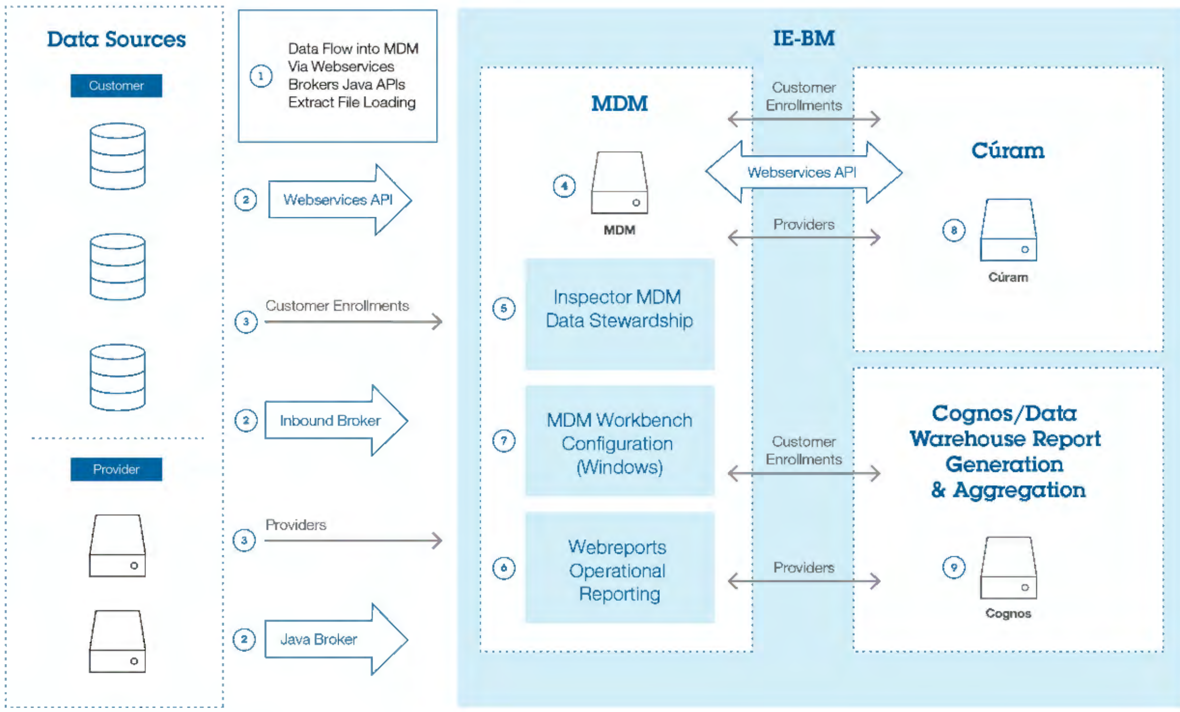


Figure 49: InfoSphere MDM – High-level APIs, interfaces, and data flows

[T4.3.16, T4.3.17, T4.3.18, T4.3.19, T4.3.20, T4.3.21]

Master data governance support

Data stewardship

IBM InfoSphere MDM will provide analytics and performance measures including the quality of active client and provider data in the MDM. Data stewards use IBM InfoSphere MDM Inspector to resolve potential linkages across source systems and perform merges to resolve duplicate records that exist within a single source system. IBM InfoSphere MDM Inspector is a web-based, fully-integrated data stewardship application that provides data stakeholders with a rich user interface for managing data relationships and data quality issues. This application provides new capabilities to view, manage, and modify complex master data relationships, including hierarchical relationships using innovative relationship visualization technology.

[T4.3.4, T4.3.12, T4.3.13, T4.3.14, T4.3.21, T4.3.22, T4.3.27, T4.3.28, T4.3.29, T4.3.30, T4.3.31]

Sophisticated relationship management

The IBM InfoSphere MDM solution can manage, store, and manipulate a number of relationships. These relationships can include the use of multiple third-party sources and establish structure to your rationalized customer data. Using Inspector, our web-based data stewardship application; users can view, modify, and manage their master data and associated relationships, including hierarchies. All changes are logged for audit purposes.

[T4.3.5, T4.3.6, T4.3.7, T4.3.17]

MDM security

The IBM InfoSphere MDM Solution will manage the policies and rules associated with privacy access rights, including configuration and management of differing visibility rules, providing different views for different roles. Our MDM solution will integrate with management and security tools including the State Active Directory to provide authorization and role-based security.

MDM security essentially works at two levels – authentication and authorization. There are two types of uses that access the MDM system – End user for data access and System user for server access.

Authentication for these two types MDM users works as described below:

End user authentication

- The end user does not directly interact with the MDM Server. They interact indirectly through the system user.
- The MDM Server and system user share a trusted relationship

MDM Server trusts the system user to perform adequate authentication and credential validation. Samples of the latter are: a username and password pair, a certificate, or a token.

System user authentication

In order for the system user to access any of the MDM Server components, it needs to authenticate to the J2EE container and establish a trusted channel. The J2EE container refers to the application server used to host MDM Server. The system user should also be included in the ServiceConsumer role, which grants limited access to MDM components.

Authorization

There are two user roles of concern to MDM Server, that of ServiceConsumer and ServiceProvider. Every MDM Entry Point Component (including Web service, service controller and process control) is configured to only grant access to system users that are of the ServiceConsumer role. Each of these entry points then proceed to use the ServiceProvider role as the Run As security role when forwarding the transaction to the internals of MDM Server for processing. The ServiceConsumer role grants a limited amount of access to MDM Server's components. It is important to note that by default, the ServiceConsumer role is assigned to All Authenticated in the security domain in which MDM Server is part of. It is suggested that you configure this role to include only the particular system users that would have a valid reason for accessing MDM Server. Transaction security is the first level of authorization enforced within MDM Server. This process is performed by the Transaction Authorization Provider component and it determines if the end user is allowed to invoke the requested transaction. By default, MDM Server is configured with the MDM Security Manager as the Transaction Authorization Provider. The MDM Security Manager is quite an extensive component of MDM Server, complete with a data model containing user and group profile information. This model ties directly into MDM Server's metadata model, identifying the transactions that the users and groups are entitled to invoke.

[T4.3.23, T4.3.24, T4.3.25, T4.3.26]

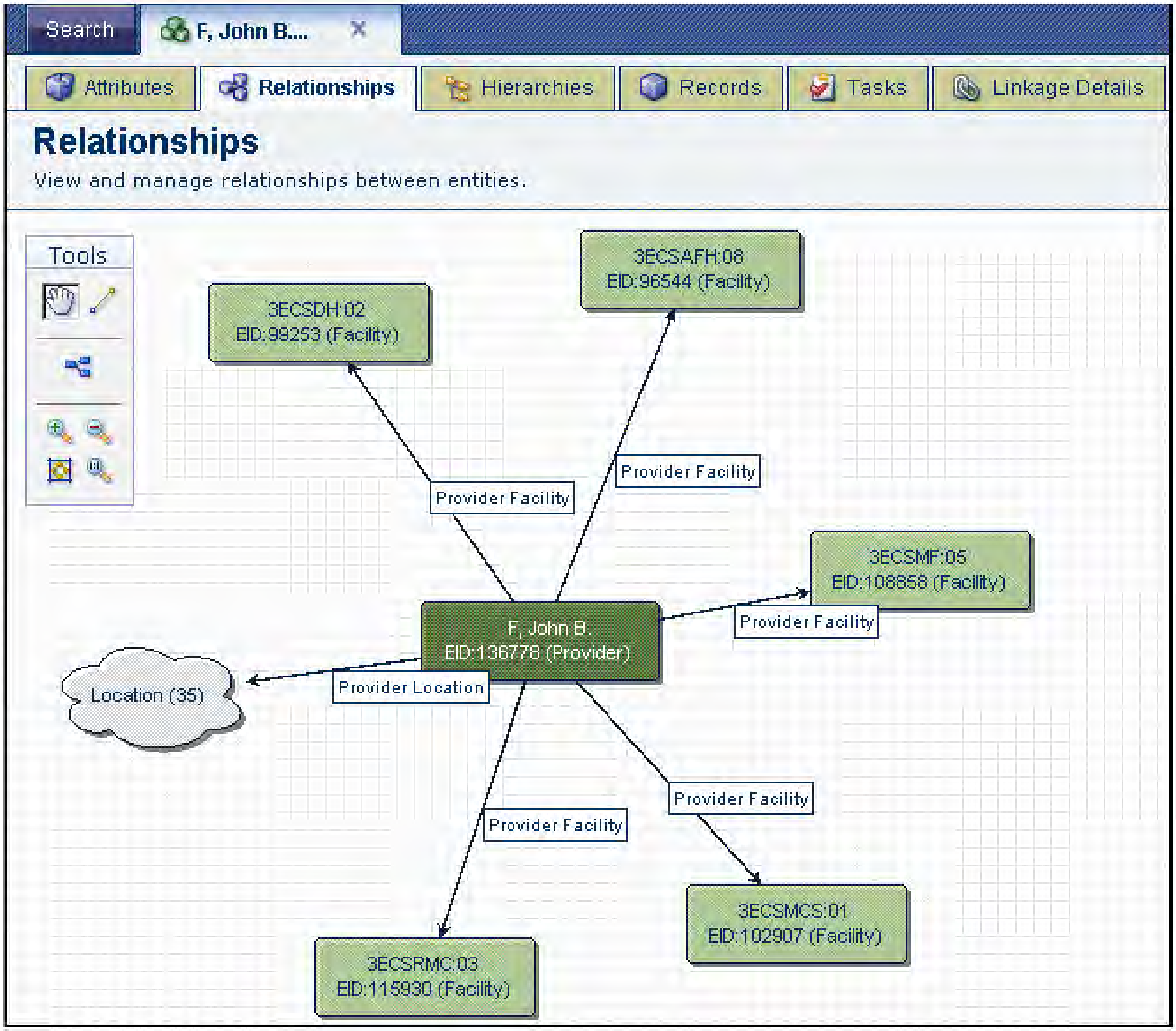


Figure 50: IBM InfoSphere MDM Inspector offers a sophisticated relationship management capability

MDM hierarchy

The MDM Lifecycle Management Update Service requests MDM Hierarchy and Relationship Management Services to detect and create hierarchies, groupings, or relationships that may have been defined. The update service then updates the master data repository automatically.

The Golden View

The IBM InfoSphere MDM solution uses probabilistic matching to link person records across source systems, assigning a common Enterprise ID. In addition, the IBM InfoSphere MDM Person Hub creates tasks for potential duplicate records within a single source system and potential linkage tasks across systems. The following graphic shows the “Golden View:”

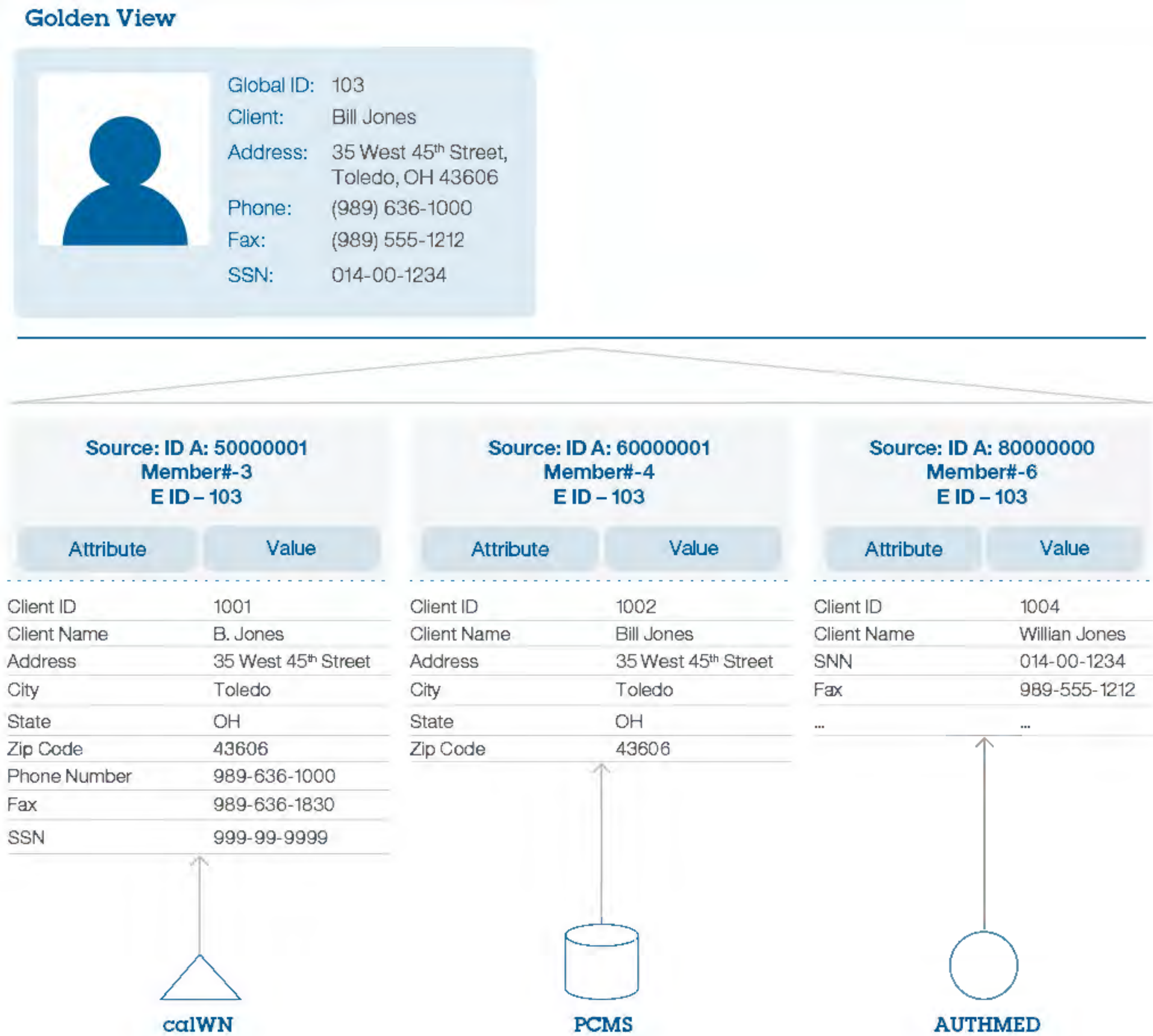


Figure 51: IBM InfoSphere MDM "Golden View"

3.5 Data Services Layer

3.5.1 Database Management Systems

The Vendor should ensure that the responses to this section are in alignment with the requirements set forth in Template T-8 – Technical Requirements Traceability Matrix, Tab T4.3 and T5.1.

Instructions: Describe the Vendor's approach to transactional and analytical "persistent" Database Management. The Database Management approach for the System should take into account the following four major types of data repositories:

- Online Transaction Processing databases shall be the read-write stores of DHS transactional services and systems, and must be the primary source of transactional data management within the System

- Operational Data Store databases shall be used to support operational and tactical data consolidation and data access needs of DHS. The data contained in an Operational Data Store must originate in one or more of the Online Transaction Processing databases.
- Data Warehouse databases shall primarily support managerial and strategic decision making for DHS. A data warehouse may contain de-normalized and/or summarized data rather than detailed data as in an Operational Data Store.
- Data Mart databases shall support departmental decision-making for DHS. The scope of information stored within the data mart data stores will generally be much smaller than within the data warehouse, and is focused on the needs of its unique stakeholders.

The current EEF implementation uses DB2. DHS has "Preference" for DB2 or MS SQL Server RDBMS.

Describe whether the Vendor can leverage DHS preferred RDBMS technologies and how they intend to do so.

If the Vendor is proposing to use alternative DBMS technology platform, provide appropriate rationale and justification for the proposed technology component and approach.

IBM supports and can use the DHS preferred RDBMS technologies. The State of Arkansas DHS currently licenses and uses IBM's DB2 Advanced Enterprise Edition, which supports the transactional and analytical "persistent" database management required. The DB2 Advanced Edition includes DB2 pure Scale for a transactional and OLTP load and DB2 with BLU Acceleration for BI/Warehousing loads.

[T4.3.6, T4.3.7, T4.3.8, T4.3.9, T4.3.10]

The following graphic shows the benefits of DB2:

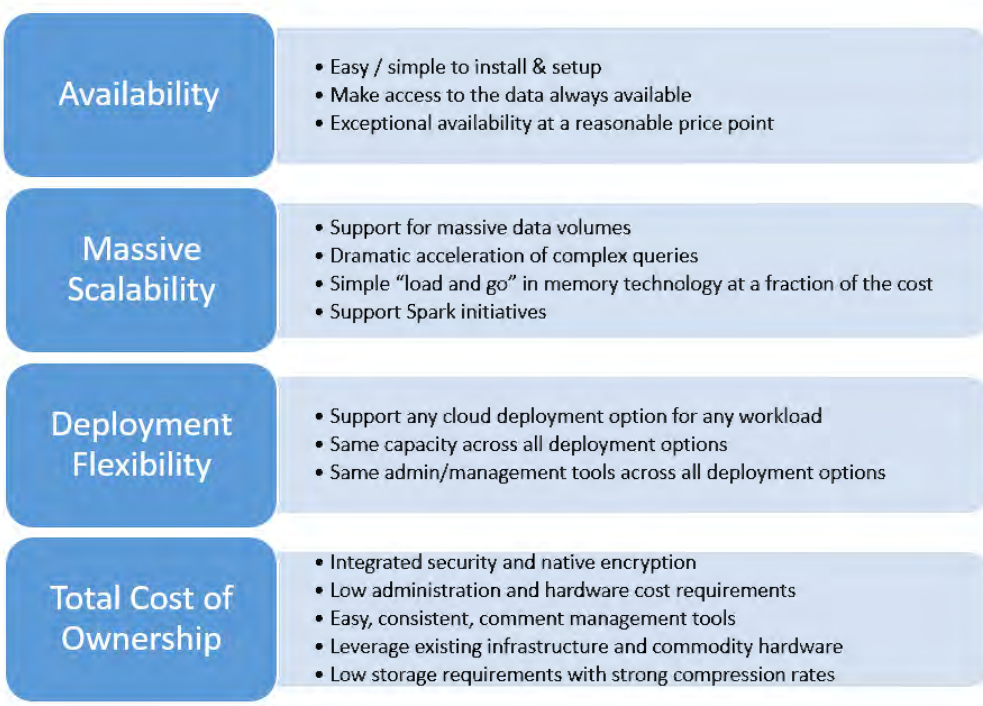


Figure 52: DB2 benefits and capabilities

DB2 is the transformation agent in the new era of digital, cloud and cognitive. It allows you to support new applications for your business, data from sensors, web or mobile applications including new development and born on the cloud applications. It provides impressive scale out and pervasive query parallelism, thus improving performance over previous BLU releases to increase response time to better support the need of your business. It leverages adaptive in memory BLU technology with industry leading columnar sort and core compression for a faster response time and handles structured and semi-structured data from a variety of sources to provide deep insight efficient decision making. With the ability to support 1000's of terabytes, one can take advantage of maintaining a continuous view of the business with historic and current data and thus be in a position to identify trends and make sound decisions to drive the future. The versatility of DB2 to support any application on top of it coupled with the massive scalability of data, enables different levels of users to address their data needs, fueling greater innovation and agility. IBM shall leverage its market leading DB2 solution in support of the State of Arkansas's effort to implement a transactional and analytical "persistent" Database Management system. IBM DB2 for Linux, Unix and Windows (DB2 LUW) offering is a general-purpose database that can be configured to work as both an OLTP, as well as, an OLAP database. It comes with numerous built-in features that are deployed to manage the workloads for each specific application. For OLTP workloads, DB2 LUW provides features such as pureScale for highly available Tier 1 applications for 24x7 availability so crucial business applications are never down for hardware and software maintenance or a system failure due to unplanned outage. Other key features include the compression of data, indexes and logs to manage the database size, resulting in storage savings and performance improvements, native encryption to prevent unauthorized data access, autonomics to reduce the need for DBAs to constantly tune the memory (RAM) used by the database, and Oracle compatibility making it easier to migrate applications that run on Oracle to DB2 LUW.

DB2 LUW is the leading OLTP offering for enterprise clients whether they are running SAP's ERP application, in banking, retail, manufacturing, insurance or HR. As an industry leading database solution, DB2 LUX will enable DHS to transact, analyze and innovate.

No matter whether you configure your database for optimal performance for transactions, analytics, warehousing or need a mixed-use database, the following specific features of DB2 apply:

- DB2 provides an online library of DB2 Best Practice Guides that are in addition to the manuals and knowledge center. **[T5.1.6]**
- DB2 allows for the creation of any number of databases in an instance or the number of instances that can be on a server. Different database instances can even be at different versions and fix pack levels, if desired. **[T5.1.2]**
- DB2 provides several options to make replicas of databases that are either one-time copies or copies that are kept up-to-date with the primary database. Examples include DB2 High Availability Disaster Recovery for keeping multiple secondary copies of the database up to date and the DB2 Advanced Copy Services for creating database copies or backups using SAN "flash copy" copies. **[T5.1.4]**
- DB2 has two primary transaction logging options for crash recovery and point in time recovery. It also has built in auditing capabilities. Furthermore, DB2 comes with the IBM Guardium Database Activity Monitoring agent built into the engine for automated security monitoring and alerting using the Guardium Console. **[T5.1.11]**

- There are multiple levels of security which can be configured. DB2 allows you to create roles and add individuals to the roles and grant or revoke authorities to tables and other objects to these roles. It also provides the Row and Column Access Control (RCAC) that allows control over which rows and columns that accesses within tables. There is also an advanced feature called Label Based Access Control that allows row and column access based on hierarchies like top secret, secret, and confidential, among others. **[T5.1.19]**
- DB2 allows the State to take full, incremental, and delta incremental backups of the database with the necessary log files contained in the backups, if desired. DB2 supports the archived log files to be backed at any interval while database backups can be scheduled to run on a regular basis or on demand. It also interfaces with a number of third-party backup tools like Tivoli Storage Manager that can put the backups anywhere in the world. **[T5.1.21]**
- When in Archive Logging mode, DB2 allows the State to take backups while the database remains fully functional. The backups can be throttled to minimize resource consumption to manage the tradeoff between speed of backup and the resources consumed by the backup process. **[T5.1.22]**
- Geo-coded address data is provided by the DB2 Spatial Extender technology. The State can bound calculations, point searches, and other geodetic entities. **[T5.1.23]**
- DB2 provides built in APIs including the IMPORT, INGEST, EXPORT, LOAD and other utilities. **[T5.1.5]**
- DB2 allows many database structure changes with no down time, including the adding of a new column to a table which can be done while users access the table. Other types of changes that do require an outage further minimize any downtime. **[T5.1.3]**
- The State can lock levels for specific transactions based on parameters sent to the database by the application. **[T5.1.1, T5.1.13]**
- Optim Data Growth solution will be used for archiving DB2 data. DB2 and Optim are a great solution as they support a robust feature set that allows a design framework to assist the State in developing procedures to facilitate that specified data is archived and protected from loss, unauthorized access or destruction. Further Optim allows continued access to the data if desired. **[T5.1.24]**
- DB2 allows the State to name tables, views, columns, indexes and other database objects nearly anything you like. This implementation will provide the framework for naming conventions used in naming those objects and we will follow a standard naming convention that is not cryptic or ad-hoc. RSA used for modeling will be configured to automate this where possible. **[T5.1.25, T51.26]**
- The IBM DBA team will work with the State DBA team to define key tables with defined partitions to facilitate archiving at a define frequency. **[T5.1.27]**
- All of the DB2 database components specified in this solution will be database agnostic. **[T5.1.28]**

Transact

DB2 helps protect your business operations by providing high levels of transactional data service without the high price. It is a highly available transactional database that can seamlessly handle the peaks and valleys in workloads to run your core transactional processing. DB2 will allow the State to scale your database at will, paying only for the capacity you use when you use it, so the State can capture and deliver data when and where needed. With DB2, the State can meet your service level agreements for high availability, scalability, and performance.

Analyze

To make the most of all State data and capitalize on time-sensitive opportunities, DB2 with BLU Acceleration changes the game for faster analytics and deeper insight. Using next generation in-memory technology, the State will obtain analytic results to your questions faster and respond quicker. The State will be able to get instant insight into operational and historical data within your transactional database environment without compromising the performance. DB2 will enable DHS will deploy State analytics projects faster and with more efficiently operational simplicity.

Innovate

IBM DB2 accelerates innovation. DB2 handles the complexities and dynamics of database architecture and capacity changes, removing that burden from your application developers. This enables those developers to focus on delivering new requirements, delivering additional value to DHS.

Some of today's most successful businesses are those that actively use data to achieve substantial growth, profit, and consumer stickiness. Leading organizations integrate new data with the wealth of their existing operational data to discover new customer and business insights that drive innovation across the entire business. By empowering DHS with the right insights, the State will be able to optimize the quality of strategic and operational decisions that may be your richest source of fresh thinking, new strategies, and new data-fueled applications, all of which can result in greater growth.

DB2 LUW is used for the Online Transactional processing that are the read-write Stores of DHS transactional services, and thus is the primary source of transactional data management within the system. DB2 LUW is a highly effective transactional database for performance, ease of maintenance, reliability, scalability, and data security. For maximum scalability and reliability, the IBM team will configure the DB2 LUW data store using a three node DB2 pureScale cluster. With DB2 pureScale, if a server fails, the surviving servers in the cluster continue processing transactions, with all rows except the ones locked for update on the failing server available for continued processing. DB2 pureScale also quickly recovers the in-flight transactions from the failing server and makes those rows available in a short time. DB2 pureScale also balances the load among the servers, so that the State does not get a bottleneck. Another feature of DB2 LUW is the Self Tuning Memory Manager (STMM). Transaction workload tends to vary throughout the day, and the STMM reallocates the system resources to provide top performance under changing conditions and reduces the strain on your database administrators. Specifically, it accomplishes the following things:

- The DB2 STMM continuously tunes the database for whatever workload is currently running. For example, if transactions are running during the day and reporting at night, it will automatically adjust itself for the workload it is receiving. One can also manually configure it, as desired. **[T5.1.10]**
- DB2 pureScale technology supports building a cluster of servers, where all servers in the cluster share the database workload with the surviving nodes, if others fail. This technology also provides automatic load balancing. It provides excellent scalability without having to make the application aware of the number of nodes in the cluster, allowing the State to scale the database to provide additional performance without making any application changes. **[T5.1.7]**

- By configuring DB2 Workload Manager, it will place queries into separate queues and work on the queues in parallel. The State can also assign priorities to the different queues, so that when there not enough system resources to execute everything, the most important work gets priority. **[T5.1.17]**
- DB2 allows many database structure changes with no down-time, for example, adding a new column to a table can be done while users area accessing the table. Other types of changes that do require an outage minimize the down-time. **[T5.1.3]**
- By default, DB2 locks at the row level for updates. However, applications can specify different rules. **[T5.1.1]**
- DB2 is fully ACID compliant OOTB, and the State can configure referential integrity through the use of enforced foreign keys. **[T5.1.12]**
- DB2 supports various types of high performance indices and other query performance objects. **[T5.1.14]**

DB2 LUW is also used for the Operational Data Store (ODS) databases that support operational and tactical data consolidation and satisfies the data access needs of DHS. The data placed in the operational data store originates from one or more of the Online Transaction Processing Databases. DB2 LUW provides the Hybrid Transactional Analytic Processing (HTAP) technology that allows the mixed transactional and analytic workloads that ODS databases typically have. With HTAP, the State can mix row based and column based tables to get great performance, no matter the type of query. No other solution on the market provides this level of mixed workload performance. Further, the State can use the DB2 LUW Workload Manager (WLM) feature to allocate resources in a way that facilitates the most important workloads get completed within defined service levels. IBM will also configure WLM to queue any transactions that would cause the server to become overloaded to prevent server trashing and lower throughput.

Because the HTAP capabilities of DB2 v11.1 combine the best of DB2's OLTP and data warehouse features, the features enumerated in those sections apply here and the fact that DB2 Workload Manager is the tool that allows one to manage mixed workloads by assigning priorities to get the most important workloads done first or by assigning different amounts of resources to different workloads. The new DB2 HTAP capabilities added to DB2 11.1 allows transactional and analytic workloads to be run efficiently on the same server. **[T5.1.18]**

DB2 LUW with the BLU feature is used for the Data Warehouse databases that will primarily support managerial and strategic decision making for DHS. As part of the overall system that IBM is designing, we will transform data to be de-normalized and summarized, where it is needed to optimize the functionality and performance of the warehouse. DB2 BLU technology provides the most advanced analytic query performance of any relational database on the market. With BLU technology, complex analytical queries run blazingly fast and use less hardware resources than other database technologies. DB2 BLU brings several technologies including column oriented tables, advanced compression, algorithms to make the most of multi-processor servers, advanced cache management, and the ability to scan and analyze enormous amounts of data without decompressing. It even uses Workload Manager to queue new queries, so that resources are not wasted on thrashing. DB2 BLU is one of those technologies where the whole is greater than the sum of the component technologies.

DB2 BLU's technology is made to scan enormous amounts of data at amazing speeds. Therefore, performance objects that take advanced skills to create like indexes, materialized query tables, multi-dimensional clusters, and the like are not needed for DB2 BLU databases.

This is especially important in a system delivered by a third party, because query workloads change over time requiring those performance objects to be reengineered. Since they are not used with BLU, they do not need to be changed. Specifically, DB2 provides the required Data Warehouse through the following specific features:

- The DB2 optimizer provides the most advanced query optimization available for individual queries. DB2 BLU technology provides the most advanced algorithms for making the best use of SMP servers to split the work evenly among many cores, automatically taking advantage of Single Instruction Multiple Data (SIMD) architectures. It can also can evaluate predicates without decompressing the column data. **[T5.1.16]**
- The DB2 Workload Manager component can be configured to take advantage of capacity planning, and the resource consumption data it collects can be easily queried for use in further capacity planning. **[T5.1.8]**
- By configuring DB2 Workload Manager to do so, it will place queries into separate queues and work on the queues in parallel. The State can also assign priorities to the different queues, so that when there not enough system resources to do everything, the most important works gets priority. [**T5.1.17]**
- DB2 supports various types of high performance indices and other query performance objects. **[T5.1.14]**
- DB2 provides the ability to support complex relationships using things like join tables for many to many relationships. **[T5.1.15]**
- DB2 provides DB2 to DB2 replication at no extra charge, but to replicate DB2 databases to or from other DBMSs, the State will to add IBM InfoSphere Data Replication (IIDR). **[T5.1.20]**
- As far as cashing on the application, DB2 provides tooling to allow data cubes and other structures to be built in the application cache. Further, DB2 BLU technology provides extremely fast response, so that cubes can be build and rebuilt quickly. As far as caching on the database server side, DB2 BLU has advanced data caching algorithms to keep the hottest data in memory plus it uses the STMM technology to make the overall database perform well. **[T5.1.9]**

As part of this project, IBM will implement the required data mart databases to support departmental decision-making for DHS using only DB2 LUW with the BLU feature. While data marts tend to be smaller than the enterprise Data Warehouse, they do have similar types of processing although focused on the needs of its unique set of stakeholders. Therefore, DB2 BLU technology will be used for the same reasons it is used for the Data Warehouse databases. Since data marts are smaller versions of data warehouses, all of the same specific features described previously in the Data Warehouse section apply to data marts.

3.5.2 Business Intelligence and Reporting Infrastructure

The Vendor should ensure that the responses to this section are in alignment with the requirements set forth in Template T-8 – Technical Requirements Traceability Matrix, Tab T5.2.

Instructions: Describe the Vendor's approach to support the BI functions that should deliver a balanced set of capabilities to DHS users across the three areas of data integration, information delivery and analysis. Additionally, discuss the Vendor's approach on how the

proposed BI Component design will provide a list of Out -of-Box standard set of Reports, Dashboards and visualizations that serve most of expected Reporting needs.

The Vendor's response, at a minimum, should take the following topics into consideration while providing the details:

- BI Infrastructure
- Reporting approach for both canned, ad-hoc reports, discovery and dashboards
- Scalable Data Architecture
- Data Integration Tools

The current EEF implementation uses Cognos. DHS "Preferred" technology for BI and reporting includes Cognos or Business Objects

If the Vendor is proposing to use an alternative product, provide appropriate rationale and justification for the proposed technology component and approach.

To support robust reporting and Data Warehouse capabilities, IBM will construct a flexible and multi-faceted data layer for the IE-BM solution. The data layer is a centralized repository for all operational data originating from Cúram, the master client index, and related data created by MDM. This data is stored, transformed, and summarized to support the DHS required analytics, reporting, and dashboards. It also serves as a source for additional databases or applications requiring data from the IE-BM systems.

The business intelligence part of the IE-BM data layer architecture will have three COTS software products at its core: Informatica, Cognos, and SPSS. These powerful applications were used to successfully implement a similarly-designed data layer for the County of San Diego. They proved to be easily deployed, require minimal administration and maintenance, and gave developers and users the depth of features and flexibility of function to satisfy all of the business requirements. Assets, both in the form of work products and solution design knowledge, will be leveraged to facilitate a similar successful build-out of a business intelligence platform within the IE-BM solution.

Business intelligence and reporting architecture

The following graphic shows the business intelligence and reporting architecture:

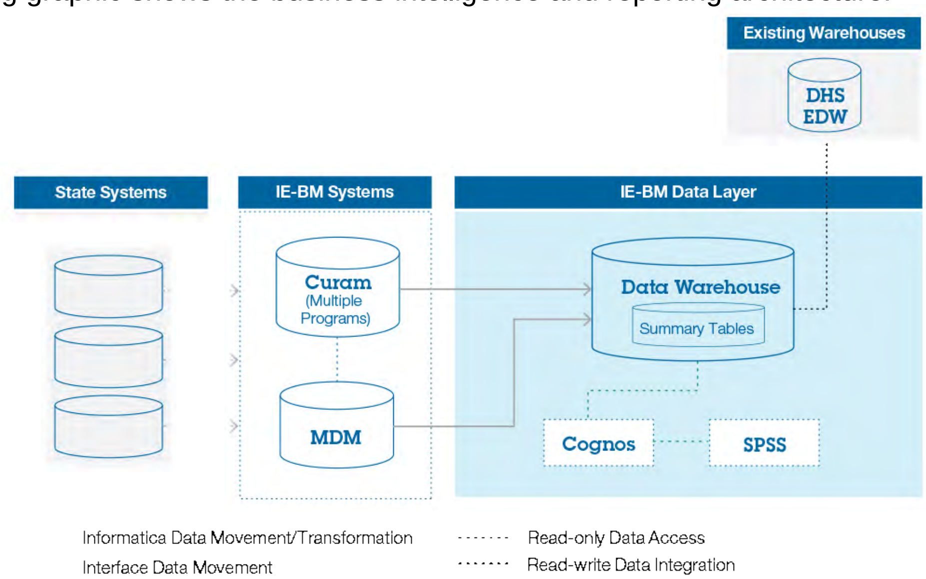


Figure 53: IE-BM business intelligence and reporting architecture

The key database within the data layer is the data warehouse. Data from Cúram and MDM is loaded into this data warehouse to be used for reporting. Additional summary tables and views will be constructed within the data warehouse to support complex reports and dashboards. Data is moved and transformed between systems and databases using the Informatica software products.

The Data Warehouse contains exact one-for-one copies of tables sourced from Cúram and MDM. Data is loaded in this fashion to reduce the burden placed on the operational data stores, to load the data in a timely manner, and to simplify the initial load process. The data needed for regular reporting is loaded into the staging area on a nightly basis, while data needed for low-latency reports is moved into the Data Warehouse more frequently. This design provides the ultimate flexibility for the IE-BM solution enabling it to serve as the single data source for any low-latency reports and to function as a source to external systems.

Most reporting will be built upon the as-is tables contained within the Data Warehouse. However, when complex reporting needs arise, data will be put into specialized forms to aid in performance and to simplify querying. This will be accomplished through the use of database views, stored procedures, or by using Informatica to transform the data and load it into specialized tables. Examples of complex reporting needs include the need for additional data aggregation, a re-organization of data to support a specific business requirement, the creation of a point-in-time data sets, or the need to make data available with specific security restrictions.

This structure forms the data foundation for Cognos, the business intelligence tool, and SPSS, the statistical modeling tool. These two tools, along with Informatica, run on dedicated servers and function alongside the databases to complete the design of a robust business intelligence and reporting architecture.

Data integration

Informatica, a leading data integration tool, is used to build, schedule, and monitor data and ETL processes between and within databases in the data layer. The Informatica suite of tools provide a wealth of functionality around data movement and conversion between an array of different data source types. Developers use PowerCenter Designer to create re-usable data mappings and transformations between sources and targets. The easy-to-use graphical interface speeds development time, simplifies change management, and increases auditability. These mappings are consolidated into workflows, which are scheduled and monitored to measure performance and reliability. Informatica's powerful functionality makes critical data readily available to reporting and analytical applications.

Informatica processes have the benefit of being modular, and the DHS solution will benefit by importing established ETL flows from existing IBM solutions. Re-use of this ETL will reduce new development and increase reliability, as the processes have been reliably running in production environments.

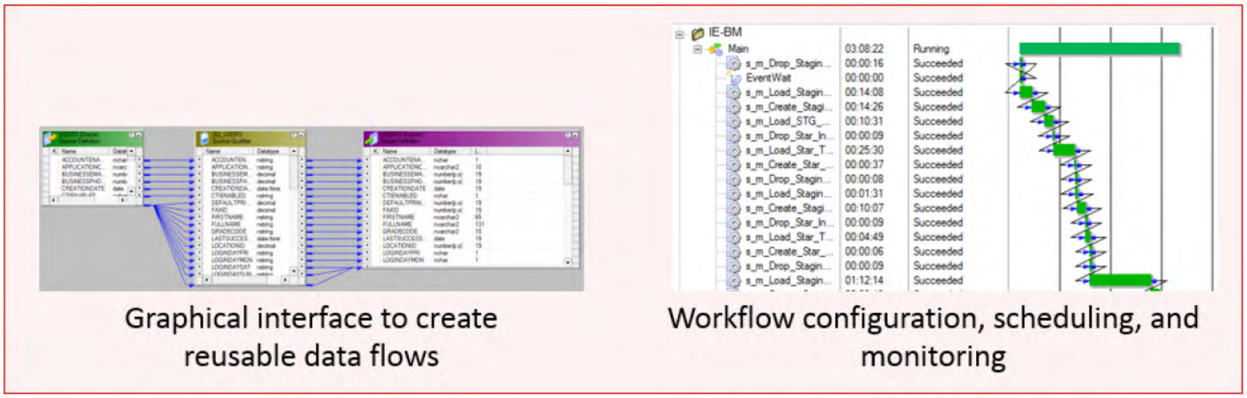


Figure 54: Informatica tools and capabilities

Reporting and analysis

To fully take advantage of the timely and high-quality data stores, IBM uses Cognos, a complete business intelligence and analytics offering, to deliver an easy-to-use product with advanced analytic capabilities. It will allow DHS leadership and staff to use data to improve operational efficiency, gain insight into trends, and receive alerts to take action. These capabilities are built on a reliable and flexible server architecture that enables data security, while increasing data access for users.

Cognos is designed to be a three-tier architecture including web, application, and data. This architecture delivers both scalability and availability with the ability to grow horizontally by adding additional servers and vertically with more powerful servers. The design of each tier will meet DHS performance expectations, while supporting anticipated demand and future growth projections. Each tier has redundancy built, providing load-balancing and end user availability. The following graphic demonstrates the Cognos architecture:

[T5.2.2, T5.2.4]

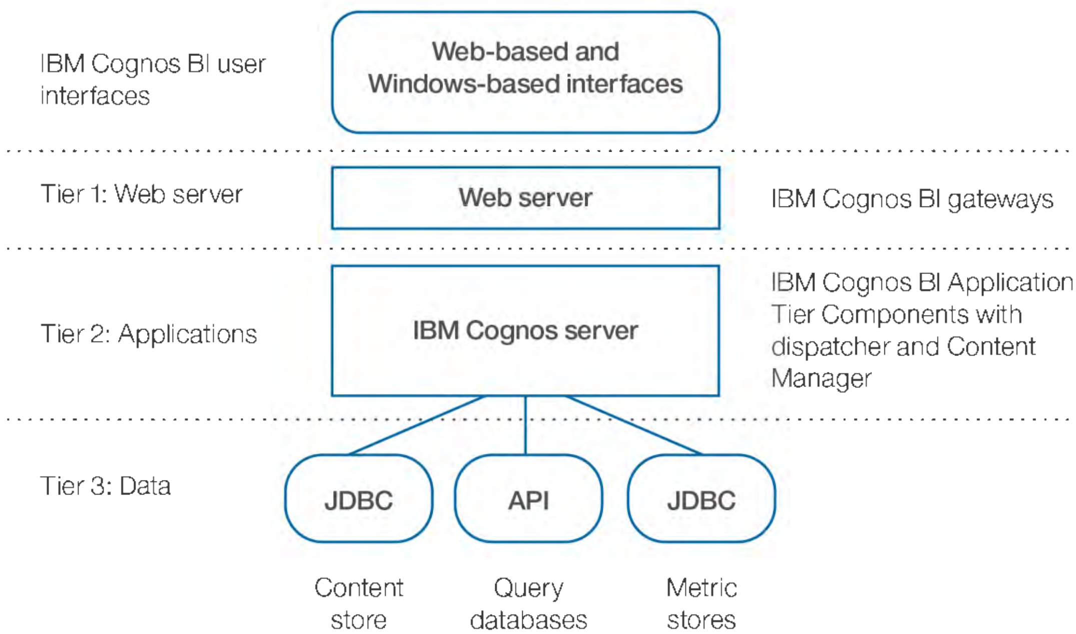


Figure 55: Cognos architecture

Cognos will facilitate a single point of integration and access for all IE-BM data. It supports numerous data source types including relational, OLAP, and XML. Internal and external data sources and all major vendors are also supported. Analytics such as reports, dashboards, and alerts are built using the foundational data available to Cognos. Consumers access these analytical objects through web-based and mobile applications, while authors and advanced DHS users are able to build and share ad-hoc queries and new reports using the integrated, web-based tools. Functionality such as running reports in different file formats, distributing reports through email, and scheduling and automation are all standard features available to users OOTB.

[T5.2.6]

Metadata models are built upon the data sources to which Cognos connects, supporting rich analytics development and ad-hoc user queries. These metadata models import tables from the sources, join tables together, and organize and display data in a logical manner. It also assigns database column names to recognizable business names and applies data security protocols. Complete metadata models greatly reduce the amount of time it takes to build reports, since all of this is completed once, prior to metadata development. Having a simplified data model with appropriate data joins and security in place enables DHS to put additional functionality and data in the hands of business users, reducing the dependency on data analysts to execute routine requests. The following diagram shows the Cognos data structures:

Figure 56: Cognos data structures

Cognos reports and queries also serve as a data source for IBM's SPSS predictive modeling tool. DHS statisticians are able to create queries and reports within Cognos that SPSS then uses for predictive modeling. This setup provides key advantages in minimizing the execution of routine and mundane tasks and simplifying the development and maintenance of SPSS models. As data in the data layer is refreshed, new data is automatically fed into SPSS, thereby removing the need for manual data refreshes. When new fields are needed for the predictive model, they are simply added to the underlying Cognos query or report. Updating the source query or report is done directly by the data analyst without enlisting the support of a database administrator, thereby reducing development time and coordination.

[T5.2.5]

Security controls, including row-level security, field-level security, and data-masking, are applied and available at multiple levels of the IE-BM data layer. All data accessed through Cognos is secured using RBAC and ABAC. This security is applied within the metadata model and universally applied whether a user is accessing data through a report, dashboard, ad-hoc query, a mobile device, or within SPSS. Individual objects, such as reports, cubes, and dashboards within Cognos are shown or hidden from users using the same RBAC. Similar row and field security is built into the databases to control access by developers and administrators through established roles.

[T5.2.1, T5.2.3]

OOTB reporting

OOTB dashboards and reports are made available through Cúram to support various business activities. For eligibility, metrics around the number of applications and timeliness of applications being processed by workers are available. Case management reports enable analysts to evaluate the compliance and goal achievement related to the number of cases by program in terms of volumes. The KPI will allow the analysis of cases by program and show progress over time. Such a KPI would provide an analyst a view of the organization's compliance as mandated by Federal, State or other Local statutes. These KPIs can be filtered by time frame or program to assist the analyst in getting the specific data they need. Similar to case management, work participation analytics evaluate the work participation rate within time frames and programs. In addition to the provided OOTB reporting, Cognos can be used to create reports and dashboards to satisfy unique reporting requirements that arise.

[T5.2.7]

3.6 Security and Privacy Services Layer

3.6.1 Security - Identity and Access Management (IAM)

The Vendor should ensure that the responses to this section are in alignment with the requirements set forth in Template T-8 – Technical Requirements Traceability Matrix, Tab T6.1.

Instructions: Describe the Vendor's approach to leveraging the Identity and Access Management technologies and services that are available through the DHS IE-BM Solution. The Vendor's response, at a minimum, should take the following topics into consideration while providing the details:

- Enabling DHS to identify users in different contexts so that DHS policies and user preferences can be applied consistently
- Delivering an integrated login experience for users across DHS systems and channels
- Enabling coherent audit trails and chain of custody records needed for security forensics and compliance requirements
- Supporting the proactive management of user access to DHS resources including de-provisioning when needed
- Enable DHS to consistently identify external users so that customer service can be made more effective

For IAM technologies, the current EEF deployment uses CA IAM. DHS has a "Preference" to use CA IAM.

If the Vendor is proposing to use an alternative product, provide appropriate rationale and justification for the proposed technology component and approach.

IBM will use the DHS and DIS preferred CA Identity and Access Management infrastructure to provide a key element of the security architecture for the IE-BM solution. IBM assumes that the wording "CA IAM" means, the following CA products:

- CA Identity Management.
- CA Access Management.
- CA Single Sign-on.

IBM assumes that CA software, including the IAM component, is free of malware.

[T6.1.15]

Identity Management

CA Identity Suite is a broad set of utilities that enable organizations to manage user identities and perform audit and role modeling activities effectively. The tools are delivered through a simple, intuitive front-end that offers business users easy access request and certification features. The following list includes ley features of CA Identity Management:

- **CA Identity Suite:**
  - Secure user login and authentication.
  - Self-service access requests and provisioning.
  - Self-service response to certification requests.
  - Self-management of user profile information.
  - Lightweight, web-based interface that requires no specialist knowledge.
- **Identity Management:**
  - Role-based access control and delegation.
  - Business policy administration and application.
  - Enforcement of segregation of duties requirements.
  - Smooth on-boarding and off-boarding.
- **Identity Governance:**
  - Entitlements cleanup.
  - Role discovery and role modeling.
  - Audit and business compliance checks.
  - Certification of entitlements.

CA Identity Suite delivers identity management and access governance capabilities for business users in a unified, easy-to-use interface. The intuitive self-service console improves business user productivity by delivering identity and entitlement features in a common business language. The interface uses a familiar shopping-cart experience for requesting access to new systems.

The product includes administrative features that help reduce administrative overhead and improve audit and compliance performance through centralized policy enforcement. CA Identity Suite uses advanced provisioning and governance technology, while offering business users a lightweight, intuitive interface that users can access on a variety of devices.

CA Identity Suite provides the following benefits:

- **Business ease of use:**
  - Feature rich and user-friendly access requests.
  - Single-pane view, rather than multiple applications.
  - Minimal training required for business users.
- **Advanced technology:**
  - Extensive connectivity (40 plus built-in connectors).
  - System of cross-domain Identity Management (SCDIM).
  - Reduced IT effort and increased productivity with Xpress Technologies.

CA Identity Suite provides a real-time, context-based Risk Analyzer and Simulator, which is based on an advanced, robust rules engine that calculates user risk score in real time.

It offers an easy-to-use, configurable user-centric risk model that identifies areas of risk within the organization caused by users with high risk scores. It also enables organizations to strategically prioritize security and compliance activities to focus proactive controls on the areas of higher risk, including the following actions:

- Calculates and displays users' risk scores and alerts whenever it detects a risky user.
- Updates risk scores continually based on changes to user access privileges, user attributes and other relevant compensating factors
- Simulates, in real time, the user's risk score changes in the context of access requests, including permissions requested in the cart.
- Implements the following three levels of preventive controls across IAM processes, based on risk and violation types and levels, when high-risk users or violating transactions are detected:
  - First level: Inform or alert of violation.
  - Second level: Collect justification from the user in order to continue request.
  - Third level: Prevent the user from continuing with his action.
- Displays violations (and justifications) to approver to support approver's decision.
- Audits violations and tracks them throughout the end-to-end process.

[T6.1.2, T6.1.3, T6.1.8, T6.1.16, T6.1.48, T6.1.49]

The following graphic shows the Identity Management high-level architecture:

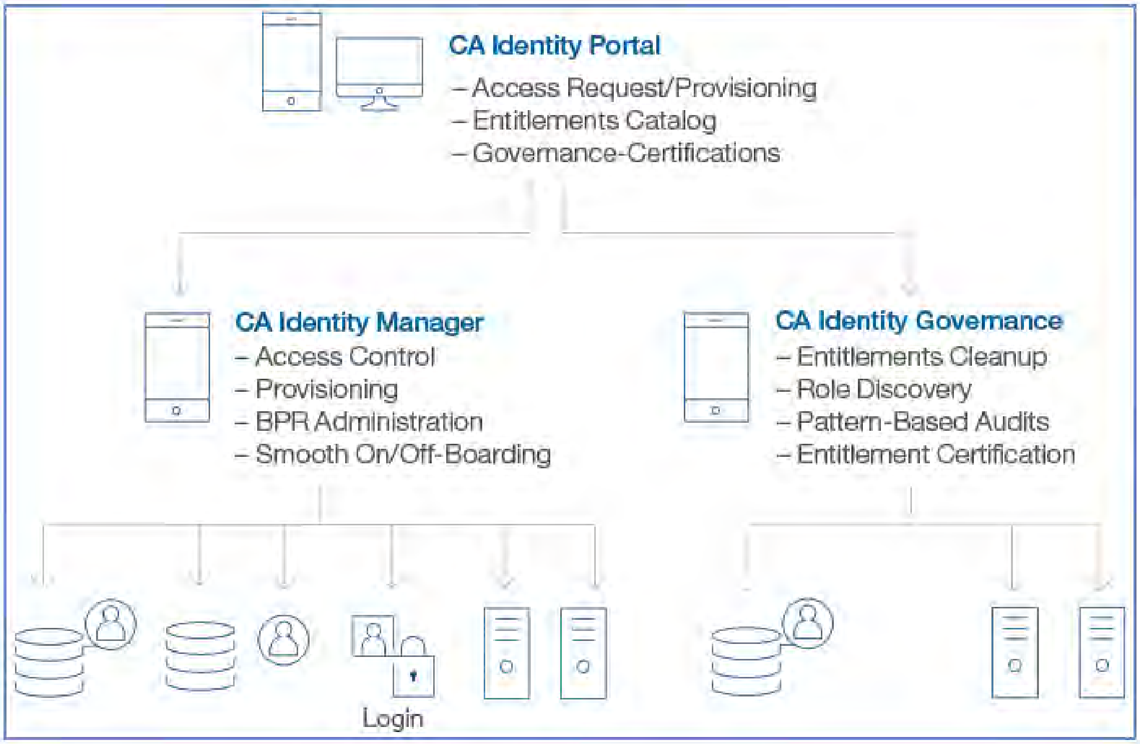


Figure 57: CA Identity Management high-level architecture

Authentication Management

CA Advanced Authentication is a packaged solution that combines two authentication products:

- CA Risk Authentication performs a transparent, intelligent risk analysis to provide greater assurance that the user is who they claim to be. The software can evaluate risk based on device, geolocation, and user behavior for any online transaction and can initiate step-up authentication when the risk score exceeds defined thresholds.
- CA Strong Authentication provides multi-factor authentication for Web and mobile apps with a wide range of credentials and methods. The software allows you to deploy the right credential with the right level of security based on the app being accessed and enforce in a cost-effective and centralized manner.

Together, these products enable a layered security approach that gives DHS and DIS the right balance of cost, convenience, and security to protect State applications and user identities. This results in better security, an improved compliance profile, and lower operational costs.

Key features of CA Authentication enable the following capabilities:

- Performs real-time risk assessment to protect sensitive logins and transactions.
- Evaluates risk based on device identification, geolocation, user behavior, and other factors.
- Supports out-of-band methods such as push notification and one-time passwords (OTP) delivered through email, text or voice for step-up authentication.
- Provides default rule sets covering typical fraud patterns that are easy to use and customize.

- Supports a wide variety of credentials from passwords and security questions to 2FA software and hardware tokens.
- Protects web and mobile channels and integrates data for broad fraud management.
- Offers several standards-based integration options: OATH, RADIUS, REST, SAML, and SOAP.
- Integrates tightly with CA SSO and other web access management systems.

[T6.1.20, T6.1.21, T6.1.27, T6.1.45, T6.1.50, T6.1.51, T6.1.52, T6.1.58]

CA Single Sign-On (SSO)

CA SSO provides secure and flexible access management for mobile, Web, and SaaS applications, regardless of where they are hosted or how they are accessed. Highly scalable, CA SSO enhances security by identifying who the user is, what they are attempting to do, and enforcing appropriate access policies using a standards-based framework that can be shared by IT and application developers. CA SSO has the following capabilities:

- Secure single sign-on provides seamless access across multiple cloud, mobile, and Web applications from any device.
- Identity federation facilitates access to cloud, internal, or partner apps through open standards, including OpenID Connect, OAuth, SAML, WS-Federation, and eGov.
- Social login supports dozens of identity providers, allowing your citizens to use their social identities to log in.
- Policy-based authorization allows the State to grant or deny access to resources based on roles, attributes, or context.
- Centralized session management enables the State to securely manage and protect a user's session, including configurable session timeout values, as well preventing duplicate logins.
- Flexible architecture models support a variety of architecture and integration options to adapt to any environment and use case.
- Self-service password reset

[T6.1.41, T6.1.53, T6.1.54, T6.1.59]

The following diagram shows the CA SSO architecture:

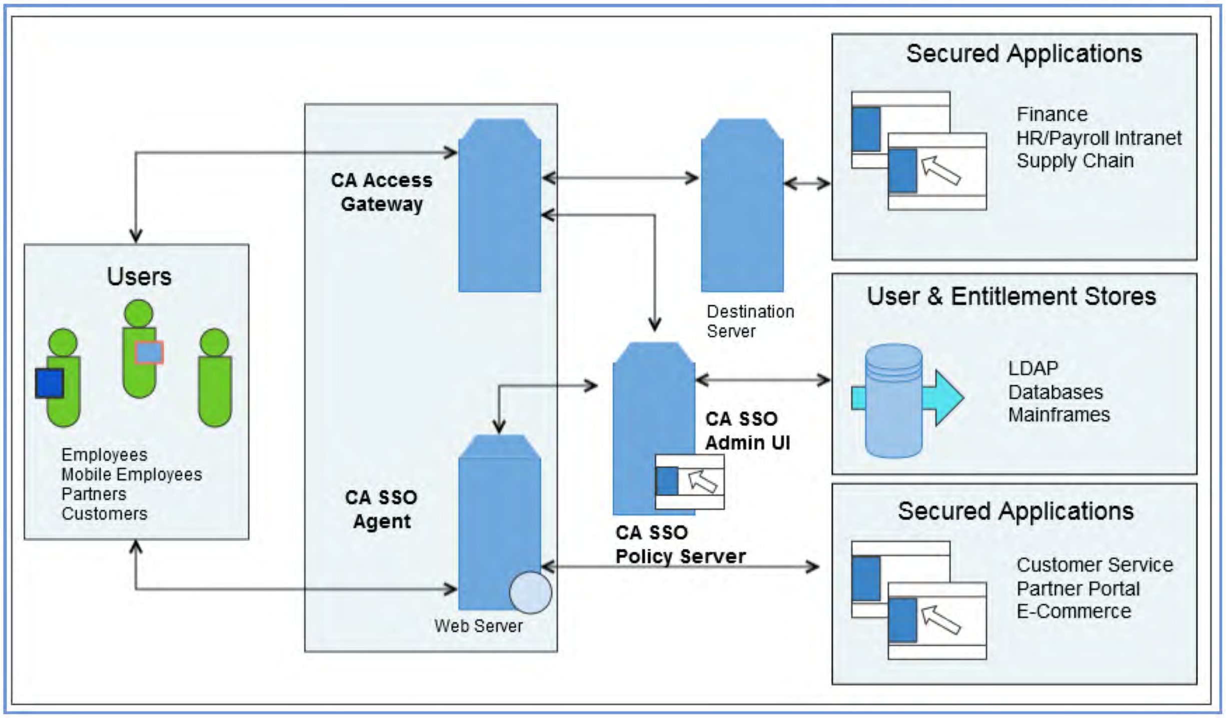


Figure 58: CA SSO architecture

Cúram and WebSphere security overview

The Cúram application supports a range of authentication providers, including local authentication, LDAP, and SAML. Furthermore, Cúram is a pure Java Enterprise Edition application that can use the JAAS module of the application server (WebSphere) to integrate with a range of identity providers. The authentication module is deployable separately from the application code.

Cúram will authenticate and authorize users by interfacing with the CA Identity and Authentication tooling.

The Cúram application itself will be configured for “Identity Only” authentication, whereby Cúram only verifies the presence of the user in the Cúram users’ table, but does not validate password or attempt to authenticate the request. Instead, it expects the authentication information (token) to be placed by another party.

Since the inherent Cúram internal security architecture allows for very granular control over user roles, user groups, functions, and data elements, once identified and authenticated by the CA IAM functions, user access will be further controlled by Cúram, which will use, map, and extend the identification and authorization functions of the CA IAM based login profiles. User roles and associated privileges will continue to be managed by Cúram. See the role-based security section below for more details.

This is similar to functionality implemented in our HHS solutions for the State of North Carolina and the County of San Diego.

Access control

Cúram supports role-based access, separation of duties, and least necessary privileges. The Cúram security profile model is both flexible and granular. Each Cúram user is assigned a security role, consisting of one or more security groups, which are in turn composed of multiple SIDs. This allows for configuration of highly specific user roles to control the users' access to workflows, tasks, data, reports, and activities, including updating and deleting records or data, as outlined in the following list:

- **Product-based authorization**: Restricts user access to specific products or programs, such that users are limited to what they can do with cases based on those programs.
- **Location-based authorization**: Determines whether or not a user can access information or perform business operations based on a comparison of the user's location, or the location associated with the position they hold in the organization, with the location associated with the case and client information.
- **Field-based authorization**: Governs the user's ability to view information in specific fields. Once security for a field has been enabled and the associated SID is available, the SID may be added to the appropriate user profiles.
- **Sensitivity-based authorization**: Restricts access to "sensitive" data items. A range of record types, such as users, participants, work queues, and notes can be designated a sensitivity level. For a user to have access to a record that has sensitivity associated with it, the user must have a sensitivity level equal or greater than the record in question.

The IE-BM solution, through its integration with CA IAM functionality, contains a set of additional security options that are managed through the IBM Cúram Administration Suite to enable administrators to configure and govern overall access to the application and its data. The options provided allow for account administration and user set–up including management of the following elements:

- Username and password.
- Assigned role.
- Account and password expiry.
- Access periods such as user can only access the account on weekdays between 7 a.m. and 7 p.m.
- Sensitivity levels.
- Location.

Through its widespread functionality for managing authentication, authorization, and administration, the Cúram security infrastructure provides the controls necessary to protect PII and PHI. The IE-BM application will be configured to display a global banner message to inform users the system should only be accessed by authorized users. The solution includes the Cúram Provider Management module, which will allow the State to register and identify licensed clinicians and build a directory of external providers. The Citizen Portal can be configured to allow users to reset their password for online self-service.

[T6.1.26, T6.1.28, T6.1.42]

Security in the IE-BM solution will be role–based in nature, which will allow the administrators to control the sections of the system that are accessed by users, based upon their role. The following graphic shows role-based authorization in Cúram:

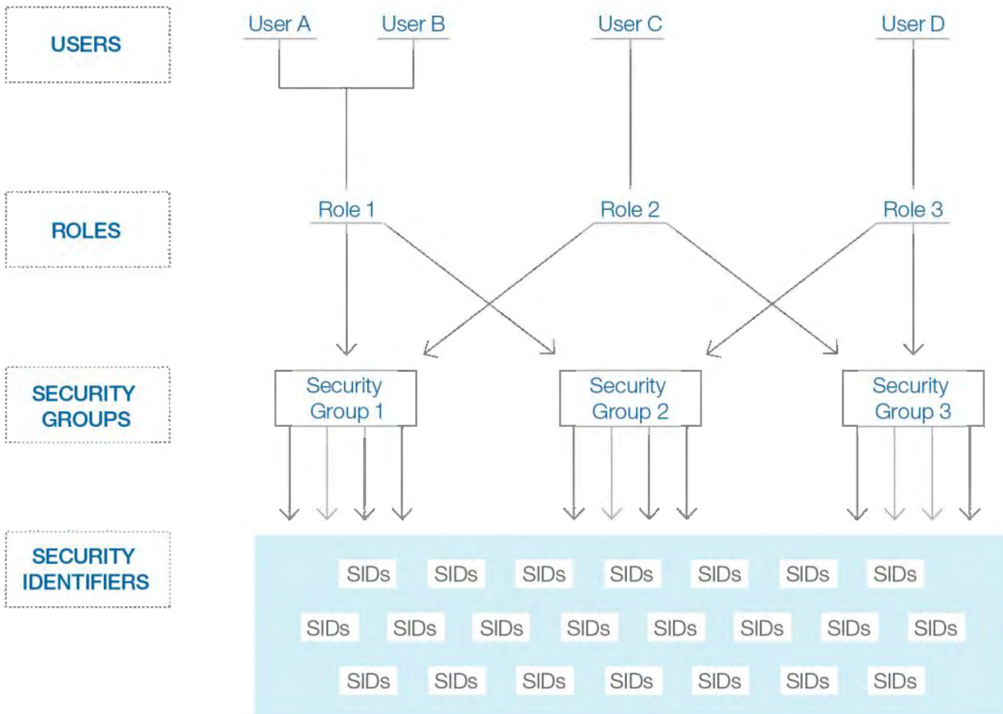


Figure 59: Flexible and configurable role–based authorization in Cúram

The above diagram highlights the structure of security that will be implemented within the IE-BM solution by Cúram. Each Cúram user is assigned a security role, consisting of one or more security groups, which are in turn composed of multiple SIDs. A SID can represent either a function or a piece of data. This allows for highly specific user roles to be configured in order to control the functions each user can access, the data they can view, and the data they can modify. Using a combination of the Cúram security roles and Cúram sensitivity-based controls, the IE-BM solution can achieve several levels of access to data and functions. For example, the SID for a read function can be assigned to a particular user role, which allows for the user assigned to that role to read the data retrieved by the function. The user would only be able to update or delete the data if the corresponding update or delete SID for those functions were assigned.

The IE-BM application will use the Cúram optimistic concurrency locking mechanisms, which will maintain integrity of data during periods of concurrent access, while allowing multiple users to concurrently view the same data.

[T6.1.6, T6.1.13, T6.1.14, T6.1.25, T6.1.36, T6.1.46, T6.1.57]

NIST 800-95 and 800-44 Compliance

The IE-BM solution will comply with the NIST 800-95 – Guide to Secure Web Services by implementing elements of the guidance at the layers of the Secure Web Service Standards Stack, as defined in the NIST guidance.

The IE-BM solution will use functionality from the lower levels of the stack (network, transport) from DHS and DIS capabilities and implement functionality from the higher levels of the stack by integrating with the CA IAM and the use of Java EE frameworks.

In particular, Java EE frameworks provide client authentication through SSL and TLS and sophisticated authorization services that can interface with any authentication mechanism, as we have highlighted previously, by integrating with DHS and DIS CA IAM capability and extending the security with fine-grained Cúram user authorization capabilities.

The IE-BM solution complies with the NIST 800-44 - Guidelines on Securing Public Web Servers by implementing every element of the Checklist for Planning and Managing Web Servers as defined in the NIST guidance.

HIPAA Compliance: Security and access control

As previously discussed, the IE-BM solution will comply with the NIST 800-53 controls at the FIPS 199 Moderate level. In terms of the NIST 800-66r1 “crosswalk”, the Administrative Safeguards and Physical Safeguards will be used from DHS and DIS policies, physical sites and infrastructure. In terms of the technical safeguards, the IE-BM will comply as follows:

- **Access control**: The IBM IE-BM team will identify and map the functional and data access needs of users using the CA IAM identity and authorization functions and the Cúram access control functions, as described elsewhere in this response, pursuant to the technical access control capabilities identified in the CA IAM, WebSphere, and Cúram subsystems. The assignment of a unique ID per user will be mapped from the CA IAM identity and authorization component into the fine-grained Cúram access control component. The IE-BM solution will use access control policies and implementation procedures from the DHS and DIS infrastructure. User update and access reviews, including user termination and emergency user access procedures will also be used or developed, as needed. Automatic logoffs will be implemented within WAS through configurable inactive session termination. DB2 encryption for data at rest and TLS encryption for data in motion will be implemented. Clients with active eligibility under one household will be allowed to re-apply for benefits on their own behalf when necessary.
- **Audit controls**: As described elsewhere in this response, Cúram implements full transactional audit capabilities OOTB, and these will be configured to meet DHS and DIS policies and procedures and HIPAA requirements.
- **Integrity**: The IE-BM solution will use DHS and DIS policies and procedures regarding user access to EPHI and risks thereto. The current integrity controls, procedures, and monitoring are assumed to be compliant.
- **Person or entity authentication**: Authentication compliance will be derived from the CA IAM capability, which is assumed to be compliant.
- **Transmission security**: The IE-BM solution will implement TLS security for secure transmission of data. Current policies, procedures, controls, and implementation are to be used from DHS and DIS and are assumed to be compliant.

IBM will use the delivered capabilities of Cúram to capture an audit trail on identified transactions. IBM will configure Cúram to recognize certain events as auditable and to write audit logs for those events to the database. These audit logs will capture user ID, date and time, nature of change, before and after values, program name, and other relevant information. Business rules can be configured to process audit logs and issue alerts or initiate workflow, where the event hits certain thresholds.

[T6.1.1, T6.1.4, T6.1.17, T6.1.22, T6.1.23, T6.1.24, T6.1.29, T6.1.30, T6.1.31, T6.1.32, T6.1.33, T6.1.37, T6.1.38, T6.1.39, T6.1.40, T6.1.43, T6.1.47, T6.1.55]

IBM Cúram, our primary IE-BM solution application, WAS, DB2 Database Server and IIB have extensive logging mechanisms to capture the runtime activities from an application and system standpoint. These logs provide important information about the health of the system. The level of logging can be configured in the deployed system. The level of logging varies from printing out debug statements to detailed method tracing. The various logging levels in Cúram include Debug, Informational, Warning, and Error. The run-time system produces logs only when the logging is enabled through configurable properties. However, these logging activities can impact performance negatively. IBM recommends enabling verbose or detailed logging temporarily to monitor or debug system issues, subject to HIPAA requirements.

The IBM Cúram data model uses recognizable structure (hierarchical) common English names for its data elements, including log files. Both WebSphere and DB2 do the same.

Log files will be configured to be written out of the filesystems to a long-term backup or archive. The log files can be prevented from modification or deletion by archive rules or system file permissions, as appropriate. By default, application users cannot access application or system log files.

System and communications protection

IBM understands the importance of safeguarding the PHI and PII in the system. The IE-BM safeguards data in motion and at rest:

- Transmission integrity and confidentiality. Users will connect to applications using HTTP over SSL or TLS. SSL or TLS certificates on the Web Servers will support FIPS 140-2 compliant encryption. These certificates will conform to the X.509 standard and will be issued by a certificate authority approved by the State.
- Protection of information-at-rest. The IE-BM solution will use volume encryption offered by the State's infrastructure provider to secure data-at-rest.
- Other data safeguards. Data in user devices will be protected in accordance with NIST 800-111. End-of-life data will be destroyed as per State policy, project requirements, and controls prescribed in NIST 800.88. Backups are stored in a separate, secure location in encrypted volumes.

[T6.1.17, T6.1.18]

Security test and evaluation

The NIST 800-53A: Guide for Assessing the Security Controls in Federal Information Systems - Building Effective Security Assessment Plans provides detailed guidance for building an effective security test and evaluation plan to cover the following activities:

- Assessment objects: Specifications review.
- Assessment methods: Examine, interview, test.
- Assessment attributes: Depth, coverage.

The plan is a **risk informed artifact**, through which the implementation team will strive to meet a minimum assurance requirement. Many security requirements fall in the category of non-functional requirements, which may not manifest in specific use case flows and do not lend themselves to test cases. Fulfillment of such requirement will rely on alternative assessment methods such as specification review and subject matter expert (SME) interviews. Security test and evaluation, therefore, involves choosing from alternate assessment objects such as SME or specification and alternate assessment methods, for example, examine, interview, and test. In most cases, the depth of SME interview questions and coverage, such as sample size, also need to be decided upon. These choices and decisions are risk informed and in conformance with NIST 800-53A guidance.

Plan of action and milestones

The plan of action and milestones (POAM) represents deficiencies and planned corrective action arising out of the original and ongoing security assessments. IBM will create or update the IE-BM project POAM, as required.

System and information integrity

The System and Information Integrity family of controls from NIST provides guidance on a wide range of elements relating to validating integrity in information systems, including hardware, firmware and software such as operating systems and applications. The IE-BM solution initially will, at the hardware, firmware, and operating system levels, inherit its compliance from the DHS and DIS infrastructure, which is assumed to be compliant.

The major sections of the System and Information Integrity family of controls is listed in the following, with comments being made for each to show the IE-BM compliance, primarily from the application software standpoint:

- System and information integrity policy and procedures: Inherited from the DHS and DIS organizations.
- Flaw remediation: See the Testing Approach section below.
- Malicious code protection: Inherited from DHS and DIS capabilities.
- Information system monitoring: Inherited from DHS and DIS capabilities and enhanced as needed.
- Security alerts, advisories, and directives: Inherited from DHS and DIS capabilities.
- Security function verification: Inherited from DHS and DIS capabilities.
- Software, firmware, and information integrity: Inherited from DHS and DIS capabilities. See also Testing Approach and Error Handling sections below.
- Spam protection: Inherited from DHS and DIS capabilities.
- Information input validation: The Cúram solution validates inputs. See also User Error Protection section below.
- Error handling: See Error Handling section below.
- Information handling and retention: Inherited from DHS and DIS policies and capabilities.
- Predictable failure prevention: Inherited from DHS and DIS capabilities. See also the Contingency Planning section below and its discussion of HA capabilities.
- Non-persistence: Inherited from DHS and DIS policies and capabilities.
- Information output filtering: Inherited from DHS and DIS capabilities, to the extent they exist for this guidance.
- Memory protection: Inherited from DHS and DIS capabilities.
- Fail-safe procedures: Inherited from DHS and DIS capabilities. See also the Performance and Availability section and its discussion of HA capabilities.

[T6.1.5]

3.6.2 Privacy & Consent

The Vendor should ensure that the responses to this section are in alignment with the requirements set forth in Template T-8 – Technical Requirements Traceability Matrix, Tab T6.2.

Instructions: Describe the Vendor's approach to leveraging Privacy & Consent technologies and services made available through the DHS IE-BM Solution. The Vendor's response, at a minimum, should take the following topics into consideration while providing the details:

- How the Consent Management capabilities will support privacy
- Seamlessness of the approach
- Integration of Consent Services and role-based security

The current EEF implementation doesn't have a Privacy and Consent management technology component. DHS has not yet identified a standard technology component for Consent Management nor has a preference.

IBM's consent management solution for IE-BM, an asset reused from our County of San Diego project, meets the following requirements:

- Fully integrated into Cúram. Privacy and consent is layered on top of the Cúram OOTB RBAC and is seamless to the Cúram user.
- The consent registry resides in Cúram, but the consent service can also be used by any application. We offer three APIs in the consent solution: a Java API (used by Cúram), a SQL API (used by Cognos), and a Web Service API (that can be used by Web Service clients).
- Fine grained access control to support compliance with HIPAA, CFR 42 Part 2, and other policy directives. Access can be controlled at multiple levels, including page or record level in Cúram pages and Cognos reports, all at a far greater granularity than Cúram RBAC.
- Break-the-glass function to override consent for emergency data access. Email and SMS alerts when such overrides occur.
- Equivalence in the transactional and analytical realm, across Cúram and Cognos. Cognos dashboards show complete data at the aggregate level, but as the user drills down, consent restrictions kick in dynamically at the appropriate level.

[T6.1.9, T6.1.10, T6.1.11, T6.1.12, T6.1.56, T6.2.1, T6.2.3, T6.2.4, T6.2.6, T6.2.7, T6.2.8, T6.2.10, T6.2.11, T6.2.13, T.6.2.14]

Consent solution supports privacy seamlessly with role-based security

Consent management is designed as an ABAC solution and is conformant with NIST guidelines for ABAC (NIST Special Publication 800-162). There are two tiers in this ABAC model, the policy tier and the consent tier. The policy tier defines when consent is necessary. The policy tier also decides the level of default access, where consent is not available. Depending on the combination the organization, role and job, as defined in Cúram, a user may have some level of default access, to the extent compliant with HIPAA, and CFR 42 Part 2. The following diagram shows the consent management solution:

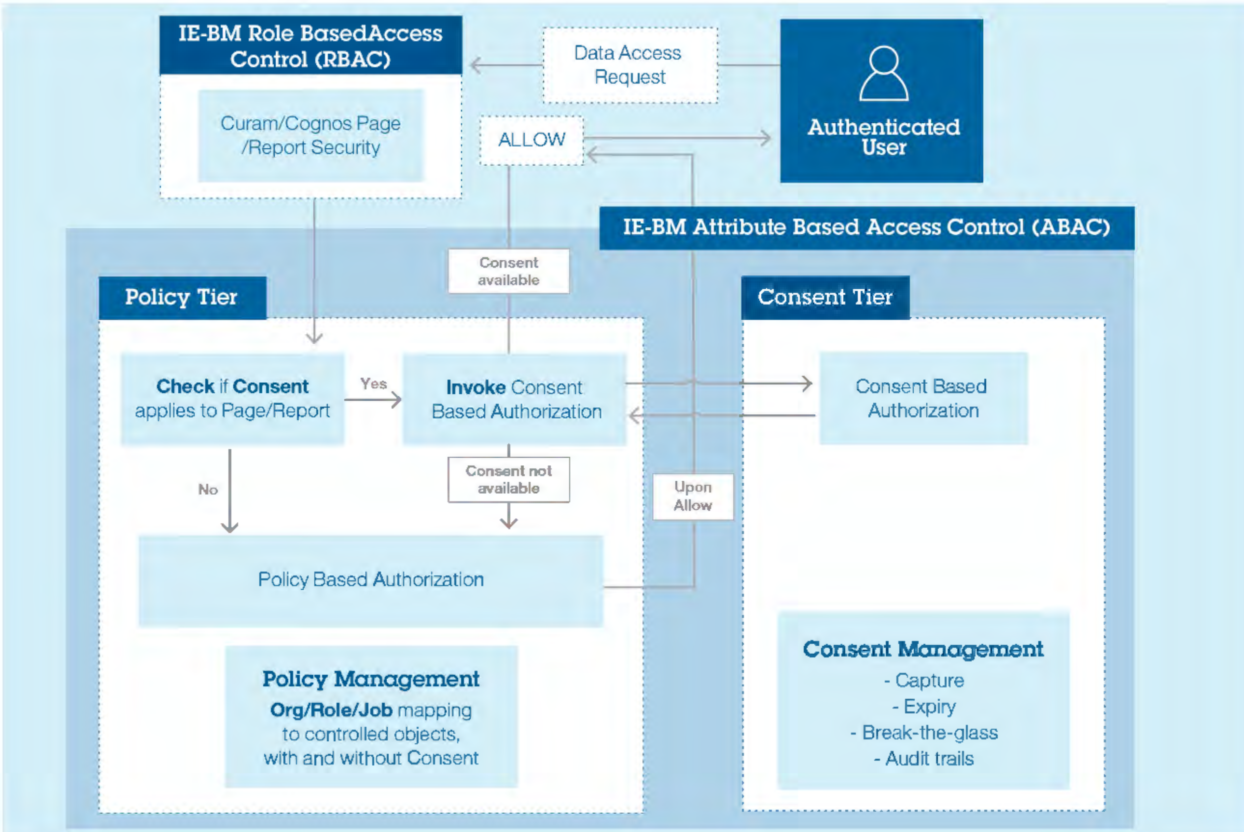


Figure 60: Consent management solution integrated with role-based security

[T6.2.12]

Consent management functions

Authorization Wizard for consent management

Our Authorization Wizard in Cúram enables the capture of client consent, guiding the user through a series of screens that complete the following tasks:

- Capture consent.
- Set auto-expiry date for consent.
- Select the data sets the client wants to exclude from consent.
- Authorize third parties to act on the customer’s behalf.
- Attach scanned documents.

The following figure depicts the Authorization Wizard:

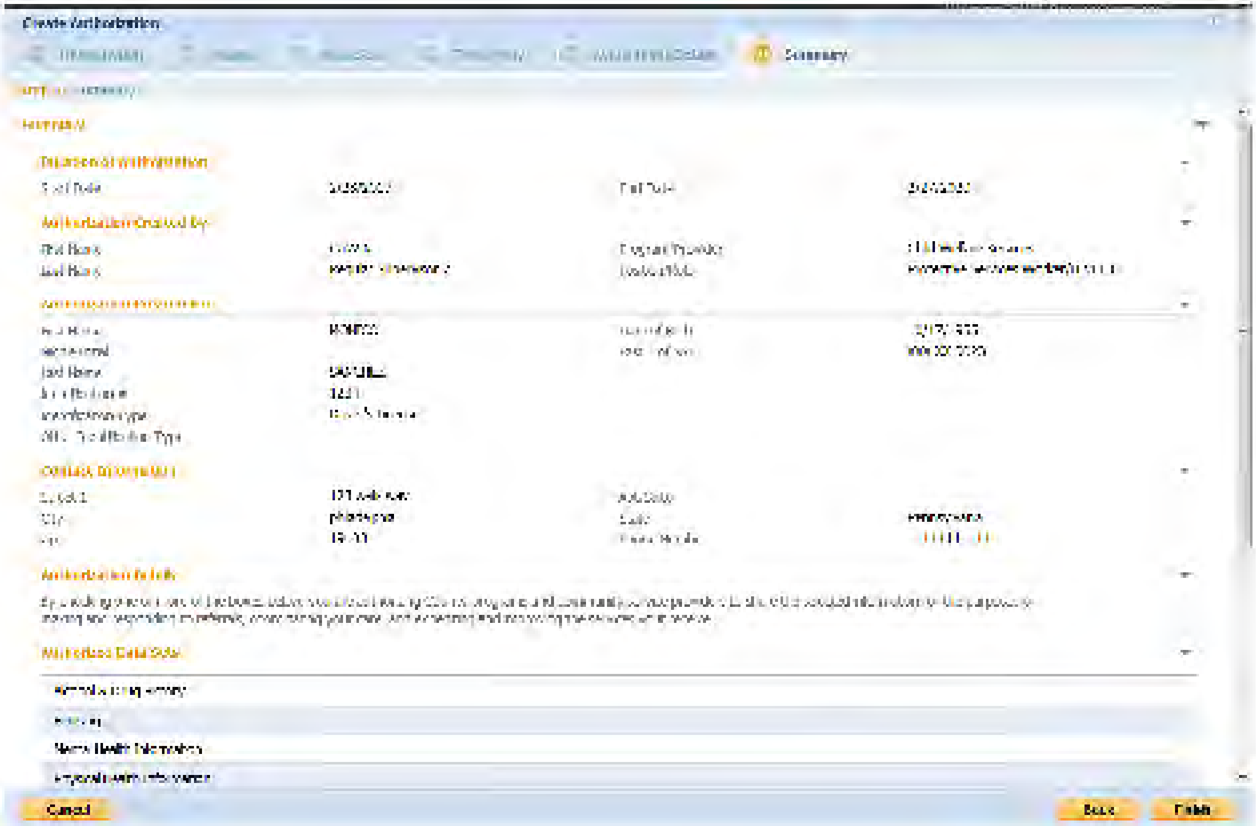


Figure 61: Authorization Wizard for the capture and management of consent

The Authorization Wizard is a convenient mechanism for capturing consent manually, but consent can also be captured through an interface. In IE-BM, the IBM team can use OCR to scan in consent forms and then read the Xerox DocuShare metadata and write to the Cúram consent management tables.

[T6.2.5]

Break-the-Glass

While consent is an essential privacy control in the IE-BM domain, IBM understands the State’s requirement that this control may need to be overridden in certain emergency situations, where the State may need unconstrained access to the client’s information in IE-BM for the client’s own benefit. Our Break-the-Glass function supports this requirement. When a user “breaks the glass”, he is alerted that his action is under special audit, and that his supervisor and the compliance officer will be notified. The user affirms at this point that there is indeed an emergency that requires the consent override. He can then access the client’s information protected by consent.

[T6.1.34, T6.1.35, T6.2.2, T6.2.9]

The following graphic shows “Break-the-Glass”:

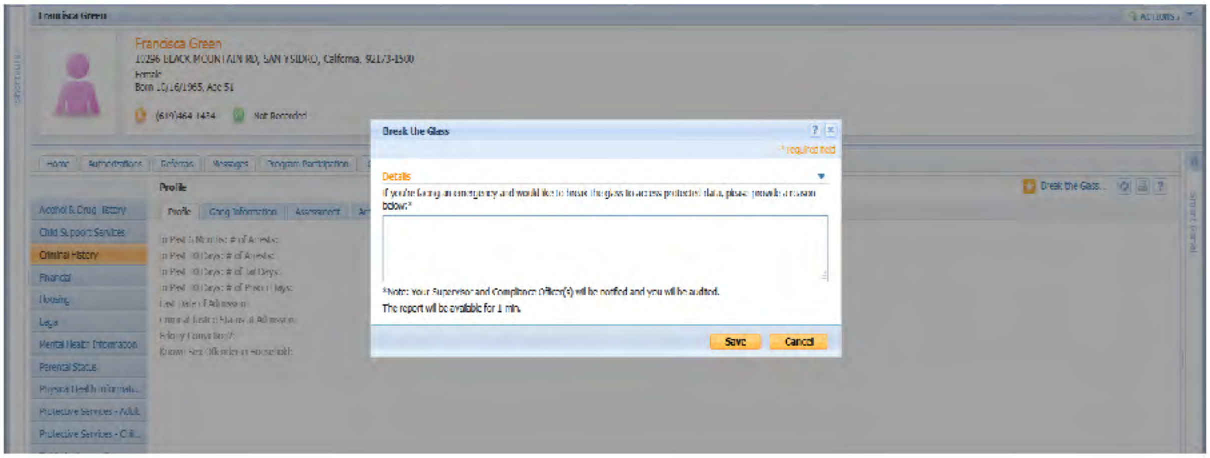


Figure 62: Break-the glass

Our Consent Management consent management solution enables a Person Centric Model of Practice,person-centric model and is therefore an essential part of the IBM Health and Human ServicesHHS Connect360 framework. Our Consentconsent solution allows client information to be shared across departments and systems, without sacrificing compliance. The solution provides extensive privacy controls, and the application infrastructure to managementmanage those controls, withn an overall NIST 800-53 Moderate security baseline. The solution is operational at the County of San Diego, across a large and complex operational landscape, comprising of many systems and departments.

3.7 Infrastructure Services Layer

The Vendor should ensure that the responses to this section are in alignment with the DHS preferences set forth in Template T-8 – Technical Requirements Traceability Matrix, Tab T7.

IBM will use the DIS Data Center/Hosting Facilities in Little Rock (Mandatory) as part of our proposed solution design and implementation for infrastructure.

[T7.4]

3.7.1 Technical Environments

Instructions: Describe the Vendor’s detailed approach to establishing the various technical environments for DHS IE-BM Solution:

- Multiple environments (e.g., development, testing, training, staging, and production)
- Procedures used to migrate software from one environment to another
- Steps needed to maintain the synchronization between environments, as appropriate

Multiple environments

Initially, IBM will use the current Cúram landscape as defined in the System Design Document (TP056 AR EEF System Design Document – version 3.1, dated September 14, 2014).

In general, IBM will establish or reuse the following high-level environments to develop, test, and deliver the desired software functionality:

- Non-PHI environments:
  - Development
  - Unit Test
  - System integration Test
  - Out of the Box (OOTB) for design and reference use
- PHI environments:
  - User Acceptance Test
  - Staging and Pre-Production Test
  - Production

These environments are generally supported by the following other necessary tooling environments:

- Development tooling and testing
- Deployment tooling
- Systems management and monitoring

From the physical infrastructure perspective, the tiers, web, app, and DB, are logically grouped into separate vLANs, and appropriate security controls are applied to isolate each environment.

IBM will modify the current environments as the needs of the business and project evolve. There may be some potential to modify the current environment in the short term to free up computing resources, but more detailed analysis than is possible in this RFP response will be necessary.

For reference, the current Cúram landscape is outlined in the following sections.

AIX and Power technical environments

- Production environment.
- Staging environments.
- User acceptance testing environment.
- Testing for production (TFP) environment.
- Staging shared environments (shared by UAT and TFP).
- Staging and production shared environment (shared by production, UAT, TFP, and staging shared - Guardium).
- Test and integration environment.
- OOTB and development environments.
- Development and test shared environment.
- Project apps environment (Rational and SVN).

- Deployment environment (Jenkins and Maven shared by production, UAT, TFP, staging shared, staging and prod shared, test and integration, test shared, OOTB and development, development shared, and development and test shared).

RHEL and x86 technical environments

- X86 production environment (JBoss EDS).
- X86 production individual servers (three Hadoop instances).
- X86 staging environment (JBoss EDS).
- X86 staging individual servers (three Hadoop instances).
- X86 test environment (JBoss EDS).
- X86 development and test shared environment (three Hadoop instances).
- X86 development environment.

Based on future requirements, the environments outlined and the resources, vCPUs and memory, assigned to these environments are subject to change.

Software migration procedures and Environment Synchronization

IBM will use the State's preferred Jenkins tool for code migration and deployment automation. IBM will also use the State's source control repository SVN to maintain incremental versions of software as it is getting migrated from environment to environment.

In essence, the following sequence of environmental migration of code will be implemented by IBM.

Continuous Build Environment

This environment is where a Jenkin's process will be running that pulls code from the latest code branch of SVN and perform build to flag any build failures due to conflicting changes from individual developers. Developers will be performing configuration and development changes on their individual computers and checking in code into SVN. Jenkins will be configured to pull merged code from SVN at regular intervals (that will be configured) like every hour (for example) and perform build. If two developers touched the same part of functionality and made changes that either modified the dependencies or modified code in different ways, this continuous build process will notify which part of the code is causing build failures. Jenkins will be configured to send notifications to the DDI team and once the issues are fixed, the next build cycle will pick up the corrected code changes. These builds are only to check code sanity as the development process is continuing. The build is not deployed anywhere.

Nightly Build Deployment

The nightly build process uses the same type of Jenkins configuration but the frequency will be set to once a day preferably in the evening after development activities for the day are done. A completed build will be deployed to a runtime environment server. Jenkins will be configured to manage the process of deploying application instances and complete the required configurations for deployment to WAS. Once this process is complete, the Nightly Build Server is ready with the latest version of the IE-BM application that will be used by Business and Testing teams for smoke testing and examining recent changes.

System Integration Test Environment

After the completion of every agile sprint or group of sprints, the code base is deployed to System Integration Test (SIT) environment for the testing team to perform System Integration Testing. During the course of this testing process, if there are any major defect fixes that warrant new deployments, the same is done on this server until the System Test process is successful. The timing of these deployments will be coordinated with all the concerned parties.

User Acceptance Test Environment

For every release, after the completion of System Integration Testing process, the version of the tested code base is deployed to User Acceptance Test (UAT) environment.

Higher Environments

Once UAT is complete, after the related defects are fixed and cleared, a new version of codebase will be ready for Testing for production (TFP), Staging and Production environments. Minor and major software versioning are key activities at this point to maintain proper migration sequence.
[T–7.8]

3.7.2 Server Architecture

Instructions: Describe the supported OS platforms and Server Configurations for the Vendor's System. Include minimum recommended specifications to support the System in all required environments (e.g., development, testing, training, and production).

IBM will retain the preferred server technology of IBM Power Servers running AIX, virtualized by the PowerVM hypervisor and the Intel x86 servers virtualized by the VMware ESXi hypervisor.

Should DHS elect to refresh the Power and x86 server technologies in the future, IBM will work with the State organizations to optimize the server environment, as appropriate from the technology and TCO perspective.

[T7.1, T7.2, T7.3, T7.4]

Supported OS platforms

As of release 7.0, IBM Cúram no longer specifies specific operating system environments for the Cúram application. Instead, IBM specifies the supported middleware, namely the application server and the database server.

IBM will retain the existing Cúram environment at DHS and DIS from the middleware perspective. The application server will be WebSphere and the database server will be DB2.

For further reference, see the "IBM Cúram Social Program Management Version 7.0.0 Supported Prerequisites" technical support document which outlines the change in policy: http://www-01.ibm.com/support/docview.wss?uid=swg27049147, the abstract of which states:

"This document outlines the supported third-party product prerequisites for the lifetime of IBM Cúram Social Program Management Version 7.0.0. A policy change has been implemented to the third-party prerequisites for this and future versions of the product. Therefore, the prerequisites that are specified here now define support only for the third-party products for which IBM's solutions have a direct dependency. For more information about the policy change, see the link in the "Related information" section."

The “Related Information” section referenced above may be viewed:

http://www-01.ibm.com/support/docview.wss?uid=swg21995211.

The document at the link above is entitled “Cúram Social Program Management Third Party Prerequisites Policy Change” and provides a more in-depth explanation and some clarifying “Questions and Answers”.

Minimum hardware specifications

The following list includes the minimum hardware specifications:

- AIX on Power:
  - Application server:
    - 2 Core POWER7 or POWER7+ system, POWER 8.
    - 8 GB RAM.
    - 60 GB disk space.
  - Database server:
    - 2 Core POWER7 or POWER7+ system, POWER 8.
    - 8 GB RAM.
    - 60 GB disk space.
- Linux or Windows on Intel:
  - Application server:
    - 2 Core Intel Xeon 2 GHz.
    - 8 GB RAM.
    - 60 GB disk space.
  - Database server:
    - 2 Core Intel Xeon 2 GHz.
    - 8 GB RAM.
    - 60 GB disk space.

All servers must have at least one network connection and one connection to storage.

Note: These specifications apply to development and test environments only. Higher level environments like staging and production need a sizing exercise done to specify the needed capacity and configurations. There is not enough information in the RFP and related documentation to do a specific sizing; therefore, we cannot list the minimum hardware specifications for those environments.

3.7.3 Client Architecture

Instructions: Describe the Client (desktop) Architecture for the Vendor’s System. Include minimum recommended specifications (e.g., RAM, video RAM, disk space, processor speed) to support the System, as well virtualized configurations to improve manageability and reduce operational costs.

The IBM Cúram solution employs a browser-based interface for interacting with the Cúram applications.

Minimum recommended specifications: Hardware

IBM does not specify a particular minimum or recommended desktop configuration for Cúram use. IBM does specify a minimum resolution capability for the desktop and laptop display:

- The minimum recommended display resolution is 1366x768.
- The optimum DPI setting is normal size.

Any fairly current desktop and laptop configuration that supports the minimum recommended display resolution should have no issues running the Cúram browser interface, subject to other workloads running on the same machine.

Standard browser support: Internal (intranet) use

IBM Cúram makes every effort to facilitate that the pages specified for the internal case workers' application use standard web technologies and formats which should be compatible with all browsers. The browsers listed in the following table are the only ones officially supported.

Standard browser support: External (internet) use

Cúram Universal Access has been specifically developed for public-facing applications; therefore, browser support has been extended in this area. It should be noted that while every effort is made to facilitate that the pages specified for the Universal Access application use standard web technologies and formats, which should be compatible with all browsers, the browsers listed in the following table are the only ones officially supported.

Table 14: Supported browsers

Supported Browser	Minimum Version	Notes
Apple Safari	10 and future fix packs	This browser is supported for the Universal Access application (external internet) use only
Google Chrome	53 and future fix packs	This browser is supported for both the Universal Access (external internet) and Case Worker (internal intranet) applications.
Microsoft Edge	38 and future fix packs	This browser is supported for the Universal Access application (external internet) use only.
Microsoft IE	11 and future fix packs	This browser is supported for both the Universal Access (external internet) and Case Worker (internal intranet) applications.
Mozilla Firefox	49 and future fix packs	This browser is supported for both the Universal Access (external internet) and Case Worker (internal intranet) applications.
Freedom Scientific JAWS screen reader	17 and future fix packs	The combination of Internet Explorer 11 and JAWS 17 is the only certified screen reader and browser combination. See the Cúram Accessibility User Guide manual for supported text resizing and browser zoom settings.

Virtualized desktops

Since the client software for the Cúram application is browser-based, virtualized desktops can run the supported browsers and hence the Cúram application.

Due to the number of variables and vendor implementations involved in running virtual desktops, IBM does not specify configurations for a virtualized desktop environment.

3.7.4 Data Storage Architecture

Instructions: Provide details on the Data Storage software and hardware components the Vendor proposes to use in its proposed Solution architecture.

IBM assumed that we will be using the existing DIS hosting facilities in Little Rock, including data storage subsystems, (Mandatory) as part of our proposed solution design and implementation.

IBM understands that DHS and DIS currently uses IBM XIV storage as the primary disk storage in the architecture for both the primary and disaster recovery locations.

As noted in Section 2.8.4 - Data Backup, IBM understands that DHS currently uses an HPE StoreOnce VTL and an IBM 3584 Tape Library as backup targets.

[T7.4, G8.20]

3.7.5 Network Architecture

Instructions: Describe the Vendor's System approach to network topology and hardware required to achieve the desired architecture (e.g., load balancing utilizing hardware and software based load balancers ahead of the Web servers, Virtual Private Networks (VPNs), creation of DMZs by firewalls.

IBM will use the existing DIS Network Infrastructure (Mandatory) as part of our proposed solution design and implementation. IBM typically designs the network infrastructure in a "leading practices" fashion to meet security requirements.

The following figure demonstrates a generic network design diagram for a typical Cúram production environment, which includes redundant components, data management zones (DMZs), firewalls, load balancers, and clusters. vLANs will be used to logically separate components within the data center zone. VPNs will use the capability of the network devices in the public facing and internal DMZs to establish IPSEC VPNs to external systems, as required.

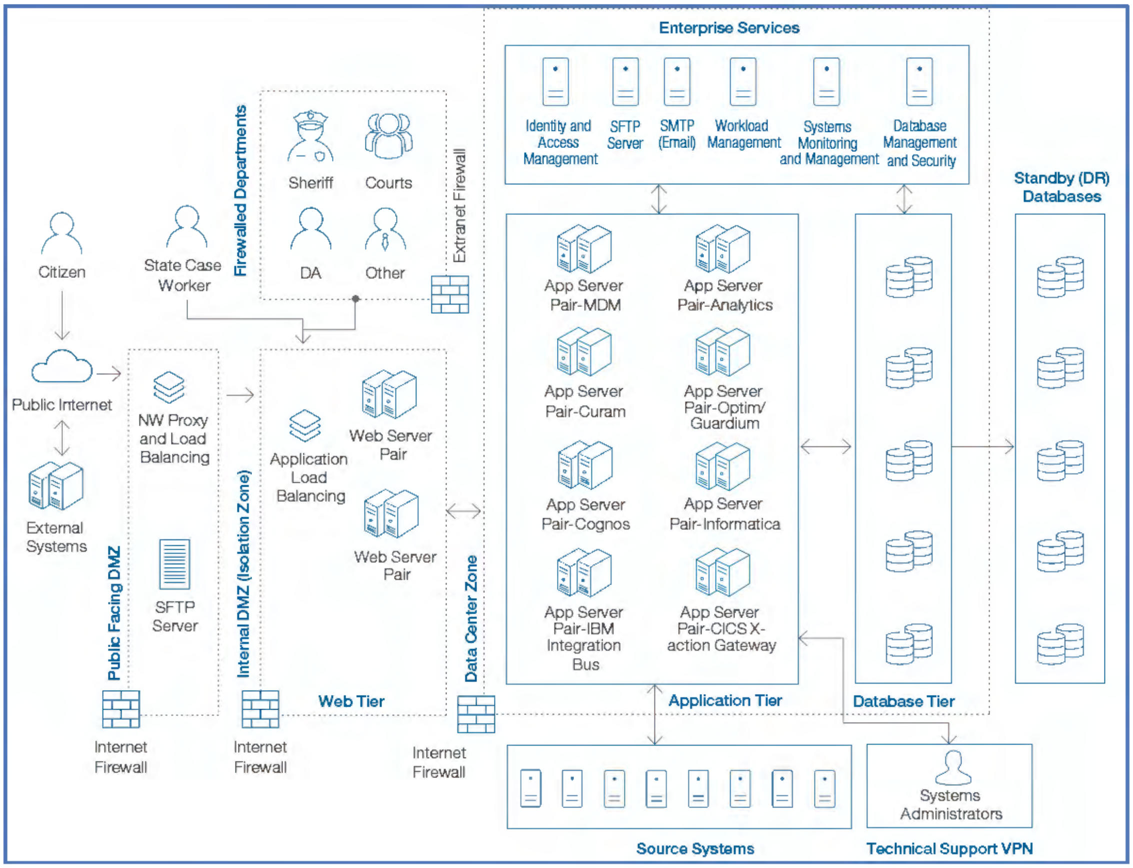


Figure 63: Generic network solution architecture (typical)

[T7.4, T7.5, T6.1.7]

3.7.6 Peripheral Architecture

Instructions: Describe the architecture of other devices such as printers, scanners and electronic signature pads etc., which are necessary for the Vendor's proposed Solution. Include minimum and recommended specifications to support the Solution.

IBM assumes that DHS/DIS has facilities for printing and scanning capabilities that are compatible and integrated with the current Cúram solution. See Assumptions.

The IBM Cúram solution is essentially agnostic concerning peripheral devices.

IBM Cúram uses desktop and server hardware, operating system capabilities, and application interfaces to support the following devices:

- Locally attached printers.
- Network attached printers.
- Centralized print facilities.
- Locally attached scanners.
- Centralized (batch) scanning facilities.
- Signature pads.

3.7.7 Design, Build and Operational Support Tools

DHS expects the Vendor to leverage tools to support their activities and, as the vendor needs to integrate into the broader DHS environment, will require the vendor to leverage some of the DHS standard tools. The vendor must leverage the following tools:

- JIRA for defect management and help desk

The following tools are installed at DHS and the vendor is encouraged to leverage these tools:

- Jenkins for deployment automation
- Subversion (SVN) for code versioning
- SharePoint for document management
- AutoSys for batch scheduling
- Rational Test Manager, Selenium to support testing efforts

If the vendor recommends the use of other tools, those tools will be purchased by DHS, will be installed in DHS' environment and the vendor's proposal must include the migration to DHS' standards at the end of the contract.

Instructions: Describe in detail the tools the Vendor plans to leverage to design, build, test, deploy, report, monitor and operate the proposed Solution.

The response should include a discussion of the capabilities the Vendor plans to leverage for each tool, why the Vendor plans to leverage DHS' standard tools or the justification for implementing different tools. The response should also include a discussion of any additional tools which will provide capabilities which currently are not supported by DHS' current tools.

If the Vendor proposes tools other than the DHS standards, the response should also include a discussion of the challenges and risks to migrating all IE-BM related materials to the DHS tools at the end of the contract and how their proposed approach will mitigate those challenges and risks.

IBM will use the existing DIS hosting facilities in Little Rock, including design, build, and operational support tools, as part of our proposed solution design and implementation.

[T7.6, T7.8, T7.9, T7.10, T7.11, T7.12, T7.13]

Specifically, IBM will use the following components:

- JIRA for defect management and help desk.
- Jenkins for deployment automation.
- Subversion (SVN) for code versioning.
- SharePoint for document management.
- AutoSys (CA Workload Automation AE) for batch scheduling.
- Wily Introscope (CA Application Monitoring) for application monitoring.
- Rational Test Manager, Selenium to support testing efforts.
- Rational Software Architect for model management.

4.0 Software Components

Instructions: The Contract may include the acquisition of COTS software to support the Project. DHS anticipates the Vendor will leverage some of the software components already within DHS Enterprise and install additional software as required.

The following questions pertaining to Software components should be answered. Please refer to the General System Design (GSD) and other reference documents in the Procurement Library for additional details.

The Vendor should use Table 1 if they intend to leverage any existing licenses that DHS owns within their enterprise as part of their current deployments. The list of all currently owned DHS software licenses is provided as part of the Procurement Library.

The Vendor should use Table 2 to list all the new COTS packages the Vendor is proposing as part of their solution design that are not currently owned by DHS.

The Vendor can add rows as needed; each row must correlate with a DHS IE-BM Solution technology component captured in the RFP Cost workbook. Add rows as necessary. Do not change any of the completed cells. Any changes to the completed cells could lead to the disqualification of the Proposal.

Table 15: Existing DHS COTS Software that the Vendor intends to leverage for the IE-BM Solution

SOFT WARE ITEM #	SOFT WARE ITEM	ENVIRONMENT (E.G., Development, Test, Training, Production)	MANUFACTURER	LICENSE TYPE (E.G., Enterprise, Per User, Per Server)	BRAND NAME	MODULE NAME	VERSION NUMBER	UTILITY/ SYSTEMS MGMT SOFTWARE, DBMS, DATA WAREHOUSE, OTHER	DETAILED DESCRIPTION (E.G., Functionality, Purpose)	OS	EARLIEST PROPOSED PURCHASE DATE
1.	Cognos	All	IBM	Enterprise	Cognos	Cognos	11.0	Other (Analytics)	For BI & Analytics	AIX	Jan-18
2.	Cúram	All	IBM	Enterprise	Cúram	All	7.0	Other (Application)	For Case Management	AIX	Jan-18
3.	DB2	All	IBM	Enterprise	DB2	DB2	As is	DBMS	For Database Mgmt.	AIX	Jan-18

SOFT WARE ITEM #	SOFT WARE ITEM	ENVIRONMENT (E.G., Development, Test, Training, Production)	MANUFACTURER	LICENSE TYPE (E.G., Enterprise, Per User, Per Server)	BRAND NAME	MODULE NAME	VERSION NUMBER	UTILITY/ SYSTEMS MGMT SOFTWARE, DBMS, DATA WAREHOUSE , OTHER	DETAILED DESCRIPTION (E.G., Functionality, Purpose)	OS	EARLIEST PROPOSED PURCHASE DATE
4.	Guardium	Production	IBM	Per Server	Guardium	Guardium	As is	Utility/Systems Mgmt. Software	For Database monitoring	AIX	Jan-18
5.	Rational Software Architect	Development	IBM	Per User	RSA	RSA	As is	Other (Cúram Modeling)	For database and method modeling in Cúram	Windows	Jan-18
6.	Rational Software Test Suite	Testing	IBM	Per Server	Rational	Rational	As is	Other (Testing)	For solution testing	AIX	Jan-18
7.	Tivoli Netcool	Production	IBM	Per Server	Tivoli	Netcool	As is	Utility/Systems Mgmt. Software	For network management	AIX	Jan-18
8.	WebSphere Application Server	Test, Training, Production	IBM	Per Server	WAS	WAS	8.5.5	Other (Application Server)	For hosting web applications	AIX	Jan-18
9.	CICS Transaction Gateway	Production	IBM	Per Server	CICS	CICS	As is	Other (Integration)	For connections to Legacy Mainframe Systems	AIX	Jan-18
10.	DocuShare	Test, Production	Xerox	Per Server	DocuShare	DocuShare	As is	Other (Doc	For document storage and	AIX	Jan-18

SOFT WARE ITEM #	SOFT WARE ITEM	ENVIRONMENT (E.G., Development, Test, Training, Production)	MANUFACTURER	LICENSE TYPE (E.G., Enterprise, Per User, Per Server)	BRAND NAME	MODULE NAME	VERSION NUMBER	UTILITY/ SYSTEMS MGMT SOFTWARE, DBMS, DATA WAREHOUSE , OTHER	DETAILED DESCRIPTION (E.G., Functionality, Purpose)	OS	EARLIEST PROPOSED PURCHASE DATE
								Managem ent)	retrieval by solutions		
11.	Informatica	Development , Test, Production	Informatica	Per Server	Informatic a	Informatic a	As is	Data Warehous e	For ETL and data manipulation	AIX	Jan-18
12.	CA Suite	Test, Production	CA	Per Server	CA	CA	As is	Utility/Syst ems Mgmt. Software	For identity, application and workload management	AIX	Jan-18

Table 16: Proposed New Packaged Software by Vendor

SOFT WARE ITEM #	SOFT WARE ITEM	ENVIRONMENT (E.G. Development, Test, Training, Production)	MANUFAC TURER	LICENSE TYPE (E.G., Enterprise, Per User, Per Server)	BRAND NAME	MODULE NAME	VERSION #	Type of Software (E.g. RDBMS, Rules Engine etc.]	DETAILED DESCRIPTION [E.g. Functionality, Purpose]	OS	Proposed Time line [E.g. 30 days after Project Planning Phase completes]
1.	IBM Integration Bus	All	IBM	Processor Value Unit	Systems - Middlewa re	N/A	10.0	Middleware	Used to connect applications together, regardless of the message formats or protocols that they support.	AIX	Jan-18

SOFT WARE ITEM #	SOFT WARE ITEM	ENVIRONMENT (E.G. Development, Test, Training, Production)	MANUFAC TURER	LICENSE TYPE (E.G., Enterprise, Per User, Per Server)	BRAND NAME	MODULE NAME	VERSION #	Type of Software (E.g. RDBMS, Rules Engine etc.]	DETAILED DESCRIPTION [E.g. Functionality, Purpose]	OS	Proposed Time line [E.g. 30 days after Project Planning Phase completes]
2.	IBM Process Server	All	IBM	Processor Value Unit	Systems - Middleware	N/A	7.5.1	Middleware	Business Process Management (BPM) platform. It includes tooling and run time for process design and execution, along with capabilities for monitoring and optimizing work that is executed within the platform.	AIX	Jan-18
3.	IBM Integration Bus Connectivity Pack for Healthcare	All	IBM	Installations	Systems - Middleware	N/A	3.0	Middleware	Builds on IBM Integration Bus to provide support for applications in healthcare. To convert data from one format to another, and transmit data.	AIX	Jan-18
4.	IBM WebSphere Service Registry and Repository	All	IBM	Processor Value Unit	Systems - Middleware	N/S	8.5	Middleware	Provides service registry and repository functions for service-oriented architecture (SOA), enterprise applications for SOAP and REST services.	AIX	Jan-18

SOFT WARE ITEM #	SOFT WARE ITEM	ENVIRONMENT (E.G. Development, Test, Training, Production)	MANUFAC TURER	LICENSE TYPE (E.G., Enterprise, Per User, Per Server)	BRAND NAME	MODULE NAME	VERSION #	Type of Software (E.g. RDBMS, Rules Engine etc.]	DETAILED DESCRIPTION [E.g. Functionality, Purpose]	OS	Proposed Time line [E.g. 30 days after Project Planning Phase completes]
5.	IBM Workload Scheduler	Production	IBM	Processor Value Unit	Systems – Middleware	N/A	9.3	Middleware	Plan, execute and track jobs on several platforms and environments.	AIX	Jan-18
6.	IBM InfoSphere Optim Archive Open Data Manager	Production	IBM	Terabyte	Analytics - Platform	N/A	11.3	Data Archive	Manages the volume, speed and complexity of data growth for reduced storage costs and improved performance.	AIX	Jan-18
7.	IBM InfoSphere Master Data Management Patient Hub	All	IBM	Resource Value Unit	Analytics - Platform	N/A	11.5	Master Data Management	Provides a single, trusted view of client data to users and applications thereby helping reduce costs, minimize risk and improve decision-making.	AIX	Jan-18
8.	IBM InfoSphere Master Data Management Provider Hub	All	IBM	Resource Value Unit	Analytics - Platform	N/A	11.5	Master Data Management	Provides a single, trusted view of provider data to users and applications thereby helping reduce costs, minimize risk and improve decision-making.	AIX	Jan-18

SOFT WARE ITEM #	SOFT WARE ITEM	ENVIRONMENT (E.G. Development, Test, Training, Production)	MANUFAC TURER	LICENSE TYPE (E.G., Enterprise, Per User, Per Server)	BRAND NAME	MODULE NAME	VERSION #	Type of Software (E.g. RDBMS, Rules Engine etc.]	DETAILED DESCRIPTION [E.g. Functionality, Purpose]	OS	Proposed Time line [E.g. 30 days after Project Planning Phase completes]
9.	IBM SPSS Modeler	Development, Test, Production	IBM	Per Authorized User	Analytics - Platform	N/A	18	Predictive Analytics	Is a data mining toolset that helps you build predictive models quickly and intuitively.	Windows	Jan-18
10.	AT&T GSMS	Production	AT&T	Per SMS message	GSMS	N/A	N/A	GSMS	SMS functionality.	AIX	Jan-18
11.	Adobe Presenter	Training	Adobe	Per User	Presenter	N/A	11	Training Development	Web Based Training development software.	Windows	Jan-18
12.	Adobe Captivate	Training	Adobe	Per User	Simulation	N/A	9	Simulation	Training simulation software.	Windows	Jan-18
13.	eLearning Brothers	Training	eLearningBrothers	Per User	Master Package	N/A	N/A	Image Library	Stock Image Library for training development.	Windows	Jan-18
14.	Drupal	All	Open Source	GNU	Web Development	N/A	8.2.7	Web Development	Content management software used for easy content authoring, reliable performance, and excellent security.	AIX	Jan-18
15.	Apache HTTP Server	All	Open Source	GNU	Portal Hosting	N/A	2.0	Web Server	Web Server for Drupal portal.	AIX	Jan-18

SOFT WARE ITEM #	SOFT WARE ITEM	ENVIRONMENT (E.G. Development, Test, Training, Production)	MANUFAC TURER	LICENSE TYPE (E.G., Enterprise, Per User, Per Server)	BRAND NAME	MODULE NAME	VERSION #	Type of Software (E.g. RDBMS, Rules Engine etc.]	DETAILED DESCRIPTION [E.g. Functionality, Purpose]	OS	Proposed Time line [E.g. 30 days after Project Planning Phase completes]
16.	MySQL	All	Open Source	GNU	Database	N/A	5.6	RDBMS	Database for Drupal.	AIX	Jan-18

If the System will include software to be licensed from the Vendor, Vendors should include software licensing requirements and anticipated volume. The Vendor should propose the licensing options available and recommend the advantages of those various options. For example, licensing options may include:

- Named user
- Per server
- Per work team
- Concurrent User
- Enterprise (unrestricted)

5.0 Proposed Hardware Technical Specifications

The Contract may include the acquisition of additional hardware in support of the System. DHS has a preference that the System be built using the established DHS standards. However, DHS understands hardware that does not conform to its standards may be required.

Please refer to the RFP and General System Design and other reference documents in the Procurement Library for additional details.

Instructions: Please list all the specifications of the proposed Hardware in the Tables below. Add rows as necessary. Do not change any of the completed cells. Any changes to the completed cells could lead to the disqualification of the Proposal.

Table 17: Leveraged DHS Hardware/Infrastructure

HARD WARE ITEM #	HARD WARE ITEM	ENVIRONMENT (E.G., Development, Test Training, Production)	MANUFACTURER	DETAILED DESCRIPTION (E.G., Number of processors, Amount and type of storage and memory, Type of network card)	OS	Proposed Time line (E.g. 30 days after Project Planning Phase completes)
1.	Item 1	Production	IBM	Power 770 server Model/Type: 9117-MMD Procs Installed: 64 Procs Active:32 Ram Installed: 768GB Ram Active: 768GB	AIX v7	Currently installed

HARD WARE ITEM #	HARD WARE ITEM	ENVIRONMENT (E.G., Development, Test Training, Production)	MANUFACTURER	DETAILED DESCRIPTION (E.G., Number of processors, Amount and type of storage and memory, Type of network card)	OS	Proposed Time line (E.g. 30 days after Project Planning Phase completes)
2.	Item 2	Staging	IBM	Power 770 server Model/Type: 9117-MMD Procs Installed: 64 Procs Active: 48 Ram Installed: 1024GB Ram Active: 1024GB	AIX v7	Currently installed
3.	Item 3	Dev/Test 01	IBM	Power S824 server Model/Type: 8286-42A Procs Installed: 24 Procs Active: 24 RAM Installed: 1024GB RAM Active: 1024GB	AIX v7	Currently installed
4.	Item 4	Dev/Test 02	IBM	Power S824 server Model/Type: 8286-42A Procs Installed: 24 Procs Active: 24 RAM Installed: 1024GB RAM Active: 1024GB	AIX v7	Currently installed
5.	Item 5	SAN Storage	unknown	62 TB total disk storage	N/A	Currently installed
6.	Item 6	Virtual Tape Library	HPE	StoreOnce unknown capacity	N/A	Currently installed
7.	Item 7	Tape Library	IBM	3594 Tape Library unknown capacity	N/A	Currently installed

Table 18: Proposed New Hardware/Infrastructure

HARD WARE ITEM #	HARD WARE ITEM	ENVIRONMENT (E.G., Development, Test, Training, Production)	MANUFACTURER	DETAILED DESCRIPTION (E.G., Number of processors, Amount and type of storage and memory, Type of network card)	OS	Proposed Time line (E.g. 30 days after Project Planning Phase completes)
1.	Item 1	None				
2.	Item 2					
3.	Item 3					

6.0 Technical Requirements Assumptions

Instructions: Document the assumptions related to the Technical Requirements in the below Table. Add rows as necessary. Do not change any of the completed cells. Any changes to the completed cells could lead to the disqualification of the Proposal.

Table 19: Technical Requirement Assumptions

ITEM #	REFERENCE (Section, Page, Paragraph)	DESCRIPTION	RATIONALE
1.	2.8.1 Solution Administration - Application management and monitoring	IBM assumes that by Wiley, DHS and DIS means the Wily Introscope tool, which was purchased by CA and is now called CA Application Performance Management.	CA purchased Wily and renamed Introscope to CA Application Performance Management
2.	2.8.1 Solution Administration - Workload management 3.7.7 Design, Build and Operational Support Tools	IBM assumes that by AutoSys, DHS and DIS means the AutoSys tool, which was purchased by CA and is now called CA Workload Automation AE (AE = AutoSys Edition).	CA purchased AutoSys and renamed it to CA Workload Automation - AE
3.	2.8.4 Data Backup	IBM assumes the current backup environment for the IE-BM implementation is sufficient to meet all performance and business requirements (SLAs and SLRs) for the foreseeable future, including additional requirements represented by this RFP.	There is not sufficiently detailed information provided by the RFP and supporting documentation regarding the data backup environment and operations to assess whether or not it is sufficient to meet current and future SLAs/SLRs.
4.	2.8.5 Disaster Recovery	IBM assumes the current DR environment for the IE-BM implementation is sufficient to meet all performance and business requirements (SLAs and SLRs) for the foreseeable future, including additional requirements represented by this RFP.	There is not sufficiently detailed information provided by the RFP and supporting documentation regarding the disaster recovery environment and operations to assess whether or not it is sufficient to meet current and future SLAs/SLRs.

ITEM #	REFERENCE (Section, Page, Paragraph)	DESCRIPTION	RATIONALE
5.	2.8 Solution Administration and Management	IBM assumes that the State of Arkansas has the appropriate software licenses and support for all products mentioned in the RFP as being “preferred”, including both proprietary and open source software, to support the systems management and administration goals for the IE-BM solution, as stated in the RFP and its amendments.	Some open source software has both free and fee offerings in terms of license or support charges. Functionality and capability often differs between free and fee versions.
6.	2.6.2 Security Architecture and Design	IBM assumes that by the term “CA IAM”, DHS and DIS refers to the full CA Identity and Access Management Suite of products: • CA Identity Management. • CA Access Management. • CA Single Sign-On.	CA does not have an offering called IAM, based on a search of their website at www.ca.com.
7.	2.8.7 Performance Monitoring and Management	IBM assumes that the DIS infrastructure (servers, storage, network) is not and will not be a performance or capacity bottleneck given the current and forecasted workloads represented by the IE-BM solution. IBM assumes there is adequate capacity to add a small number of additional LPARs to the current servers.	There is not sufficiently detailed information provided by the RFP and supporting documentation regarding detailed performance and capacity information to assess whether or not it is sufficient to meet current and future SLAs/SLRs
8.	3.3 Enterprise Content Management/ECM	IBM assumes DocuShare software has the capabilities described in Template T-8 – Technical Requirements Traceability Matrix, Tab T3.3, and our proposed solution will integrate with this software for enabling the capabilities	DocuShare has been specified as the preferred Enterprise Content Management software
9.	3.7 Infrastructure Services Layer	IBM assumes the current DIS infrastructure, at the network level for WAN, LAN, and SAN, includes appropriately redundant components (application and protocol appliances, routers, switches, firewalls) so as not to negatively impact system availability (99.75% SLR).	There is not sufficiently detailed information provided by the RFP and supporting documentation regarding detailed infrastructure architecture information to assess whether or not it is

ITEM #	REFERENCE (Section, Page, Paragraph)	DESCRIPTION	RATIONALE
			sufficient to meet current and future SLAs/SLRs
10.	3.4.2 Data Integration	IBM assumes that Cúram will contain all history data, thus there is no historical data conversion needed for the IE-BM reporting solution, just a one-time feed.	
11.	3.4.2 Data Integration	IBM assumes that data generated by Cúram and MDM will be exported to the IE-BM data layer in its raw form.	
12.	3.4.2 Data Integration	IBM assumes that Informatica, as a software product, will only be configured based on published technical documentation. Application code will not be customized.	
13.	3.4.2 Data Integration	IBM assumes that Informatica ETL is planned to be run on a nightly basis. If hardware or network issues prevent the timely loading of data, ETL will be run on a less-frequent basis.	
14.	3.4.2 Data Integration	IBM assumes that Informatica will have access to an email server in order to send out operational emails to administrators	
15.	3.4.2 Data Integration	IBM assumes that if no geocoding software is available or purchased for the IE-BM solution, DHS will be responsible for geocoding addresses in the IE-BM data layer.	
16.	3.5.1 Database Management Systems	IBM assumes that DB2, as a software product, will only be configured based on published technical documentation. Application code will not be customized.	
17.	3.5.2 Business Intelligence and Reporting Infrastructure	IBM assumes that cross department reporting will be done out of the DHS and State EDW (not from the IE-BM system).	

ITEM #	REFERENCE (Section, Page, Paragraph)	DESCRIPTION	RATIONALE
18.	3.5.2 Business Intelligence and Reporting Infrastructure	IBM assumes that until a department's system is brought into Cúram, all associated legacy system reporting will continue as-is.	
19.	3.5.2 Business Intelligence and Reporting Infrastructure	IBM assumes that data loaded into the data layer will solely be loaded from the Cúram and MDM databases.	
20.	3.5.2 Business Intelligence and Reporting Infrastructure	IBM assumes that in order for reports to be accessed through mobile devices, the Cognos servers must be accessible to that mobile user either through the public internet or through a VPN on the mobile device.	
21.	3.5.2 Business Intelligence and Reporting Infrastructure	IBM assumes that DHS will be responsible for acquiring the appropriate number of licenses to facilitate users can access reports and Cognos functionality that is needed.	
22.	3.5.2 Business Intelligence and Reporting Infrastructure	IBM assumes that we will install and configure SPSS to be used within the IE-BM data layer, but DHS will be responsible for developing any predictive models using that application.	
23.	3.5.2 Business Intelligence and Reporting Infrastructure	IBM assumes that Cognos, as a software product, will only be configured based on published technical documentation. Application code will not be customized.	
24.	3.5.2 Business Intelligence and Reporting Infrastructure	IBM assumes that SPSS, as a software product, will only be configured based on published technical documentation. Application code will not be customized.	
25.	3.5.2 Business Intelligence and Reporting Infrastructure	IBM assumes that for any Cognos-ESRI GIS integration, DHS must be licensed to use ESRI in that capacity and provide IBM	

ITEM #	REFERENCE (Section, Page, Paragraph)	DESCRIPTION	RATIONALE
		appropriate credentials to access the GIS server or service.	
26.	3.5.2 Business Intelligence and Reporting Infrastructure	IBM assumes that DHS will provide IBM an organization hierarchy, if needed, for reporting and be responsible for notifying IBM of any updates.	
27.	3.5.2 Business Intelligence and Reporting Infrastructure	IBM assumes that DHS will provide IBM the geographical hierarchy (counties, zip codes, regions, offices) if needed, for reporting and be responsible for notifying IBM of any updates.	
28.	3.5.2 Business Intelligence and Reporting Infrastructure	IBM assumes that DHS will provide IBM the calendar dates needed for reporting and be responsible for notifying IBM of any updates.	
29.	3.5.2 Business Intelligence and Reporting Infrastructure	IBM assumes that file formats to execute or save reports in will be those provided by OOTB Cognos - HTML, PDF, Excel, CSV, and XML.	
30.	3.5.2 Business Intelligence and Reporting Infrastructure	IBM assumes that the ability for users to incorporate and upload external data to be used in conjunction with the core data layer data will be subject to Cognos' published file size limitations.	
31.	3.5.2 Business Intelligence and Reporting Infrastructure	IBM assumes if reports are to be saved to common network drives, DHS will provide service accounts to be used by Cognos to map to these file systems.	
32.	3.5.2 Business Intelligence and Reporting Infrastructure	IBM assumes that Cognos emailing functionality can be customized to the degree provided in published documentation such as the ability for users to attach files to emails. But certain emailing requirements, like encrypting emails, will not be supported.	
33.	3.5.2 Business Intelligence and	IBM assumes that the Cognos metadata model available for ad-hoc reporting will be the same that	

ITEM #	REFERENCE (Section, Page, Paragraph)	DESCRIPTION	RATIONALE
	Reporting Infrastructure	is developed for reports and dashboards. No additional customization will be added.	
34.	2.8.1 Solution Administration – Print prioritization and management	IBM assumes the current centralized and decentralized print prioritization and management environment for the IE-BM implementation is sufficient to meet performance and business requirements (SLAs) for the foreseeable future, including additional requirements represented by this RFP.	The proposed IBM solution is agnostic to print capabilities in the infrastructure, but does use them if available.
35.	T9 Technical Requirements Approach	IBM assumes that DHS will provide IBM developers and administrators appropriate server privileges to install, configure, and manage required software during the project phases.	

Template T-10

Implementation Requirements Traceability Matrix

Response Template RFP #: SP-17-0012

State of Arkansas Department of Human Services
Integrated Eligibility and Benefit Management (IE-BM) System
RFP #: SP-17-0012
Template T-10 - Implementation Requirements Traceability Matrix

Introduction

This document captures the Implementation Requirements for the State of Arkansas's IE-BM Engagement. This document should be read in conjunction with the Solution Overview section of the RFP, which documents the State's guidelines and expectations for the Solution development approach. Together, these requirements and the Solution Approach section must be used to inform the Vendor's cost and schedule estimates and final fixed bid for the design, development, implementation and ongoing support of the IE-BM System.

The Implementation Requirements document contains the following sections:
1) Instructions
2) Implementation Requirements

Within the Implementation Requirements, the requirements are categorized by area as detailed below. Each category has its own tab in this workbook.

ID	Section Title
I	**Implementation Requirement Section**
I1	Project Management and Monitoring
I2	Planning
I3	Technical Environment Setup and Management
I4	Solution Design, Development & Implementation (DDI)
I5	Data Conversion and Migration
I6	Testing
I7	Organizational Change Management, Training and Knowledge Transfer
I8	Pilot, Roll-Out and Go-Live
I9	Warranty Support and Close Out
I10	Service-Level Requirements

State of Arkansas Department of Human Services
Integrated Eligibility and Benefit Management (IE-BM) System
RFP #: SP-17-0012
Template T-10 - Implementation Requirements Traceability Matrix

Instructions

This workbook contains Implementation Requirements desired by the State of Arkansas for the IE-BM System and captures the tasks the Vendor will be responsible for performing.
The response codes below should be used by the Vendor to indicate whether the it agrees to perform the requirements identified to be completed by the Vendor or whether the Vendor recommends changes to the tasks being performed.
This template must be submitted as an MS Excel file as part of the Vendor Proposal and should be thoroughly completed.

Field	Definition / Instructions
Req. #	**Requirement Identification Number:** This should be used to refer to requirements in correspondence. DO NOT EDIT THIS FIELD.
Requirement Description	**Requirement:** The detailed description of requirement. DO NOT EDIT THIS FIELD.
Requirement Met	**Vendor response to whether the Implementation Requirement will be met by the Vendor's solution DDI approach**. For tabs I1 - I9, indicate whether the requirement, as currently written, will be met by the Vendor's proposal: Yes or Clarification. For each Service Level Requirement, indicate agreement with each and all of the SLRs. The Vendor is expected to show in its Proposal how it will ensure compliance with the SLRs: Yes or No.
Vendor Proposed Clarifying Comments (for I1 to I9)	If the Response Code is set to "Clarifications" the Vendor must provide clarifying comments To provide more detail regarding the approach for meeting an implementation, use the Implementation Approach Narrative Templates (Template T-11 - Implementation Approach) and provide a reference to the appropriate RFP Req. #(s) in this template.
Proposed Liquidated Damages Amount	For each Service Level Requirement, provide a recommended Liquidated Damages amount per measure of SLR Measurement of Non-Compliance.

State of Arkansas Department of Human Services
Integrated Eligibility and Benefit Management (IE-BM) System
RFP #: SP-17-0012
Template T-10 - Implementation Requirements Traceability Matrix

Project Management and Monitoring

Req #	Requirement Description	Requirement Met	Vendor Proposed Clarifying Comments
I1.1	Provide, employ, maintain, and execute a robust project management methodology that complies with the Project Management Institute (PMI) standards and other industry best practices and aligns and integrates with DHS PMO's processes.	Yes	
I1.2	Develop each of the Project Management Deliverables outlined in the Scope of Work (SOW) in the main RFP document. These will be reviewed and formally approved by DHS staff, to be identified by the State, through the process outlined in the Project Management Plan. The Vendor shall complete these deliverables in compliance with the Project Schedule and complete the deliverables approval process (e.g. invoice) in a timely manner as agreed to in the final contract.	Yes	
I1.3	Collaborate with the DHS PMO staff to ensure the DHS and Vendor project managers work "shoulder-to-shoulder". Although the Vendor will be responsible for managing the project they also must ensure DHS project managers have enough involvement to ensure the processes align and integrate with DHS PMO's processes and are being followed, allowing the deliverables to be approved in a timely manner.	Yes	
I1.4	Produce a Deliverables Expectation Document (DED) for each deliverable and submit for review by the DHS prior to commencing work on any deliverable. Any work done not in compliance with these is completely at risk by the Vendor.	Yes	
I1.5	Perform all project management processes outlined in the PMP throughout the duration of the project	Yes	
I1.6	Provide all project management documents (e.g., Project Management Plan, Project Schedule, Work Breakdown Structure, etc.) using Microsoft software products and/or pdf. The software version to be used must match the State's approved standards.	Yes	

Req #	Requirement Description	Requirement Met	Vendor Proposed Clarifying Comments
I1.7	Provide training to the State project team on the COTS packages (out-of-the-box functionality), software development methodology (including best practices, lessons learned from previous projects), selected tools (e.g. document management tools), case management/business process re-engineering (lessons learned and best practices) and project specific content (to enable team members to become familiar with the Project). These trainings can be provided through a variety of methods (e.g. targeted product seminars (preferred), workshops, self-learning). Initial project team training must occur before requirements validation activities commence however materials must be maintained/available throughout the Project.	Yes	
I1.8	Leverage the DHS and/or other Statewide standards and templates for deliverables or receive approval from DHS to use Vendor's own templates.	Yes	
I1.9	Lead the project communications effort in compliance with the Project Communications Management Plan for the duration of the Project	Yes	
I1.10	Ensure all project management reports are developed in alignment with DHS processes and standards.	Yes	
I1.11	Provide weekly Status Reports and monthly Executive Status Reports containing the contents outlined in the Scope of Work.	Yes	
I1.12	Lead and/or participate in all Status meetings as outlined in the Project Communications Plan.	Yes	
I1.13	Manage the risk, issues, action item and decision management processes and logs in compliance with the approach outlined in the Project Management Plan.	Yes	
I1.14	Collaborate with DHS staff in mitigating risks, resolving issues, completing action items and driving decisions.	Yes	
I1.15	Track progress against the baselined schedule and report any deviations to DHS. At DHS' discretion, the Vendor shall develop recovery plans to address major deviations.	Yes	
I1.16	Prepare for and present to DHS detailed progress and variance reports at specific Project gate reviews.	Yes	
I1.17	Develop recovery plans to address major deviations to the baselined Project schedule (if required).	Yes	
I1.18	Develop DHS resource demands to perform tasks outlined in the Project schedule.	Yes	
I1.19	Structure the DDI team and implement policies to minimize staff turn-over.	Yes	
I1.20	Provide, in writing, the reason for changes to any key project resources and provide a completed staff experience and references form and resume for the substitute personnel.	Yes	
I1.21	In the event of a transition between employees, ensure roles are filled by qualified personnel during the transition.	Yes	
I1.22	Provide a minimum of one full-time assigned PMI Certified Project Manager.	Yes	
I1.23	Establish project staffing policies designed to minimize personnel turn-over during Project execution.	Yes	

Req #	Requirement Description	Requirement Met	Vendor Proposed Clarifying Comments
I1.24	Perform the tasks required to close out the Project including updating all appropriate documentation, migrating the documentation to the DHS PMO team control and providing support during the transition.	Yes	
I1.25	Develop formal Change Reqests for any changes to the project's scope, schedule or budget and submit through DHS' Project Change Request process	Yes	
I1.26	Perform in compliance with SLAs and provide a process for reviewing performance against SLAs.	Yes	
I1.27	Invoice for approved deliverables in a timely manner as agreed to in the final Contract.	Yes	
I1.28	Provide an Engagement Manager who will serve as DHS' single point of contact for the duration of the Project. The Engagement Manager must be empowered to act on behalf of the organization. S/he must resolve any problems and contract disputes in an efficient and timely manner related to items such as roles, responsibilities, performance against SLAs or Change Requests..	Yes	

Req #	Requirement Description	Requirement Met	Vendor Proposed Clarifying Comments
I1.29	Must be responsible for documentation management in alignment with the DHS' document management policies.	Yes	
I1.30	Must support DHS oversight activities in their attempts to produce their oversight reports.	Yes	
I1.31	Must be responsible for suggesting technology and process improvements.	Yes	
I1.32	Must actively maintain Project documentation (e.g. Requirements Traceability Matrix, Project Roster) for the duration of the Project on the DHS approved document repository.	Yes	
I1.33	Must trace requirements through the entire development process and produce a finalized Requirements Traceability Matrix which maps the requirements to specific test cases. This must include removing and adding requirements as the scope changes through change requests	Yes	
I1.34	Must comply with the State's security and ethical standards and policies.	Yes	
I1.35	Provide document repository tool and administer security permissions for that tool. DHS must approve in the definition of approach (e.g. roles, process and folder structure) including any changes throughout the process.	Yes	
I1.36	Must ensure that the Vendor's Project team will not transmit or store any Personally Identifiable Information (PII) using publically available storage over the internet or wireless communications device unless 1) the PII is “de-identified” in accordance with 45 C.F.R § 164.514(b) (2); or 2) encrypted in accordance with applicable law, including the American Recovery and Reinvestment Act of 2009 and as required by policies and procedures established by DHS.	Yes	
I1.37	Must ensure that the Vendor's Project team has passed privacy/security and FTI data handling training.	Yes	
I1.38	Throughout the Project, adhere to the Quality Management Plan including, but not limited to, responding to the oversight team's requests for information, complying with any audit requests and any other requests from DHS	Yes	
I1.39	The Vendor will collaborate with the DHS PMO to align all project management processes, templates and standards with the DHS standards or receive approvals for exceptions	Yes	
Project Tools			
I1.40	The Vendor will leverage a document management solution as a repository for all system related documentation. DHS prefers the Vendor leverage their installation of SharePoint though the vendor can leverage other technologies, with appropriate justification. If the Vendor recommends an alternate document management solution it will be installed on Arkansas' environment and owned by DHS	Yes	

Req #	Requirement Description	Requirement Met	Vendor Proposed Clarifying Comments
I1.41	The Vendor will propose other tools to be leveraged during the DDI phase of the engagement. DHS prefers the Vendor leverages technologies already being leveraged by DHS (see RFP Section 3.3.6 and 3.6.7) though the Vendor can propose alternate technologies with appropriate justification. If the Vendor recommends an alternate document management solution it will be installed on Arkansas' environment and owned by DHS	Yes	
Project Closeout			
I1.42	Provide all training materials developed for the System to DHS. Those materials will become the property of DHS and may be modified and duplicated by DHS.	Yes	
I1.43	Provide electronic copies of all training materials (end-user, technical, trainee and instructor) in a format that can be easily accessed, updated and printed by DHS Staff using software for which DHS owns licenses, prior to deployment onto the staging platform. This includes, but is not limited to, CDs/DVDs and online channels.	Yes	
I1.44	Provide training for the DHS training department on the training materials, tools and procedures to ensure a smooth transition into ongoing training support.	Yes	
I1.45	Be available to the DHS training team to ensure the knowledge transfer activities have been effective and ownership of training delivery transitions smoothly from the Project team to the DHS training team.	Yes	
I1.46	Align with the Medicaid Enterprise Certification Toolkit (MECT)/Medicaid Enterprise Certification Lifecycle (MECL) to help ensure the System meets all federal requirements and satisfy the objectives described in the State’s Advance Planning Document (APD).	Yes	
I1.47	Support DHS in preparing for any federal reviews and certifications (e.g. Medicaid and FNS) by, at a minimum, developing a preparing required documentation throughout the project, attending interviews and providing additional documentation	Yes	

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Project Planning

Req #	Requirement Description	Requirement Met	Vendor Proposed Clarifying Comments
I2.1	The Vendor must develop planning documents that comprise the entire project life cycle as outlined in the SOW. These will be reviewed and formally approved by DHS staff through the process outlined in the Project Management Plan. The Vendor shall complete these deliverables in compliance with the Project Schedule and complete the deliverables approval process (e.g. invoice) in a timely manner as agreed to in the final Contract.	Yes	
I2.2	Vendor will align each of the SDLC planning deliverables to align with industry best practices (IEEE, ISO etc.), State standards, Federal standards as well as any specific guidelines identified in the SOW for that particular planning deliverable.	Yes	
I2.3	The Vendor will provide a detailed plan on the SDLC methodology that will be used for the project (E.g. Modified Waterfall, Agile, Scrum etc.) which includes an overview of the different SDLC phases, the number of iterations (releases) being proposed and how each release will flow through the different phases of SDLC including planning, design, configuration, testing, roll-out etc.	Yes	
I2.4	The Vendor must revisit and update each of the SDLC planning deliverables to reflect all changes that occur in downstream phases (design, development, testing etc.) at agreed upon time intervals. This frequency of updates will occur according to the planning during project initiation phase and upon DHS request.	Yes	

Req #	Requirement Description	Requirement Met	Vendor Proposed Clarifying Comments
I2.5	Prior to conducting planning sessions and documenting of each of the SDLC deliverables, the Vendor must review DHS Repository of all available documentation regarding existing plans and processes in place to ensure that each of these planning deliverables are aligned to State’s standards.	Yes	
I2.6	The Vendor must also review all State and Federal standards and methods that will affect the project and incorporate these into SDLC planning deliverables.	Yes	
I2.7	The Vendor must provide planning deliverables as defined in the SOW (e.g., Security plan, Capacity plan etc.) using Microsoft software products and/or pdf. The software version to be used must match the State’s approved standards. The software version must be no less than a version still available on the common market and that is still supported by the manufacturer. DHS will work with the Vendor in approving specific versions to assure that the application is synchronized with the PMO standards and any broader DHS ESM Platform plans and schedules.	Yes	

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Technical Environment Setup and Management

Req #	Requirement Description	Requirement Met	Vendor Proposed Clarifying Comments
I3.1	The Vendor must develop each of the Environment Management and Support Deliverables outlined in the SOW. These will be reviewed and formally approved by DHS staff through the process outlined in the Project Management Plan. The Vendor shall complete these deliverables in compliance with the Project Schedule and complete the deliverables approval process (e.g. invoice) in a timely manner as agreed to in the final Contract.	Yes	
I3.2	The Vendor must develop and maintain detailed specifications for all necessary hardware, software and tools requested/required to support the functionality on the DHS IE-BM Solution (aligned with DHS' standard policies and procedures) for the six (6) environments listed below for the duration of the Project. The six (6) environments include: 1. Production 2. Staging 3. User Acceptance Testing 4. System Integration Testing 5. Development 6. Disaster Recovery *(potentially a temporary data conversion environment) As a part of its Proposal, the Vendor shall submit specifications for all software, hardware, and tools that would be inclusive of the full SDLC.	Yes	
I3.3	The Vendor must provide service requests for any changes to the infrastructure and/or middleware required by the Vendor to support the Solution.	Yes	
I3.4	The Vendor must manage all COTS software that is part of the IE-BM Solution	Yes	

Req #	Requirement Description	Requirement Met	Vendor Proposed Clarifying Comments
I3.5	The Vendor must provide deployment scripts and procedures to allow a 3rd party to perform deployment of development/configurations to any of the environments	Yes	IBM team will provide the standard deployment scripts that we used in simialar projects using similar environments.
I3.6	When functionality is ready to be delivered to DHS for User Acceptance Testing (UAT), the Vendor must deliver the Solution in the form of a pre-production release (defined as ready for production in every respect but just not yet in production). The pre-production release is equivalent to a production release and requires the rigor associated with a production release including a Pre-Production Release Plan. Each pre-production release will include the following: a. Release-specific hardware and software System components b. Release description including architecture or design updates, new functionality introduced, defects fixed, modifications to interfaces with other systems, other changes to existing code, and any software and hardware configuration changes c. Release contents including a description of the release structure and contents and instructions for assembling and/or configuring the components of the release d. Test Plan and test execution results e. Detailed hardware and software configuration information including any software and hardware dependencies and instructions at a level of detail that will enable administration staff to rebuild and configure the hardware environment without outside assistance f. Database documentation conforming to industry standards g. Detailed configuration information for any 3rd party hardware and software h. Detailed step-by-step, hour by hour, deployment instructions i. Deployment scripts that need to be run as part of the step-by-step instructions j. Contingency Plan including timelines with key milestones when different contingencies are no longer an option (e.g. rolling back)	Yes	

Req #	Requirement Description	Requirement Met	Vendor Proposed Clarifying Comments
I3.7	Upon successful completion of UAT, the Vendor must create a Production Release Plan that will consist of an updated Pre-Production Release Plan. It must include, but not be limited to, the following components: a. Updated Configuration Information required satisfying the System production configuration management requirements b. Updated System Architecture c. Updated Detailed Design, including detailed system, technical, and user documentation d. Deployment schedule e. Backout plan (complete/incremental)	Yes	
I3.8	The Vendor must Transition ownership of all Solution environments specifications to the State M&O team or State contracted M&O team during Project close out.	Yes	

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Solution Design, Development and Implementation (DDI)

Req #	Requirement Description	Requirement Met	Vendor Proposed Clarifying Comments
I4.1	The Vendor must develop each of the Solution Design, Development and Implementation Deliverables outlined in the RFP. These will be reviewed and formally approved by DHS staff, to be identified by DHS, through the process outlined in the Project Management Plan. The Vendor shall complete these deliverables in compliance with the Project Schedule and complete the deliverables approval process (e.g., invoice) in a timely manner as agreed to in the final Contract.	Yes	
I4.2	Support DHS staff in their review and approval of all of the Solution Design, Development and Customization DEDs and Deliverables outlined in the SOW.	Yes	
I4.3	Develop a plan to conduct interviews, Usability Studies, group workshops and surveys to refine the requirements.	Yes	
I4.4	Support DHS in identifying all the staff with the required business knowledge attend the workshops.	Yes	
I4.5	Perform usability studies with end users, Clients or Service Providers	Yes	
I4.6	Coordinate and facilitate workshops with DHS' users to develop the detailed design based on the Use Cases and Functional Requirements.	Yes	
I4.7	Maintain the Use Cases captured in the BPA. All changes must be reviewed and approved by DHS.	Yes	
I4.8	Support DHS staff in their review and approval of any changes to the Use Cases and Functional Requirements.	Yes	
I4.9	Drive to support the in-scope functionality leveraging the COTS packages. Perform detailed gap analysis to identify any custom development required.	Yes	
I4.10	Develop and document the Detailed Functional and Technical Design including detailed documentation regarding business rules.	Yes	
I4.11	Incorporate feedback provided by the DHS staff on the Detailed Functional and Technical Design while the documents are being developed.	Yes	
I4.12	Support the DHS staff in their review and approval of the Detailed Functional and Technical Design documents.	Yes	

Req #	Requirement Description	Requirement Met	Vendor Proposed Clarifying Comments
I4.13	Based on the Organizational Assessment and detailed design, develop a Security Matrix which defines the Security profiles and identifies the roles and permissions each user will receive.	Yes	
I4.14	As part of the detailed design, define the specific reports required and identify opportunities to consolidate reports into ad-hoc, parameter driven reports.	Yes	
I4.15	Perform all necessary configuration, development and unit testing required to implement the functional and technical design.	Yes	
I4.16	Incorporate feedback from DHS staff on all DDI activities.	Yes	
I4.17	Provide tools to manage the version control on software configurations and custom development.	Yes	
I4.18	Support discussions with external and internal data source staffing teams.	Yes	
I4.19	Facilitate design sessions required in support of the development of interfaces to external and internal data sources.	Yes	
I4.20	Develop a detailed plan for each interface with support from the external system resources. These will include, at a minimum, the technical approach, tasks required (including development and testing timing and approach), design documentation, data format and support approach.	Yes	
I4.21	Perform all necessary design, configuration, development and unit testing activities required to implement the interfaces.	Yes	
I4.22	Provide input and conform to the direction for DHS Enterprise architectural standards.	Yes	
I4.23	Lead architecture and design discussions including identifying components and services that should be shared across the DHS enterprise.	Yes	
I4.24	Participate in architecture and design discussions to identify potential components and services that can be shared with other systems using the IE-BM Solution.	Yes	
I4.25	Analyze and present decision reports on what services should be exposed as shared services across the entire platform.	Yes	
I4.26	Develop components and services that DHS deems to have the potential to be shared across other systems so that they will be available and have adequate documentation.	Yes	
I4.27	Apply consistent development standards for all development work as described in the Vendor's SDLC approach including coding, database and field naming conventions.	Yes	
I4.28	Provide DHS access to both source/object codes for software components and documentation.	Yes	
I4.29	Perform code reviews to ensure customized software and interfaces comply with coding standards to reduce defects	Yes	

Req #	Requirement Description	Requirement Met	Vendor Proposed Clarifying Comments
I4.30	Support the DHS staff in reviews of documentation and code to ensure the solution is conforming to the IE-BM standards.	Yes	
I4.31	Provide DHS with well documented, readable source code and object (executable) code, documentation for all functionality developed by the Vendor outside of COTS configuration. All new software functionality built on top of COTS software will be owned by DHS.	Yes	
I4.32	Provide DHS with well documented readable source code and object (executable) code, and documentation for all COTS functionality and escrow of source code for the custom developed and/or integration related code. All new software functionality built on top of COTS software will be owned by DHS.	Yes	
I4.33	The Vendor shall deposit into escrow the Software source code, together with any subsequent updates to the source code as and when they become available, and DHS will have the right to access the Software source code upon the occurrence of an Insolvency Event, in which case DHS may continue to use the Software for the remainder of the Term or the Renewal Term, as the case may be.	Yes	
I4.34	Conduct and provide the results of a security risk and impact assessment prior to releasing the solution into UAT in alignment with NIST 800-30 guidance methodology and certify that the CWE/SNAS Top 25 Most Dangerous Software Errors (http://cwe.mitre.org/top 25) have been mitigated (and document the mitigation).	Yes	
I4.35	Complete all required State and Federal security documents including, but not limited to, System Security Plan, Risk Assessment and Contingency Plan.	Yes	
I4.36	Get authorization from DHS for the use of production System resources (e.g., source files), or data derived from DHS' production resources.	Yes	
I4.37	Follow the process and procedures defined by DHS or its designee with respect to use of all shared technical and business services and components.	Yes	
I4.38	Complete all required State and Federal security documents including, but not limited to, System Security Plan (SSP), Risk Assessment (RA), and Contingency Plan (CP).	Yes	
I4.39	Provide and implement Application Life-Cycle Management to manage requirements through the entire SDLC process.	Yes	

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Data Conversion

Req #	Requirement Description	Requirement Met	Vendor Proposed Clarifying Comments
Data Conversion and Migration			
I5.1	Develop each of the Data Conversion and Management Deliverables outlined in the SOW. These will be reviewed and formally approved by DHS staff, to be identified by DHS, through the process outlined in the Project Management Plan. The Vendor shall complete these deliverables in compliance with the Project Schedule and complete the deliverables approval process (e.g. invoice) in a timely manner as agreed to in the final Contract.	Yes	
I5.2	Migrate data from the identified source systems (as detailed in the SOW) ensuring no duplicate records, standardized demographic information and other items required to ensure the DHS IE-BM Solution reflects one accurate record for each client/individual/family, in alignment with DHS' data standards.	Yes	
I5.3	Support DHS staff in the review and approval of all of the Data Conversion and Data Management DEDs and Deliverables outlined in the SOW.	Yes	
I5.4	In alignment with the Data Conversion Plan, develop procedures for converting data from legacy systems.	Yes	
I5.5	In alignment with the Data Conversion Plan, develop scripts to automatically convert high volume data objects.	Yes	
I5.6	Lead data conversion activities including developing a schedule for all data mapping and conversion activities including DHS resources.	Yes	
I5.7	Except when DHS input is required, perform data conversion, mapping and loading.	Yes	
I5.8	Perform data testing and validation and provide tools to DHS to confirm the data testing results.	Yes	
I5.9	Perform and pass, at a minimum, one trial data conversion prior to UAT using a full or partial dataset as determined by DHS during planning phase.	Yes	
I5.10	Support the review and approval of data conversion testing results	Yes	
I5.11	Acquire authorization from DHS for the use of production System resources (legacy data or source files), or data derived from the State's production resources.	Yes	

Req #	Requirement Description	Requirement Met	Vendor Proposed Clarifying Comments
I5.12	Coordinate all automated and manual data loads during data conversion testing and UAT.	Yes	
I5.13	Provide a data dictionary, data models, data flow models, process models and other related planning and design documents to DHS.	Yes	
I5.14	Ensure data dictionary, data models, data flow models, process models and other related planning and design documents are in alignment with DHS standards	Yes	
I5.15	Be an active member on the data governance body and adhere to the data governance standards established by the governance body.	Yes	
I5.16	Provide tools to minimize manual effort required to convert data from the legacy solution and/or synchronize the data between the initial release and the retirement of legacy care management systems (assuming the new System is implemented in multiple releases).	Yes	
I5.17	Provide tools to help data conversion by identifying common error conditions (e.g. duplicate records) and minimizing manual effort during the data conversion and migration process by automating where possible the corrective action process (e.g. merging duplicate records).	Yes	
I5.18	If the Vendor selects not to use DocuShare as their CRM, the Vendor must migrate all existing documents from DocuShare to the new CRM solution	Clarification	DocuShare will remain the CRM. T11, 5.2 Data Conversion Strategy, Approach and Timeline, last paragraph.

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Testing Requirements

Req #	Requirement Description	Requirement Met	Vendor Proposed Clarifying Comments
Test Planning			
I6.1	Develop each of the Testing Deliverables outlined in the SOW. These will be reviewed and formally approved by DHS staff, to be identified by DHS, through the process outlined in the Project Management Plan. The Vendor shall complete these deliverables in compliance with the Project Schedule and complete the deliverables approval process (e.g. invoice) in a timely manner as agreed to in the final Contract.	Yes	
I6.2	Support DHS staff in review and approval of each of the Testing DEDs and Deliverables outlined in the SOW.	Yes	
I6.3	Participate in check-point meetings including testing phase entrance and exit gates and provide relevant information for DHS to make informed decisions to migrate into/out of specific testing phases.	Yes	
I6.4	Ensure schedule accommodates for the provision of the required test data for each testing cycle and produce a de-identified test data set.	Yes	
I6.5	Refine the test documents, procedures, and scripts throughout development and through full System acceptance to reflect the as-built design and current requirements.	Yes	
I6.6	Run validation and testing software against externally facing Internet applications to help identify potential security issues, and must agree to repair any deficiencies found during this testing.	Yes	
I6.7	Support DHS staff in evaluating test results.	Yes	
I6.8	Testing must include testing of time-sensitive elements. As System events contain date and time-sensitive elements, the testing infrastructure must provide a method of altering and synchronizing the System date throughout each test phase. This requires the ability to change the System date and time in some scenarios.	Yes	

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Req #	Requirement Description	Requirement Met	Vendor Proposed Clarifying Comments
I6.9	Provide and leverage a testing tool/test harness which supports automated regression testing and other testing functions.	Yes	
I6.10	Develop test plans for each testing cycle including entrance and exit criteria, approach to defect management, progress tracking.	Yes	
I6.11	Develop test scripts covering all of the functionality included in the release for each testing cycle in collaboration with DHS.	Yes	
System Integration Testing - SIT (pre-User Acceptance Testing)			
I6.12	Manage each test cycle up to UAT, tracking progress and producing progress and quality reports.	Yes	
I6.13	Execute the test scripts and provide testing results for all test cycles except UAT with minimal assistance from DHS. Prior to being promoted to UAT, the test scripts must pass with user security/permissions enabled (aligned with the Security Plan).	Yes	
I6.14	Provide and use a defect tracking tool to track progress in resolving identified defects.	Yes	
I6.15	Resolve all defects identified during testing.	Yes	
I6.16	Re-test a test script in its entirety (and associated test scripts) when a failure occurs at any stage of testing (e.g., a failure in Acceptance Testing that necessitates a code change will require the component to go back through Unit Testing, Integration Testing, and so forth).	Yes	
I6.17	Develop a suite of automated regression test scripts to automate regression testing for the entire Solution, leveraging the test harness.	Yes	
I6.18	Execute the automated regression test scripts prior to submitting the changes to the pre-production environment for UAT and report results.	Yes	

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Testing Requirements

Req #	Requirement Description	Requirement Met	Vendor Proposed Clarifying Comments
User Acceptance Testing - UAT (pre-production testing)			
I6.20	Vendor must support DHS staff or another DHS appointed contractor in developing UAT test scripts including developing test data sets.	Yes	
I6.21	Support the testing environment throughout the UAT cycle including, but not limited to, creating the dataset, resetting the data to support re-running of test scripts	Yes	
I6.22	Provide staff to DHS to answer questions and address any problems that may arise during testing conducted by the State.	Yes	
I6.23	Develop performance and security testing scripts and lead testing effort	Yes	
I6.24	Support DHS in performing end-to-end testing.	Yes	
I6.25	Schedule time for Federal review of the test results both Pre-UAT and Post-UAT (e.g. before the Pilot).	Yes	
I6.26	Conform to all Federal testing guidelines and develop reports and supporting materials required to pass any required or requested Federal review of the testing results.	Yes	
I6.27	Execute the automated regression test scripts as required to ensure changes to other components on the DHS IE-BM Solution do not break the intended functionality.	Yes	

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Organizational Change Management (OCM), Training (T), and Knowledge Transfer (KT)

Req #	Requirement Description	Requirement Met	Vendor Proposed Clarifying Comments
General Requirements			
I7.1	The Vendor must develop each of the Organizational Change Management, Training and Knowledge Transfer Deliverables outlined in the SOW. These will be reviewed and formally approved by DHS staff, to be identified by DHS, through the process outlined in the Project Management Plan. The Vendor shall complete these deliverables in compliance with the Project Schedule and complete the deliverables approval process (e.g. invoice) in a timely manner as agreed to in the final Contract.	Yes	
I7.2	Support the DHS staff in the review and approval of Change Management, Training and Knowledge Transfer DEDs and Deliverables outlined in the SOW.	Yes	
I7.3	During the detailed design phase, identify the level of process change that will occur and use this information to drive the Change Management, Knowledge Transfer and Training plans and activities.	Yes	
I7.4	Provide a software tool(s) that supports the generation, presentation and maintenance of on-line trainings, captures attendance and other features required to meet the on-line and off-line training requirements captured in the RFP package	Yes	
I7.5	Support the training environment including, but not limited to, providing training data sets and providing procedures to reset the training environment.	Yes	
Organizational Change Management			
I7.6	Lead and perform Change Management activities throughout the Project and provide a Change Management framework including communications targeted at specific stakeholders (e.g. type of end-user, supervisors, executives), surveys, etc.	Yes	
Training Planning and Development			
I7.7	Produce all required training materials to address training needs identified through the initial analysis. This will include, but may not be limited to, instructor lead classroom training, on-line trainings, workshops, training manuals and interactive trainings.	Yes	

Req #	Requirement Description	Requirement Met	Vendor Proposed Clarifying Comments
I7.8	Produce all help files including interactive on-line help files targeted at System users.	Yes	
I7.9	Support the DHS staff in the review and approval of all training plans and material.	Yes	
I7.10	Provide DHS a training course outline and schedule for review and acceptance at least two months prior to the beginning of scheduled training.	Yes	
I7.11	Submit all training packages to DHS for review and acceptance at least one month prior to the beginning of scheduled training.	Yes	
I7.12	Schedule all training during regular work hours as approved by DHS, unless the Vendor receives advance approval from the State for specific training at other times.	Yes	
I7.13	Provide all training within the State of Arkansas, at locations convenient to the attendees of the training, unless the Vendor receives advance approval from the State for specific training at other locations.	Yes	
I7.14	Schedule staff training in a manner that is least disruptive to the normal business operations.	Yes	
I7.15	Track staff attendance at the training sessions.	Yes	
I7.16	Prior to completing training sessions, survey the end-users, super users and support staff to validate adequate training/knowledge transfer has been performed. Any identified gaps will be addressed before formal Release close out.	Yes	
I7.17	Provide web based trainings/CBTs including in course progress quizzes to ensure trainees understand the material prior to proceeding.	Yes	
I7.18	Produce training data set to be deployed to the training environment along with deployment instructions to the DHS.	Yes	
I7.19	Train the State's training team and hand off materials	Yes	
Knowledge Management			
I7.20	Identify the level of knowledge transfer required between the Project team and the operations team (M&O, super users and support teams) to support, maintain and operate the System as well as the skill sets necessary, with DHS' agreement.	Yes	
I7.21	Based on the initial assessment, perform Knowledge Transfer activities throughout the Project and measure progress.	Yes	
I7.22	Coordinate with DHS throughout the project lifecycle to ensure that DHS staff is available in a timely manner for knowledge transfer activities.	Yes	
I7.23	For the duration of the Project, provide training to the technical/operations team on any System changes/changes in System components functionality/architecture.	Yes	

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Pilot, Roll-Out and Go-Live Requirements

Req #	Requirement Description	Requirement Met	Vendor Proposed Clarifying Comments
General			
I8.1	The Vendor must develop each of the Deployment/Roll-Out Deliverables outlined in the SOW. These will be reviewed and formally approved by DHS staff, to be identified by DHS, through the process outlined in the Project Management Plan. The Vendor shall complete these deliverables in compliance with the Project Schedule and complete the deliverables approval process (e.g. invoice) in a timely manner as agreed to in the final Contract.	Yes	
Pilot Program			
I8.2	Provide input into the development of the pilot program including identifying the scope, participants and timeline.	Yes	
I8.3	Manage the Pilot Program and collaborate with FNS and DHS throughout the process	Yes	
I8.4	Identify and track all issues identified during the pilot.	Yes	
I8.5	Address issues identified during the pilot.	Yes	
I8.6	Lead check-point meetings including entrance and exit gates and provide relevant documentation and results to help DHS make informed decisions to migrate into/out of the pilot.	Yes	

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Pilot, Roll-Out and Go-Live Requirements

Req #	Requirement Description	Requirement Met	Vendor Proposed Clarifying Comments
I8.7	Develop reports and supporting materials required to pass any required or requested Federal review of the pilot results. This must be in compliance with Title 7 for 277.18(g)(2)(ii)) "Prior to statewide rollout of the system there must be a test of the fully operational system in a live production environment. Pilots must operate until a state of routine operation is reached with the full caseload in the pilot area. The design of this pilot shall provide an opportunity to test all components of the system as well as the data conversion process and system performance. The duration of the pilot must be for a sufficient period of time to thoroughly evaluate the system and must be at least three months in duration. The State agency must provide documentation to FNS of the pilot evaluation. FNS approval to implement the system more broadly is a condition for continued FFP"	Yes	
Go-Live/Roll-Out			
I8.8	Assess the pre-implementation readiness of each part of the organization and document the status in a pre-implementation readiness assessment.	Yes	
I8.9	Develop the roll-out plan.	Yes	
I8.10	Manage the roll-out including, but not limited to, providing additional support to new user groups and enabling security access.	Yes	
I8.11	Provide input into check-point meetings to assess health of the roll-out and decide if changes are required.	Yes	
I8.12	Provide post release support (for each release), up to the contracted time period, after the System has been rolled out to all users, resolving go-live issues, defects and enabling a smooth transition to ongoing M&O support processes.	Yes	
I8.13	As part of Project close out activities, update all documentation and assist in the smooth transition to the M&O team.	Yes	

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Integrated Eligibility and Benefit Management (IE-BM) System
RFP #: SP-17-0012
Template T-10 - Implementation Requirements Traceability Matrix

Pilot, Roll-Out and Go-Live Requirements

Req #	Requirement Description	Requirement Met	Vendor Proposed Clarifying Comments
I8.14	Collaborate with DHS to update the DHS IE-BM Solution M&O documentation.	Yes	
I8.15	Assist in developing the Maintenance and Operations documentation including, but not limited to the following: a. Maintenance and Operations Plan b. Staffing Requirements c. System Maintenance Procedures d. Support Plans and Processes	Yes	

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Warranty Support

Req #	Requirement Description	Requirement Met	Vendor Proposed Clarifying Comments
Warranty and Steady-State			
I9.1	Integrate Warranty Support into M&O activities.	Yes	
I9.2	Follow the processes outlined in the M&O Plan to resolve any defects identified after go-live for a pre-determined length of time. These fixes will be completed at no cost to DHS. A defect is defined as the System not conforming to the specifications documented as part of the Project.	Yes	
I9.3	Provide warranty support for 12 months after all of the System functionality has been rolled out to all users, from the date of each release.	Yes	
I9.4	Provide transition support at the end of the term of the Contract.	Yes	

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Implementation Service Level Requirements

I10-1 - Scheduled Deliverable		Requirement Met	Proposed Liquidated Damages Amount
SLR Description/Objective	To avoid costly delays, all deliverables must be approved according to the baseline schedule	Yes	One quarter of one percent (0.25%) for up to 20 business days with earn back potential.
Target	100% of all deliverables are approved on schedule		
Measurement	Date approved - planned approval date (captured in the baseline schedule)		
SLA Reporting Period	per deliverable		
SLR Measurement of Non-Compliance	per day the deliverable is late		

I10-2 - Deliverable Quality		Requirement Met	Proposed Liquidated Damages Amount
SLR Description/Objective	The deliverables submitted to DHS for review should be to a quality standard that allows for one DHS review, one update and approval	Yes	Five percent (5%) for each additonal review cycle for up to 2 cycles with earn back potential.
Target	100% approved within 2 review cycles		
Measurement	Each review cycle required beyond 2 cycles		
SLA Reporting Period	per deliverable		
SLR Measurement of Non-Compliance	per review cycle		

I10-3 – Benefit Payment Accuracy		Requirement Met	Proposed Liquidated Damages Amount
SLR Description/Objective	The benefits match rate (benefits to be paid by the new system as compared to benefits that would have been paid out of the legacy system) must be 100%	Yes	$10 dollars for each inncorrect payment up to $10,000 per go-live.
Target	100% of client payments must be to the same client and for the same amount (excluding explainable differences) both before going live and immediately after going live		
Measurement	Each payment		
SLA Reporting Period	Twice - immediately prior to go-live (projected) and immediately after go-live		
SLR Measurement of Non-Compliance	# of payments made to the incorrect person and wrong amount		

I10-4 - Additional Vendor Proposed SLRs		Requirement Met	Proposed Liquidated Damages Amount
Additional Vendor Proposed SLRs	To help the State in managing a more robust performance based contract, vendors are highly encouraged to propose additional SLRs. Vendors can add additional rows below, in this Section I10-4, to propose any additional SLRs. These additional SLRs will be evaluated by the State as part of Value added services provided by the vendor, during the proposal evaluation and selection process.	Yes	IBM will work with DHS to refine and identify additional SLR's to help ensure compliance to the agreement upon deliverables.

Template T-11

Implementation Requirements Approach

Response Template RFP #: SP-17-0012

Template T-11

Implementation Requirements Approach

Response Template

RFP #: SP-17-0012

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Implementation Requirements Approach

The Vendor should provide a narrative overview of how the System will meet the Integrated Eligibility and Benefits Management (IE-BM) Project Implementation (SDLC) requirements. The following questions pertaining to Implementation should be answered by the Vendor.

While responding, the Vendor should reference the IE-BM SOW as well as all other documentation provided as part of the Procurement Library, to gain an overall understanding of the current application and infrastructure environment and future DHS vision.

Please use these response sections to provide specific details of the proposed approach to meeting DHS requirements in each area. Responses should, when necessary, reference requirements using the appropriate RFP Requirement Numbers from Template T-10 – Implementation Traceability Matrix.

Responses for the M&O Requirements Approach should be highly focused on the specific requirements and must not simply provide generic or marketing descriptions of technology or product capabilities. Also, include one (1) or more diagrams where necessary that detail the proposed design and the relationships between key technical components.

1.0 Approach to Managing the Project

The Vendor should ensure that the responses to this section are in alignment with the requirements set forth in Template T-10 – Implementation Requirements Traceability Matrix, Section I1.

1.1 Project Management

The selected Vendor shall agree to follow project management methodologies that are consistent with the PMI's PMBOK Guide. The Vendor Project Manager will be held responsible for establishing and managing to these standards throughout the Project.

The DHS Project Manager or delegate shall supervise the Vendor's performance to the extent necessary to ensure that the Vendor meets performance expectations and standards as it relates to effective project management.

The Vendor should provide a narrative overview of how the proposed System will meet DHS' requirements. The following information pertaining to project management methodology should be provided.

This section should include detail sufficient to give DHS an understanding of how the Vendor's knowledge and approach will assist them to effectively:

- Manage the Project
- Guide Project execution
- Document planning assumptions and decisions
- Facilitate communication among stakeholders
- Define key management review as to content, scope and schedule

Instructions: Describe the Vendor's project management methodology, tools and techniques that will be used to support the Project from initiation through M&O which addresses DHS' business needs including deployment of the new System, and support of the System

throughout its lifecycle. Describe policies and procedures employed to ensure the timely completion of tasks to a level of quality expected of a professional firm.

Project Management Overview

The project requested by the State of Arkansas to implement and manage a Federally-compliant Integrated Eligibility and Benefit Management (IE-BM) Solution will be implemented by IBM in conjunction with the Northrop Grumman Corporation (NGC). IBM will collaborate with the State of Arkansas using IBM's proven and successful project management processes and procedures that are consistent with the PMI's PMBOK Guide. To overcome obstacles in the project management process, IBM will enlist key resources with proven project experience to ensure that desired objectives are mutually agreed to and reached. IBM will leverage our experience and lessons learned from successful implementations in San Diego, the State of Missouri, and the State of South Carolina on similarly large and complex projects, IBM will deliver the transparency and clarity needed to succeed with IE-BM. We were successful in helping our clients achieve their mission on these projects by understanding our clients' needs through purposeful listening and continuous collaboration with the client. Further elaboration of how IBM was successful on these specific projects is described in Section 4.0 Approach to Solution Design, Development and Implementation (DDI).

Project Management concepts aligned with PMI PMBOK Guide [I1.1]

- Use best practices refined through thousands of large and complex projects in the Software Development Lifecycle (SDLC)
- Implement best practices for large and complex projects using the IBM Watson Agile Method
- Maintain full library of project and project management artifacts and templates that can be customized to the IE-BM project
- Implement a formal governance structure with clear escalation pathways to facilitate timely decisions and on-time delivery
- Align project expectations, goals, and objectives among project stakeholders including top level legislative and executive sponsors, members of the project delivery team, users of the delivered system, Maintenance and Operation (M&O) personnel, and clients of the State receiving benefits
- Consistently deliver high quality systems adapted to the needs of stakeholders with orderly and flexible scope management
- Enable the State of Arkansas to see progress through tangible working software and user feedback in addition to traditional status reports
- Work with you to achieve a high degree of collaboration; the goal is to achieve a seamless rapport between project members
- Our project team will be assigned with stability and expertise in mind to avoid turnover among key personnel
- By the use of collaboration and participation in the project the accepted IE-BM system can be transitioned rapidly to M&O where efficient and smooth operations are an imperative

IBM delivers high quality to our clients through expert resources utilizing best practices and strong SDLC that is aligned with PMI.s PMBOK Guide. The processes, knowledge, skills and artifacts we use to initiate, plan, execute, monitor and control, and close the project are derived from principles in “A Guide to the Project Management Body of Knowledge” (PMBOK Guide®) from the Project Management Institute.

We will also use our Worldwide Project Management Method (WWPMM®) to establish the project, elaborate plans, execute activities to create deliverables, and monitor delivery through project transition and closure. Our IBM Watson Agile Method rounds out the standards that guide our project delivery as shown below in Figure 1.

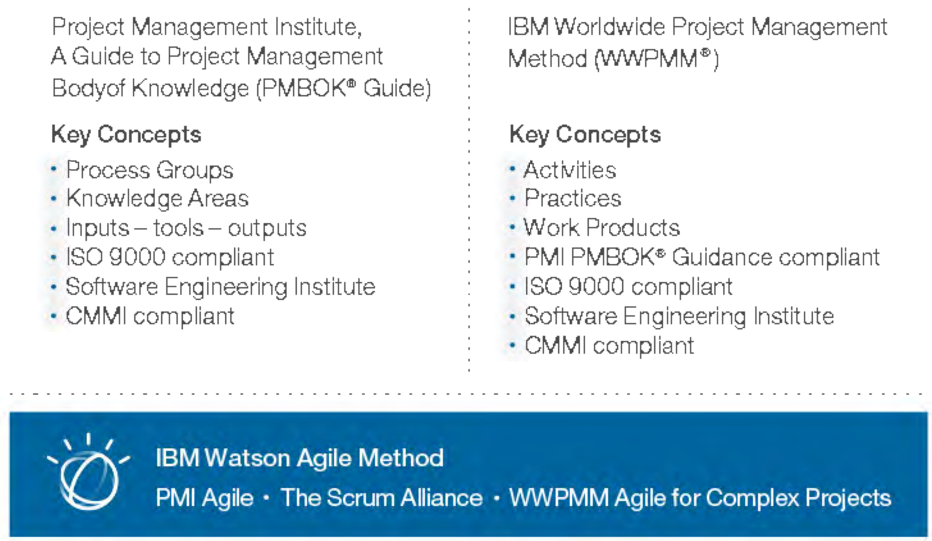


Figure 1: IBM team project management standards and methods

Industry standards and our experience bring structure and benefits to you.

IBM has successfully implemented thousands of large and complex projects using our proven methodology. Some recent examples of successful implementations utilizing this methodology are the County of San Diego Health and Human Services, the MEDES project for the State of Missouri, and the SCDHHS MMRP project for the State of South Carolina, which is currently in the execution phase of delivery.

The following are key topics in our project management methodology.

- Project Phases
- Project Manager Duties
- Project Management Tools
- Release Schedule Management
  - Project Activities
  - Work Breakdown (WBS)
- Deliverable Expectation Documents
- Governance and Management Communications
- Project Execution

- Configuration and Change Management
- Schedule Management
- Project Quality

Each of these is discussed at greater length in the sections that follow to create a more complete understanding of our project management methodology.

Project Phases

Our project methodology includes the following project phases and objectives align with PMI PMBOK Guide®:

Table 1: IE-BM Project Phases

Project Phase	Summary of Objectives for State of Arkansas IE-BM Project
Initiation	▪ Understanding and determining State of Arkansas IE-BM objectives, ▪ Creating a strong and comprehensive Statement of Work (SOW), ▪ Developing close working relationships with the State of AR, and ▪ Negotiating and starting up a win-win contract with the State of AR. ▪ Incremental onboarding of personnel, including initial project process, security and security training in compliance with State of Arkansas security and ethical standards and policies **[I1.34, I1.36, I1.37]** ▪ Initial setup of project facilities and early technical environments
Planning	▪ Finalizing the Statement of Work, with the Software Development Lifecycle (SDLC) focused on IE-BM use cases and deliverables, and Maintenance and Operations (M&O) focused on maintaining and improving existing operations while deploying new IE-BM capabilities and system components. ▪ Elaborating and validating project functional and technical requirements to determine major elements of scope, schedule, budget and staffing. ▪ Creating and reviewing a comprehensive Work Breakdown Structure (WBS) with the State of AR, the start of which is contained in this proposal. This will be updated during project initiation and planning and progressively monitored, elaborated, and adjusted at critical checkpoints following the Centers for Medicare & Medicaid Services (CMS) XLC Guidelines for Agile Projects, throughout the project. ▪ Finalizing major milestones in the project work plan while elaborating and detailing execution activities for both the SDLC and M&O including the M&O transition. This phase will also include identifying detailed resource needs and staff assignments, as well as the IBM and the State of Arkansas activities and staffing that will be required to execute successfully. This activity will be continuously monitored, elaborated and adjusted throughout the project based on project progress along with analysis and management of risks, issues and action items identified during execution of the project.
Execution	Project execution will include project start up, performance of Design, Development, and Implementation (DDI), transition of existing M&O

Project Phase	Summary of Objectives for State of Arkansas IE-BM Project
	operations from the incumbent vendor to the IBM team, and the full release, implementation and transition of new technical and business capabilities into production and operations. Each of these major categories of execution include: ▪ Project Startup, – Elaborate and validate project requirements, SOW, work plan, and budget **[I1.5]** – Startup project process and procedures including the PMP and deliverable subsections and plans identified in the State of Arkansas IE-BM Request for Proposal (RFP). **[I1.5, I1.8]** – Stand up and finalize the technical environment described in the technical solution sections of this proposal. – Provide training to the State of Arkansas project participants on COTS products, project method and approach, and project tools that will be used throughout the project. **[I1.7]** – Create project document and reporting standards and templates that are based upon IBM WWPMM artifacts, and implemented consistent with State standards and guidance. **[I1.6, I1.9, I1.10, I1.29, I1.35]** ▪ DDI of five major releases using the IBM Watson Agile Method: 1. Client Portal Enhancements & Integrated Application, 2. Integrated Application Interfaces, 3. Supplemental Nutrition Assistance Program (SNAP) Implementation, 4. Temporary Assistance for Needy Families (TANF) and Other Program Implementations, and 5. Medicaid Implementation Point releases may be executed outside the accepted project Work plan based on break-fix or other ad hoc needs of the project. ▪ Implementation and transition of new releases and capabilities into production use and M&O through Organizational Change Management (OCM), training, and knowledge transfer (KT) activities.
Monitoring and Control	▪ Establish compliance and adherence to DHS and Federal Standards, including providing support to DHS in their efforts to comply with State and Federal Standards [**I1.44, I1.45]** ▪ Establish project review checkpoints consistent with the Centers for Medicare & Medicaid Services (CMS) Expedited Life Cycle (XLC) and documented in the “CMS XLC Guidelines for Agile Projects” ▪ Establish analysis, reporting, and briefing cadence on baselines and project progress for major activities, milestones and deliverables in the SOW, project work plan, staffing plan, and budget. ▪ Collaborative and participative creation, review and acceptance of project deliverables by an integrated project team of Team IBM and State of Arkansas personnel. **[I1.39]**

Project Phase	Summary of Objectives for State of Arkansas IE-BM Project
	▪ Create project document repositories consistent with DHS standards **[I1.29]** and deliverable configuration management policies and procedures. ▪ Implement risk, issue and action item management processes and procedures. ▪ Implement strategies and activities in the Project Communication Plan ▪ Implement the project governance structure including regular reporting and executive briefings. **[I1.30]** ▪ Implement the project Quality Management Plan **[I1.38]**
Closing (Req I.24)	▪ Incrementally sign-off and approve deliverables, requirements and use cases throughout the project at project start up with regular change management as needed throughout the life of the project. ▪ Sign-off and approve major releases including corresponding pilots and implementations as they occur. ▪ Transition support for project deliverables to DHS in a completed state for ongoing M&O activities **[I1.40, I1.41, I1.42, I1.43, I1.44, I1.45]** ▪ Perform final audits and contract closure and sign-off by DHS.

IBM project phases aligned with PMI PMBOK Guide®

Project Manager Duties

Leading our project methodology and activities our proposed IBM Engagement Director Walter Szyperski and proposed Project Manager Ennapadam Padmanabhan. Each is a certified Project Management Professional from PMI and has been certified at the Expert level by IBM to lead and manage IBM delivery projects. These leaders are experts in successfully leading, managing and completing large scale complex transformations such as the AR IE-BM project. They will perform the following duties: [I1.22]

1. Supervise the IBM team and staff and coordinate with personnel from the State of Arkansas to perform and deliver the project**. [I1.18, I1.19, I1.20, I1.21, I1.23]**
2. Deliver the project deliverables and oversee activities necessary to accomplish the scope of the project as defined in the SOW.
3. Create, implement, track, and report progress on activities in the project work plan along with key milestones and deliverables. **[I1.15, I1.16, I1.17, I1.18]**
4. Implement policies and procedures identified in the Project Management Plan (PMP) including the following sub-sections and plans:

Table 2: PMP Subsections and plans

Section No.	Description
I.1.2.1	Scope Management Plan
I.1.2.2	Schedule Management Plan
I.1.2.3	Project Change Management Plan **[I1.25]**
I.1.2.4	Risk and Issues Management Plan **[I1.13, I1.14]**

Section No.	Description
I.1.2.5	Performance Management Plan
I.1.2.6	Document Management Plan
I.1.2.7	Data Management Plan
I.1.2.8	Quality Management Plan
I.1.2.9	Human Resource Management Plan
I.1.2.10	Acceptance/Contract Management Plan
I.1.2.11	Project Communication Management Plan **[I1.12 I1.8, 1.11]**
I.1.2.12	Procurement Management Plan

5. Identify, monitor and report key project metrics and performance standards. **[I1.26]**
6. Track and manage the budget and financial performance of the project. **[I1.2]**
7. Manage the project contracts, subcontracts, and procurements, and serve as the single and authoritative contact for the State of Arkansas to resolve issues and oversee project activities throughout the lifecycle of the project. **[I1.28]**

Project Management Tools

Project management tools for the term of the contract include:

Table 3: Project Management Tools

No.	Description	Tool
1	Reports, document deliverables, tracking and other general use documentation	Microsoft Office Adobe Acrobat
2	Document repository for deliverables and project documents **[I1.29]**	Microsoft SharePoint
3	Risk and issue management	Microsoft SharePoint and Excel
4	Project work plans and schedules	Microsoft Project
5	Project Data Security and Privacy policies and procedures	Microsoft Office
6	Project financial reporting and forecasting	IBM Integrated Project Planning and Forecasting (IPPF)
7	Internal IBM project document and deliverable repository	IBM Program Work Center (IPWC)
8	Requirements and change management	IBM Rational
9	Internal IBM monthly progress evaluation and reporting	7 Keys to Success

Tools in rows 1 through 5 are industry standards currently used by DHS and are well known to the IBM team. Tools in rows 6 through 9 are proprietary to IBM and are used for internal IBM processes.

Release Schedule Management

The release schedule is focused on five (5) major release dates corresponding to overarching program areas for the Integrated Application, Client Portal Enhancements, Integrated Application Interfaces, SNAP, TANF, and Medicaid. The delivery timeline is spread over 27 months of the project as shown below. Release dates are indicated with a numbered bubble at the end of each string of IBM Watson Agile activities.

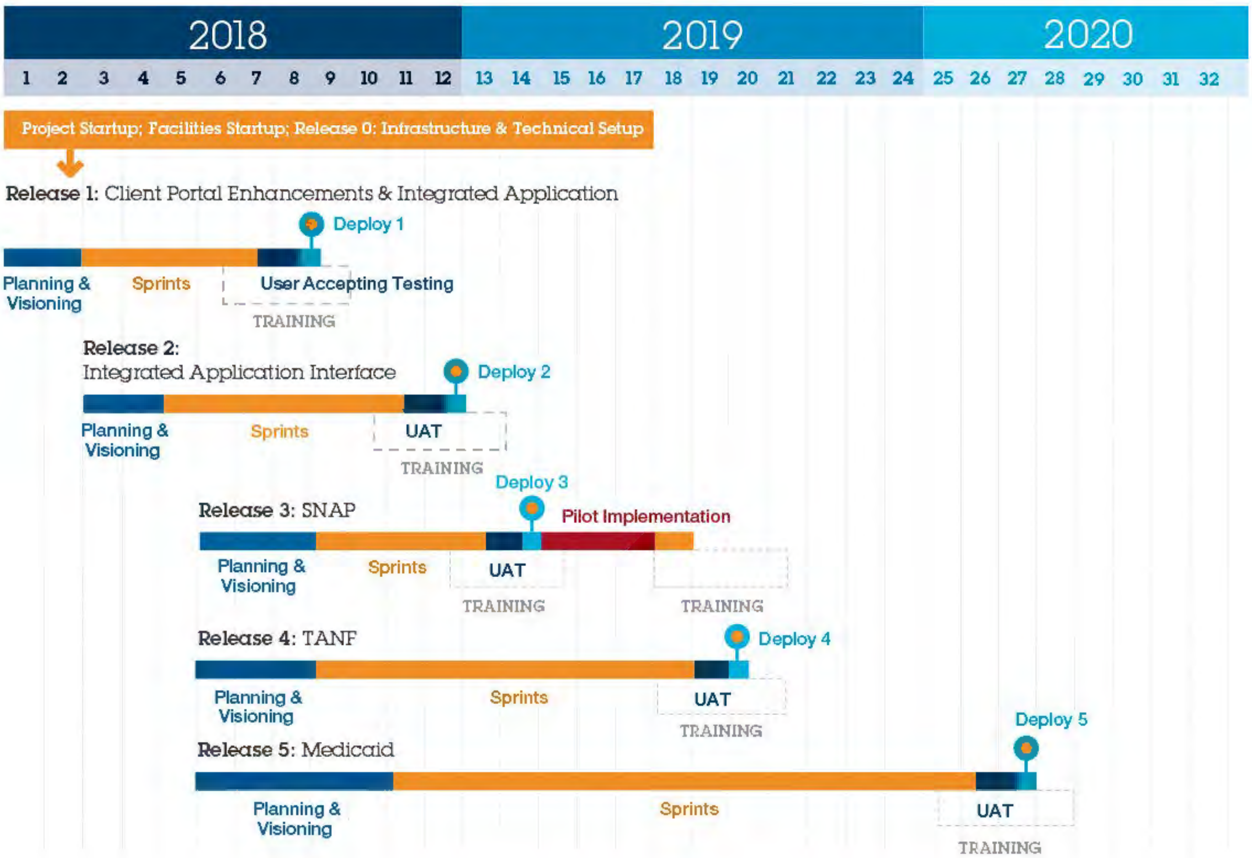


Figure 2: IE-BM Proposed Project Delivery Timeline

Major release dates correspond to:

- Release 1, Client Portal Enhancements & Integrated Application: end of month 8
- Release 2, Point Release Integrated Application Interfaces: end of month 12
- Release 3, SNAP: end of month 18
- Release 4, TANF end of month 20
- Release 5, Medicaid: end of month 27

The SNAP releases include a three (3) month pilot period prior to rollout to the entire state. Enhancements and break-fix items that may be discovered during the pilot will be incorporated into release 4, TANF. The Medicaid release includes two User Acceptance Test (UAT) periods for collections of programs included in the overall release. Release tracks will run in parallel such that development activities will be conducted continuously from month 5 through month 27. The Medicaid release will be planned early with a longer planning period than other releases due to complexity and risks associated with its implementation. Included in these risks is the possibility of legislative changes that may occur in the changing political landscape during the term of the contract. The timeline allows for some adjustments in this release before work begins. However, after work has begun the project change management process may be needed to facilitate these types of changes.

Key Terms:

- **Planning and Visioning**: Collaboration between IBM (BA, Testers, Developers, Training) and the State (Product Owners, SME, decision makers) to validate requirements, identify blockers, review mockups, review user stories, estimate content and length of sprint)
- **Sprints**: The Scrum Master (IBM BA) leads a daily scrum along with the State Product Owner. The balance of the team will include IBM Testers, Developers, and Trainers. Specific activities include review of requirements, screen designs, developer updates, test team updates, training material review, and demos.
- **User Acceptance Testing**: State team will test within each sprint per the project plan.
- **Deployment**: Follows the approval of the Sprint Package. Deployment will follow a release to production that can include multiple sprints.
- **Training**: Is documented before UAT and conducted within the release.
- **Pilot Implementation**: Functionality is rolled out to a sub set of State Users to pilot for Release 3 functionality. The state provides feedback to IBM on the user experience.
- **Release**: Upon completion of each sprint, and deployment activities, the release will occur.

Further details of the key terms above can be found in the Project Activity section.

Functional content for each release is shown in the table below:

Table 4: IE-BM Major Releases

Release No	Release Name	Major Release Content
0	Infrastructure	▪ Environment set up (Dev, Test, DC, UAT, Training, Test for Production, Reporting, Production) ▪ COTS Installation ▪ Other Software Installations ▪ MDM Set up
1	Client Portal Enhancements & Integrated Application	▪ Client Portal – New UI – Navigation to existing Pre-screener – Web Content Management – User Account Management ▪ Integrated Application – Integrated Pre-screening – Change of Circumstance

Release No	Release Name	Major Release Content
		– Web Content Management – Document Upload – Document Management Integration with DocuShare – Barcode verification documents – Barcode application forms
2	Integrated Application Interfaces	▪ Interfaces – LIHEAP – VA – Child Care – Child Support – State Data Warehouse (Reporting) – Identity and Access Management – State Accounting System (AASIS) – Postal Service System – Department of Motor Vehicles – US Census Bureau System ▪ Change of Circumstance – WIC – SNAP – TANF – Medicaid ▪ Reporting
3	SNAP	▪ Interfaces – Electronic Disqualified Applicant System – OASIS - Overpayment Financial System – Division of Workforce Services (Wage/Unemployment) – Asset Verification System – Social Security Administration – Public Assistance Reporting Information System – Department of Homeland Security SAVE System – preexisting with MAGI ▪ Electronic Benefit Transfer (EBT) ▪ Barcoding enhancements ▪ Eligibility Determination ▪ Benefits Management ▪ Overpayment Tracking ▪ Integration with Case Management System

Release No	Release Name	Major Release Content
		▪ Reporting ▪ DWS Integration ▪ SNAP Client Services – Outlook – Client Portal Calendar – Redetermination – Change in Circumstance
4	TANF	▪ Interfaces – OASIS - Overpayment Financial System – Department of Labor System – National Directory of New Hires ▪ Barcoding enhancements ▪ Eligibility Determination ▪ Benefits Management ▪ Overpayment Tracking ▪ Integration with Case Management System ▪ Reporting ▪ DWS Integration ▪ TANF Client Services – Outlook – Client Portal Calendar – Redetermination – Change in Circumstance
5	Medicaid	▪ Additional Interfaces – Medicare Premium System ▪ Medical Review Team Visibility Determination ▪ MRT Portal ▪ First Medicaid UAT – Refugee ▪ Rules Collection ▪ Eligibility ▪ Redetermination ▪ Change in Circumstance ▪ Reporting ▪ MMIS Integration – Qualified Medicare Beneficiary (QMB) ▪ Rules Collection ▪ Eligibility

Release No	Release Name	Major Release Content
		▪ Redetermination ▪ Change in Circumstance ▪ Reporting ▪ MMIS Integration – Social Security Insurance ▪ Reporting ▪ MMIS Integration – Specified Medicare Beneficiary (SMB) ▪ Rules Collection ▪ Eligibility ▪ Redetermination ▪ Change in Circumstance ▪ Reporting ▪ MMIS Integration – Foster Care / Adoption ▪ Rules Collection ▪ Eligibility ▪ Redetermination – Qualified Individual (QI-1) ▪ Rules Collection ▪ Eligibility ▪ Redetermination ▪ Change in Circumstance ▪ Reporting ▪ MMIS Integration – Qualified Disabled Working Individual (QDWI) ▪ Rules Collection ▪ Eligibility ▪ Redetermination ▪ Change in Circumstance ▪ Reporting ▪ MMIS Integration ▪ Second Medicaid UAT – Emergency ▪ Rules Collection ▪ Eligibility ▪ Redetermination ▪ Change in Circumstance

Release No	Release Name	Major Release Content
		▪ Reporting ▪ MMIS Integration – "Assistance to the Aged, Blind and Disabled" ▪ Rules Collection ▪ Eligibility ▪ Redetermination ▪ Change in Circumstance ▪ Reporting ▪ MMIS Integration – Long Term Care ▪ Rules Collection ▪ Eligibility ▪ Redetermination ▪ Change in Circumstance ▪ Overpayment Tracking ▪ Reporting – Medical Needy - Spend Down ▪ Rules Collection ▪ Eligibility ▪ Redetermination ▪ Change in Circumstance ▪ Reporting ▪ MMIS Integration ▪ Medically Needy - Exceptional ▪ Rules Collection ▪ Eligibility ▪ Redetermination ▪ Change in Circumstance ▪ Reporting ▪ MMIS Integration – Medicaid Savings Program (MSP) ▪ Rules Collection ▪ Eligibility ▪ Redetermination ▪ Change in Circumstance ▪ Reporting

The project work plan will be finalized, reviewed, approved, and baselined during the start-up phase of the project. Once baselined, release dates become fixed and may only be changed by an approved change request. Other intermediate SDLC dates leading up to the release are somewhat flexible and may be changed based on mutual agreement between the IBM and State of Arkansas Project Executives as needed.

Each release track follows a pattern of Agile planning and visioning, followed by a series of Agile sprints that last 2 – 4 weeks in duration, depending on the stories assigned. The release is the collection of multiple sprints that have been completed during the development time window. At the completion of each sprint in a release, user acceptance testing (UAT) will be conducted followed by activities to finalize and deploy the release.

Work assignments and status will be communicated weekly via the project work plan with burndown rates in percent complete tracked for each sprint. [I1]

Project Activities

The initial project work plan is attached in MS Project format in greater detail in T-14. Following is a high-level list of activities included in the project work plan to illustrate the implementation of the Project Approach.

- Project start up
  - Project Establishment Checklist (Deliverable I.1.1)
  - Facilities Management Plan
    - Facilities requirements review and validation
    - Facilities search, selection and contracting
    - Facilities preparation and set up
    - Facilities occupancy and start up
    - Facilities operations
    - Facilities disposal
  - PMO deliverable creation, review and approval
    - Method adoption workshops and training
    - Project Management Plan (PMP) (Deliverable I.1.2)
    - Risk and Issue Management Plan and procedures (Deliverable I.1.4)
    - Communications Management Plan and procedures (Deliverable I.1.4)
    - Weekly and Monthly reporting (Deliverable I.1.4)
    - Change Management Plan and procedures (Deliverable I.2.5)
    - Organizational Change Management Plan (Deliverable I.2.5)
    - System Security Plan (Deliverable I.2.3)
    - Quality Management Plan
    - Staff Management Plan
    - Master Test Plan (Deliverable I.2.7)
    - Organizational Change Management Plan
    - Tool set up and deployment
    - MS Project

    - SharePoint document repository
    - Rational requirements management
    - Rational change management
    - Statement of Work review and validation
    - High Level Project Work plan (Deliverable I.1.3)
    - Release 1 Detail Project Work plan (Deliverable I.1.3)
    - Project Closeout Checklist (Deliverable I.1.5)
- Infrastructure set up
  - Technology Environment Specifications and Infrastructure plan (Deliverable I.2.4)
  - Technical Environment Specifications Plan (Deliverable I.3.1)
  - Multiple Release Environment Management procedure
  - Development environment set up
  - Test environment set up
  - Pre-Deployment environment set up
  - Disaster Recovery and High Availability environment set up
  - Production environment set up
- Requirements Validation and updates to RTM, BPA and Use Cases (Deliverable I.4.1)
  - Requirements, RTM, BPA and Use Case review, elaboration
  - Requirements, RTM, BPA and Use Case elaboration
  - Requirements, RTM, BPA and Use Case approval
  - Requirements, RTM, BPA and Use Case and scope change management
- High level visioning and designs for each release
  - System Architecture Plan (Deliverable I.2.2)
  - System Architecture Design
  - Functional Design Document (FDD) general sections (Deliverable I.4.2)
  - Technical Design Document (TDD) general sections (Deliverable I.4.3)
  - Data Integration and Interface Control Documents (ICDs) (Deliverable I.4.4)
- SDLC Agile processes for each release
  - SDLC Approach Plan (Deliverable I.2.1)
  - Sprint planning
  - Functions and features
    - User Interfaces
    - Data Interfaces

    - SOA
    - Data Warehouse, Reports & Analytics
  - Use cases, epics, stories and requirements
  - Requirement and estimate elaboration and validation
  - Scope and change management
  - Pre-sprint activities
  - Sprints
    - Roles and responsibilities
      - Product Owner (State expert)
      - Scrum Master (IBM BA)
      - Developers
      - Testers
      - Training Developers
    - Sprint visioning
    - System configuration and customization
    - Test case creation and execution
    - Functional and technical design deliverable updates (Deliverable I.4.2, I.4.3)
    - RTM updates (Deliverable I.4.5) [I1.32, I1.33]
    - OCM and training development updates
    - Test execution
    - Defect fixing
    - Sprint demonstrations
    - Sprint retrospective and review
    - Sprint approval and sign-off
  - Data Conversion
    - Interface coordination and design
    - Interface implementation
    - Interface sample file test results
- SDLC Release processes for each release
  - Pilot and Full Roll-out Plan (Deliverable I.2.9)
  - Pilot and Full Deployment Plan (Deliverable I.2.10)
  - Data Conversion
    - Interface full load
    - Interface incremental loads

    - Data Conversion Testing Report and Results (Deliverable I.5.1)
  - Soft code freeze
  - SIT Readiness Checklist (Deliverable I.6.1)
  - SIT Testing Report and Results (Deliverable I.6.2)
  - UAT Readiness Checklist (Deliverable I.6.3)
  - UAT Testing Report and Results (Deliverable I.6.4)
  - Performance testing
  - Hard code freeze
  - Regression and smoke testing
  - Release deployment preparation
  - Deployment
  - Production monitoring and feedback
  - Pilot Deployment Report and Sign-off (Deliverable I.8.1)
  - Formal System Acceptance and Final Go-Live Report (Deliverable I.8.2)
- Warranty
  - Warranty Management Plan
  - Warranty break-fix activities
  - Warranty Knowledge Transfer and turnover activities
  - Completion of Warranty Activities Report (Deliverable I.9.1)
- OCM & Training
  - OCM plan
  - OCM and communications development
  - OCM implementation
  - Training and Knowledge Transfer Plan (Deliverable I.2.8)
  - Training and Knowledge Transfer Materials development
  - Training and Knowledge Transfer Materials (Deliverable I.7.1)
  - Training and Knowledge Transfer implementation
    - Training and Knowledge Transfer Completion Report (Deliverable 1.7.2)
    - Executive Briefing (Deliverable I.7.3)
  - M&O transition
    - System Operations, Support and Transition Plan (Deliverable I.2.11)
  - M&O steady state

Work Breakdown Structure (WBS)

The project WBS contains Levels 1 through 7 as shown in the table below. There are two main subdivisions in the project corresponding to DDI and M&O deliverables and activities respectively. These are consistent with the nine (9) major tasks corresponding to deliverables identified by the State of Arkansas in the IE-BM RFP. **[I1.2]**

Table 5: Work Breakdown Structure Design

WBS Level	Description	Numbering
1 Project	IE-BM Project	1.0
2 Sub-Project	Design, Development and Implementation Project M&O Project	1.1 1.2
3 Tasks	Project Management and Monitoring Planning Technical Environment Specification Design, Development and Implementation (DDI) Data Conversion Testing OCM (Organizational Change Management), T (Training) and KT (Knowledge Transfer) Pilot, Roll-Out and Go-Live Warranty Support	1.1.1 1.1.2 1.1.3 1.1.4 1.1.5 1.1.6 1.1.7 1.1.8 1.1.9
4 & 5 Milestones and Deliverables	Milestones, deliverables and sub-parts using Project Management, SDLC, OCM, and M&O methodologies	1.1.1.1 1.1.1.1.1
6 & 7 Activities	Activities to plan, create, monitor, deliver, review and approve deliverables	1.1.1.1.1.1 1.1.1.1.1.1.1

WBS Levels create consistency and organization

Deliverable Expectation Documents (DEDs)

The IE-BM project will use Deliverable Expectations Documents (DEDs) as specified in the requirements and based on the content identified in Section 13.1 and 13.2. IBM will submit each DED to the State for review and approval 20 working days prior to the delivery due date of each deliverable. Comments and edits from the State will be due back to IBM within 10 working days of submittal. The DED documents will follow the same organization of deliverables outlined in the SOW with mutually agreed upon elaborations and changes, including:

1. Title Page
2. Revision History
3. Distribution List
4. Document Location
5. Document References

6. Deliverable Description extracted from the SOW with elaborations as needed for clarity and mutual agreement
7. Deliverable Assumptions
8. Deliverable Constraints
9. Deliverable Acceptance Criteria
10. Comment and Approval Block

The IBM project manager will create a DED template based upon the preceding sections in a format derived from WWPMM and acceptable to the DHS project executive with approval authority for the DEDs [I1.3, I1.4].

Governance and Management Communications

The IE-BM project will implement a governance structure that has been used successfully on other similar IBM Health and Human Services delivery projects. The objective is to create clear lines of authority for reporting and escalation. Each succeeding level of authority will be responsible for assisting the project team in resolving issues and clearing obstacles or blockers that represent potential risk to the project schedule or deliverable quality.

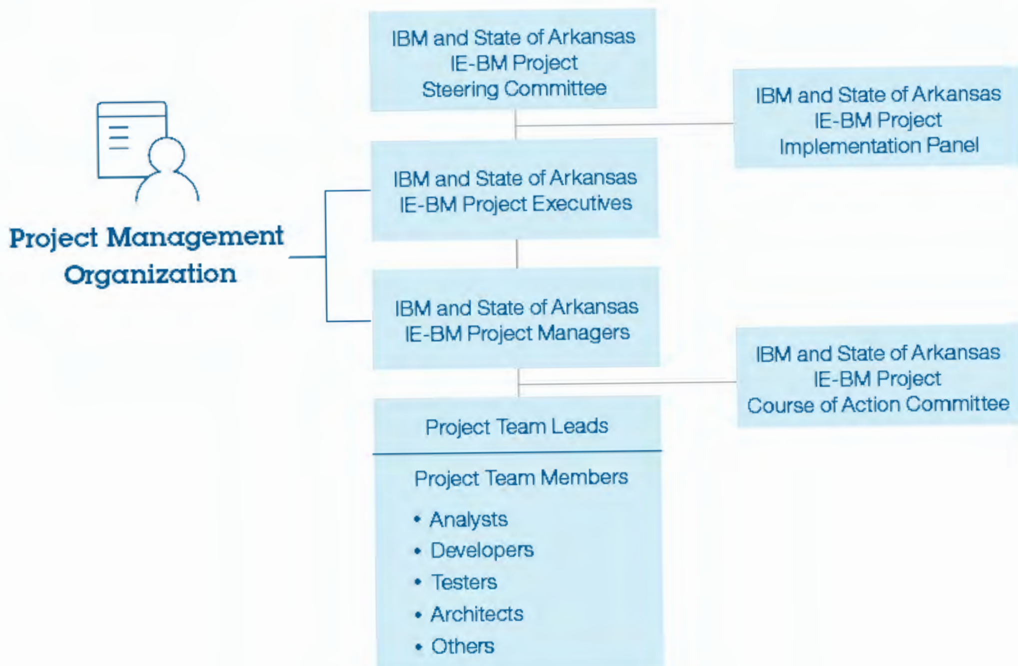


Figure 3: IE-BM Project Organization and Governance

Organization facilitates rapid escalation and monitoring of project risks and issues

Each succeeding level in the governance structure corresponds to higher levels of authority for project reporting and decision making purposes. Reporting will be accomplished as identified in the project Communications Plan and corresponding requirements from the RFP. [I1.12]

The Project Management Organization (PMO) is comprised of the IE-BM Project Executives and Project Managers from the IBM team and the State of Arkansas. Also included are those who provide project administration, financial analysis, staff recruiting and onboarding and off boarding, DS&P analysis, schedule maintenance, change management, and project reporting.

The project technical team is comprised of those responsible for creating deliverables and performing associated business (functional) and technical activities of the project for the DDI and M&O functions of IE-BM. These include business analysts, subject matter experts (SMEs), product owners, architects, technical system, application and database administrators, programmers and developers, testers, training developers and trainers, OCM implementation specialists, and system and application support personnel. Key personnel are identified in Section T-4, Vendor Engagement Organization and Staffing response.

An important part of the project governance is the Course of Action Committee (COAC), whose job it is to address challenging policy, operational process, or system design issues. The COAC plays an important role in managing risks and mitigating issues. The COAC meets weekly as prescribed in the Communications Plan and is constituted of the IE-BM Project Executives, Project Managers and Team Leads from both the IBM team and the State. Others may be invited to participate based on the needs of agenda items that are brought to the COAC for timely resolution.

Table 6: COAC benefits to the State of Arkansas and IBM

Course of Action Committee
• Transparency • Collaboration • Problem Solving • Team Building • Mutual Support • Creativity • Effectiveness • Decision Making • Results Driven

Another important feature of the project governance is the Project Implementation Committee (PIC). The PIC is comprised of mangers of various project stakeholders who may be instrumental in the implementation of the IE-BM system. While the PIC does not have formal project authority, their purpose is for informal project reporting, issue discussion, risk mitigation, and issue escalation that may need to be brought to the Project Steering Committee. They are a working group that meets with greater frequency than the Project Steering Committee to provide working attention to items that need more timely granular monitoring and control than the Project Steering Committee is able to provide.

Risk and issue management will be performed as described in Section 1.2, Risks and Issues Management. When the project team identifies a risk or encounters an issue they are empowered to deal with it as prescribed in the Risk and Issues Management Plan. These items will be reported weekly or more often as need dictates to the Project Team Leads. Team members will be trained and expected to act upon risks and issues together with their designated Project Team Lead with the appropriate level of response and approval. For items that have impact to scope schedule and budget Team Leads will escalate to the IBM and State of Arkansas Project Managers for reporting, assistance, and decision making when necessary. This process will also be subject to CMS reviews identified in the Project Process Agreement (PPA). [I1.13, I1.14]

Each succeeding level in the governance structure becomes a support, decision and resolution pathway when greater authority to proceed is necessary.

Project Execution

Delivery of the IE-BM project depends on integrated collaboration between the IBM team and the State of Arkansas team. The IE-BM project delivery method is designed to certify mutual agreement across the levels of the organization. At the highest level, these include the contract, SOW, and deliverables. At an intermediate level, mutual agreement is required for Agile epics and stories, requirements and use cases. At a detailed level, there are a multitude of interactions from policy making to document editing that require mutual agreement.

The project methodology proposed by the IBM team is designed to create clear targets and objectives for each deliverable, foster an integrated collaborative relationship between the IBM team and the State of Arkansas team, and to avoid costly delays and rework.

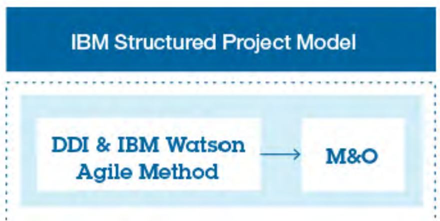


Figure 4: IE-BM Project Methodologies

Key features of the IE-BM project methodology proposed by the IBM team are:

1. Structured project management based upon the PMI PMBOK and the IBM WWPMM.
2. Agile SDLC to perform DDI of new features of the IE-BM system
3. M&O transitioned from DDI

Project management is explained in the response to this Section 1.0, Project Management. The SDLC and M&O methodologies are further explained below in succeeding sections.

The Agile method of the SDLC is a key collaboration with the State of Arkansas Team. Benefits include

- Primary emphasis on a working system fine-tuned to current needs and the implementation of up to date innovations. **[I1.31]**
- Complete system documentation, including functional and technical documents
- Fewer iterations to deliver and review system documentation
- Increased system and documentation quality over other methods
- Increased responsiveness to user needs, legislative change, and other necessary adjustments

More details on the IBM Watson Agile Method will be provided in Section 2.0, Approach to Planning the Software Development Life Cycle (SDLC), and Section 4.0, Approach to Solution Design, Development and Implementation (DDI).

Project Configuration and Change Management

The Project Change Management Plan, which is part of the PMP, will provide prescriptive detail about the change management process and procedures. Highlights of this plan include:

1. An overview of the Change Management Process for the SDLC and M&O stages.

2. Identification of roles that will be responsible to manage the process during the SDLC and M&O stages.
3. Policies and procedures that will be implemented for change management on the project.

The proposed change management process requires the establishment of a configuration baseline. The initial configuration baseline includes the contract, SOW, requirements, and responses found throughout the IE-BM proposal. Requirements and change requests (CRs) will be tracked in Rational and in Excel spreadsheets during the project. Elaborations may be made during project start up as requirements are validated. New requirements, assumptions, or constraints will require a CR to evaluate the request for approval or rejection. Every requirement and deliverable is considered a separate configuration item. Changes to a baselined configuration item will be analyzed and approved before CRs are implemented.

During the SDLC, Agile sprints will be conducted. CR's may be requested by IBM or State personnel. Changes may be incorporated according to agile practices depending on their impact and the rework caused by their implementation. Changes will be sized according to their impact as follows:

Table 7: Change Impact Levels

Level	Name	Impact
1	Small	0 to 80 hours of work
2	Medium	81 to 250 hours of work
3	Large	251 to 500 hours of work
4	Extra Large	Greater than 500 hours of work

Actions taken will depend on the impact anticipated for each level of change. CRs that occur before work has been performed on a configuration item may be swapped or added incrementally depending on the situation. Swapped changes have no overall impact to cost or schedule if they are done before work on the target configuration item has been started. In that case the swap is between the CR and some other configuration item that is no longer needed or that can be scaled back. Additive changes have incremental impact according to their added sizing or the amount of rework required to implement them.

In the SDLC each IE-BM system feature is associated with one or more configuration items. Each configuration item is assigned a sizing based on the level of work required to implement it and is verified prior to implementation. The sizing and estimates are used in sprint planning, execution and monitoring through agile burndown rates. The impact level is also used to plan CRs that will be swapped or added to the project.

Project Quality

The project Quality Management Plan will be presented in the format prescribed by the State and will contain details of Quality Planning, Project Quality Assurance and Project Quality Control. Roles will be identified to create clarity regarding quality assignments and activities that will be carried out.

Quality Planning will include the identification of quality guidelines for deliverables, acceptance and review, and quality measurement.

Project Quality Assurance will define quality processes that will occur for infrastructure, software, and documentation deliverables. It will outline quality techniques to be used on the project such as reviews, testing, walkthroughs and demonstrations, validations and evaluations. It will also outline quality guiding principles such as auditability, continuity of processing, correctness, efficiency, flexibility, security and other parameters of quality. Quality tools will also be specified to aid in the quality process.

Project Quality Control will focus on quality measurement with references and guidance on issue resolution and defect tracking. Additional details on quality plans can be found in Section 1.4, Quality Management.

Significantly, our defect policy going into UAT is to have zero severity 1 or severity 2 defects as agreed to and described in Section 6.0, Approach to Testing, which builds high quality into production systems.

Project Management as proposed by IBM is essential to project success. Our standards based methodology is well proven on many similarly complex projects in the Health and Human Services industry, including County of San Diego, State of Missouri, and the State of North Carolina who are identified as references for the IBM team. IBM has the experience to structure the project to the unique requirements of the State of Arkansas to achieve a successful outcome.

PROJECT QUALITY

IBM's quality management and planning was demonstrated in San Diego by having zero (0) Severity 1 issues throughout the lifecycle of the project.

1.2 Risks and Issues Management

Throughout the Project and M&O phases, DHS will rely upon the identification and mitigation/resolution of risks and issues to manage potential and realized problems. The Vendor must actively contribute to this process in every aspect of its work to anticipate and identify these risks and issues, as well as contribute to the solution of these. The Vendor should provide a description of the Vendor's internal Project issue resolution process including an escalation plan, where the escalation plan includes contact information for each person identified in the proposed problem reporting and escalation procedure and describes the amount of time elapsed before a problem is escalated within its organization

Instructions: Describe the Vendor's risk and issues management approach, including interactions between the Vendor and DHS in this process. Describe any expected risk areas and initial mitigation plans. Include references to the use of any specific methodologies, as well as any specific tools being used.

The IBM team has extensive experience managing risks and issues while successfully executing projects to a high-quality standard and maintaining on-time deliveries. Our approach includes the creation of Risk and Issue Management Plans at project start-up and the active logging and monitoring of risks and issues on a weekly and monthly basis.

The IE-BM risk and issue management approach will be documented in detail in the Project Risk and Issue Management Plan that is part of the PMP deliverable. Microsoft SharePoint and Microsoft Office will be the tools used to implement risk and issue management. Our approach distinguishes between risks and issues as defined by PMI and PMBOK. Risks are anticipated events that may negatively (or positively) impact the project scope, schedule or budget. They are assigned a risk severity and likelihood of occurring to determine the potential risk impact to the project. Issues are risks or other problems or events that have occurred and will be resolved in order for the project to proceed toward completion.

The IBM and State Project Managers are the owners of the risk and issue management processes, while the project team is primarily responsible for identifying, quantifying, mitigating and resolving risks and issues. The project team implements risk mitigation strategies and issue resolution plans to minimize their impact on the project.

Based on previous experiences, the IBM team typically uses an escalation strategy to rise through the management structure as risk probability and impact increase and begin to become issues. However, the IBM team will work with the State to create a specific collaborated plan for escalation strategies with risks and issues.

Risk Management will flow through an iterative process that can be seen in the example below:

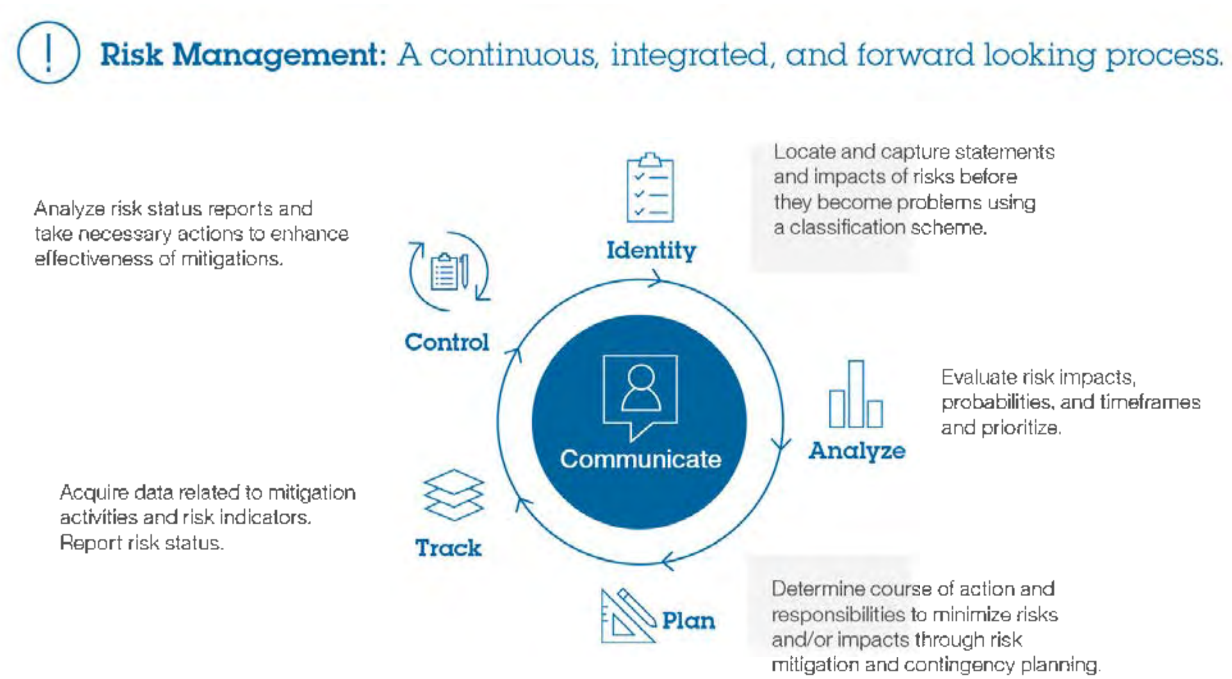


Figure 5: Risk Management Process

The project Risk and Issue Management Plan defines the processes and procedures that will be followed. These include:

1. Identify risks and issues at the startup of the project
2. Review and analyze known risks and issues weekly
3. Identify and assess new risks and issues weekly
4. Create risk mitigation and contingency plans for high impact risks
5. Create issue resolution plans for medium and high impact issues
6. Track and monitor risk impact and issue resolution progress to completion
7. Control risk mitigations and issue resolutions to minimize impact to the project

Risk probability will be assessed according to the following scale:

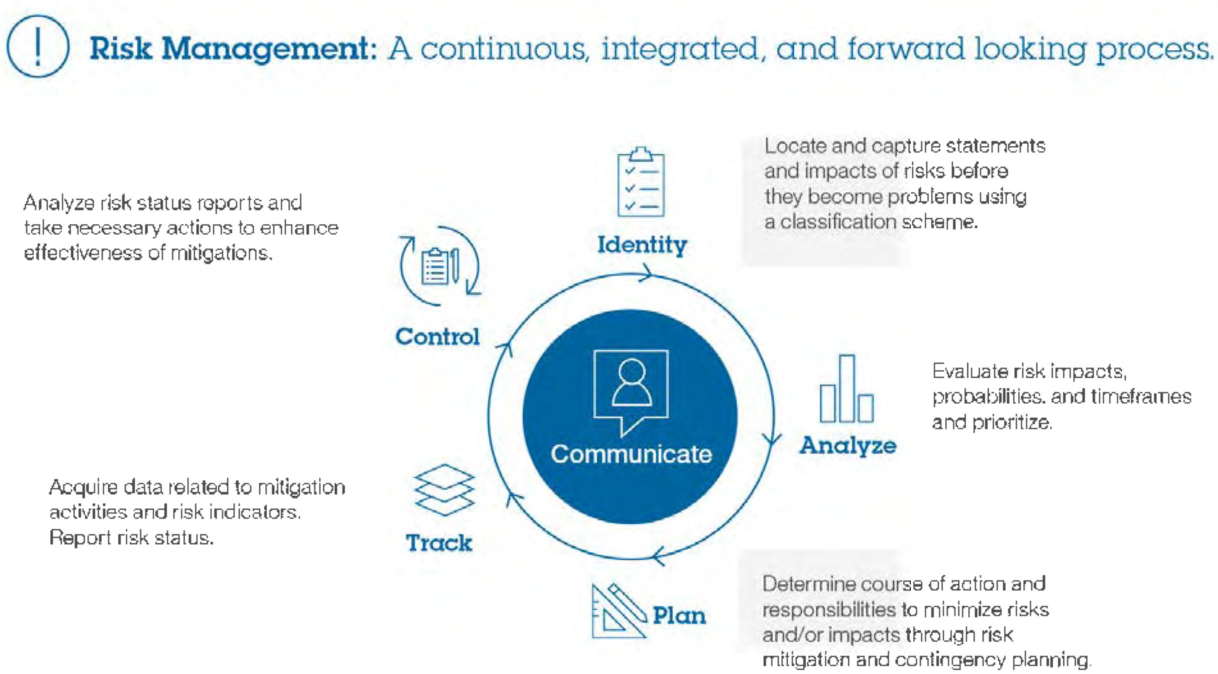


Table 8: Risk Likelihood Assessments

Rank	Value	Explanation
5	81–99%	Almost Certain to Occur
4	61–80%	Probable/Likely to Occur
3	41–60%	About Even Chances to Occur
2	21–40%	Unlikely to Occur
1	0 –20%	Almost Certainly Not to Occur

Risk exposure is then calculated numerically as the product between risk probability and risk impact. An example of this matrix can be seen below:

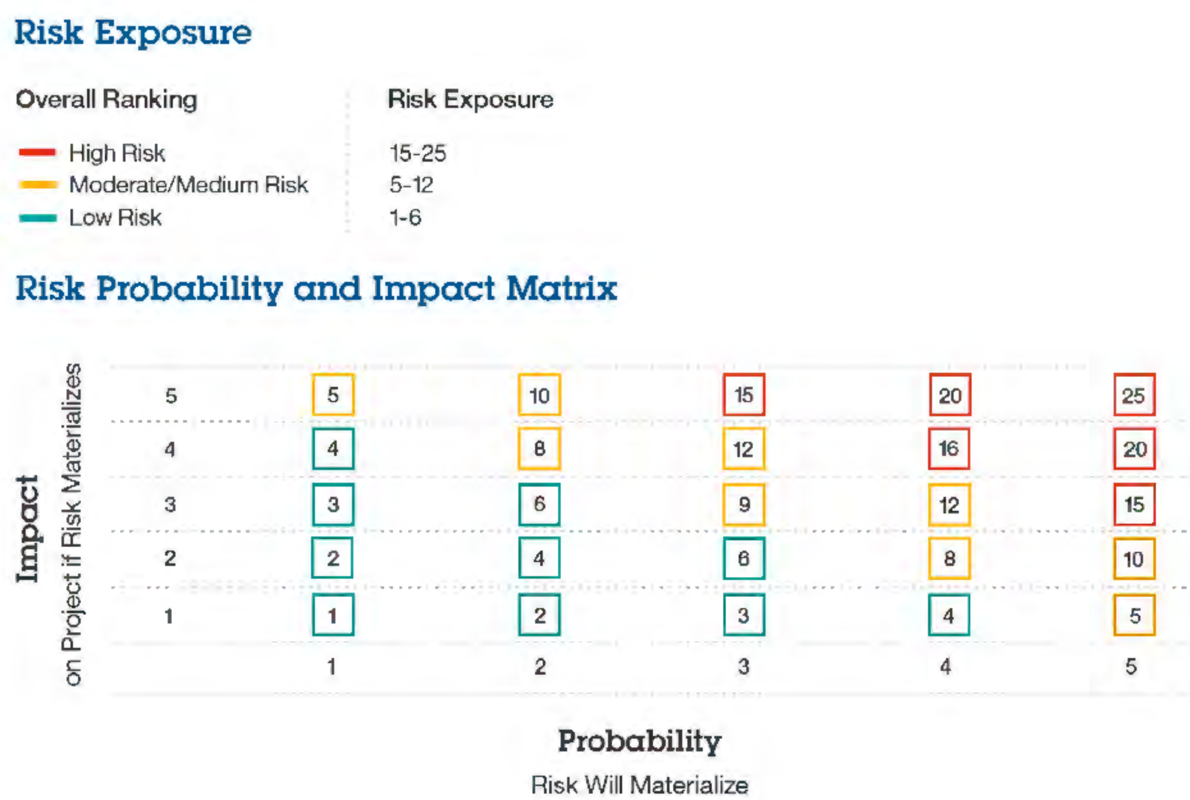


Figure 6: Risk Impact Matrix

The matrix provides a definition of high, medium, and low risk exposures. High and medium risk exposures are reviewed weekly, while low risks may be tracked without weekly review until they change.

Table 9: Risk Exposure Rankings

Risk Exposure	Description
High	High risks should have a mitigation and contingency plan in the event the risk is triggered into an issue. Illustrative actions include: 1. Develop a mitigation and contingency plan for the risk. 2. Implement the Risk Mitigation Plan and actively track status of the risk and mitigations. 3. If necessary, implement contingency plans and actively track status of the risk and mitigations. 4. Reassess the risk impact and probability on a weekly basis. 5. Report on the risk in monthly status reports and at weekly project review meetings.
Medium	Medium risks may have, but are not required to have a mitigation and contingency plan depending on their potential to negatively impact a Milestone Deliverable in the schedule. Illustrative actions include: 1. Determine if a Milestone Deliverable may be impacted by the risk.

Risk Exposure	Description
	2. If necessary, develop a mitigation and contingency plan for the risk. 3. Reassess the risk impact and probability monthly at the Risk Management Meeting.
Low	Low risks do not require a mitigation and contingency plan. Illustrative actions include: 1. Reassess the risk if impact or probability change. 2. Monitor the risk at the monthly Risk Management Meeting.

If the probability or impact of a risk changes it will be updated in a weekly risk management meeting or review to provide a current classification and overall project risk profile.

Risks will be tracked in a project Risk Management Log. Information tracked on a risk-by-risk basis includes:

- Risk number
- Risk categories identified for organization and cataloging related risks. Risk categories include scope, schedule, budget, personnel, and other
- Risk description in brief if-then statements
- Risk owner
- Risk creation and closing dates
- Probability rating
- Risk Impact rating
- Risk Exposure rating
- Risk Ranking (High, Medium, Low)
- Risk Mitigation Required (Y/N)
- Risk Mitigation Plan Exists (Y/N)
- Risk comments or status

Risk Mitigation Plans may be created for risks, but are required for High risks. The Risk Mitigation Plan includes the information tracked in the risk log and includes additional information as follows:

- Mitigation strategy: Accept (no action required), Transfer, Avoid, Mitigate
- Mitigation objectives
- Assumptions and constraints
- Identified triggering events, what will change the risk into an issue
- Quantified impact statements on scope, schedule or budget
- Mitigation activities to decrease the risk probability or risk impact
- Contingency plans in the event the planned activities do not work to mitigate the risk

A risk mitigation template will be created that conforms to DHS standards and a layout of the Risk Mitigation Plan. A sample is shown below:

Table 10: Sample Risk Mitigation Template

<table>
<tr><th>Risk ID</th><th colspan="2"></th><th>Risk Title</th><th colspan="4"></th></tr>
<tr><td>Risk Category</td><td colspan="2"></td><td>Risk Probability</td><td></td><td>Risk Impact</td><td colspan="2"></td></tr>
<tr><td>Risk Exposure</td><td colspan="2"></td><td>Risk Rating</td><td></td><td>Risk Strategy</td><td colspan="2"></td></tr>
<tr><td>Risk Creation Date</td><td colspan="2"></td><td>Risk Closure Date</td><td></td><td>Risk Owner</td><td colspan="2"></td></tr>
<tr><td>Risk Mitigation Objectives</td><td colspan="7"></td></tr>
<tr><td>Assumptions or Constraints</td><td colspan="7"></td></tr>
<tr><td>Risk Triggers</td><td colspan="7"></td></tr>
<tr><td>Closure Criteria</td><td colspan="7"></td></tr>
<tr><td>Risk Impact Statements</td><td colspan="7"></td></tr>
<tr><td colspan="5">Mitigation Activities</td><td>Start Date</td><td>End Date</td><td>Resource</td></tr>
<tr><td colspan="5">1.</td><td></td><td></td><td></td></tr>
<tr><td colspan="5">2.</td><td></td><td></td><td></td></tr>
<tr><td colspan="5">3.</td><td></td><td></td><td></td></tr>
<tr><td colspan="5">Contingency Activities</td><td>Start Date</td><td>End Date</td><td>Resource</td></tr>
<tr><td colspan="5">1.</td><td></td><td></td><td></td></tr>
<tr><td colspan="5">2.</td><td></td><td></td><td></td></tr>
<tr><td colspan="5">3.</td><td></td><td></td><td></td></tr>
<tr><td>No.</td><td colspan="5">Mitigation Revision History Description</td><td>Date</td><td>Revised By</td></tr>
<tr><td>0.0</td><td colspan="5">Draft Mitigation Plan</td><td></td><td></td></tr>
<tr><td>1.0</td><td colspan="5">Approved Mitigation Plan</td><td></td><td></td></tr>
</table>

When a risk becomes an issue the Issue Management process includes the following steps:

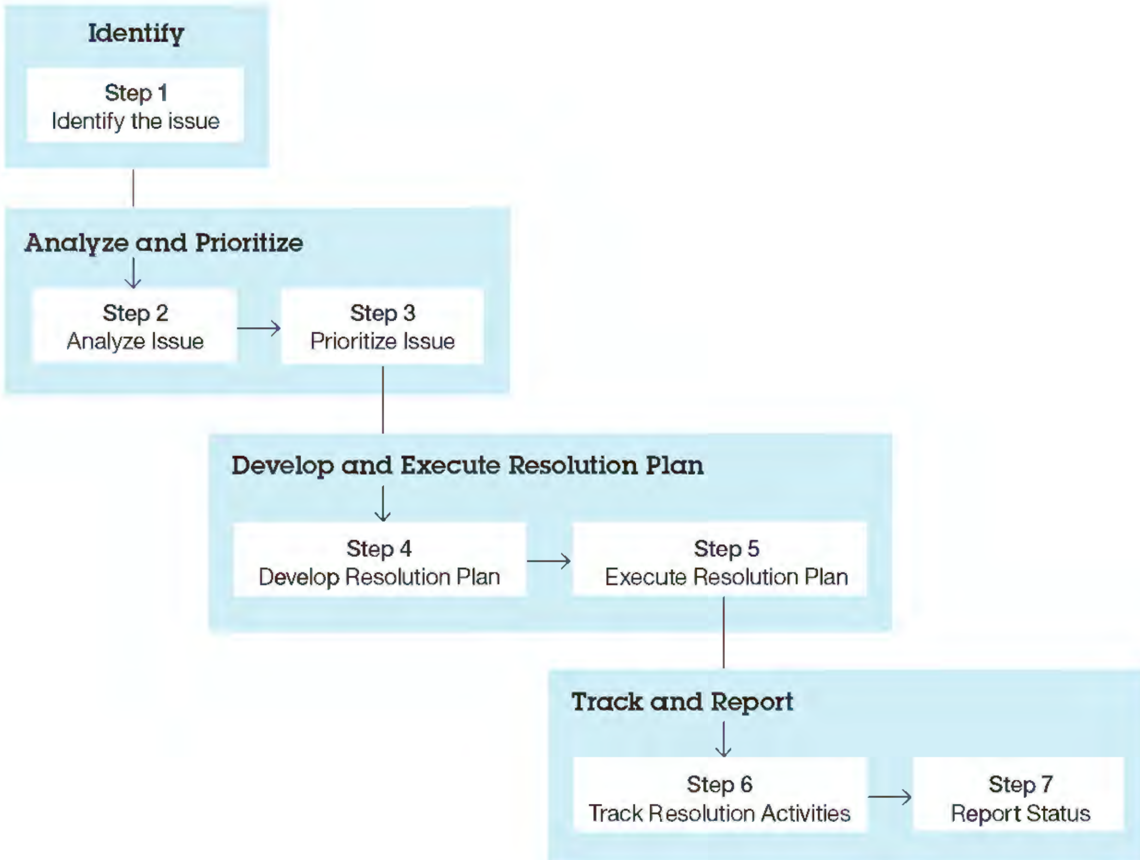


Figure 7: Issue Management Process

Step 1: Identify the issue. If a risk was triggered this automatically identifies the issue. Otherwise, the issue may be identified by monitoring the project to deviations from scope, schedule or budget.

Steps 2 & 3: Analyze and prioritize the issue. The analysis identifies the impact of the issue and the magnitude of the impact establishes the priority of the issue.

Step 4: Develop a resolution plan. Major issues require a formal resolution plan. Minor issues can be resolved at once or through action items. A resolution plan template will be developed that conforms to DHS standards and needs. A sample resolution plan template is shown below:

Step 5, 6 & 7: Execute the plan, track activities, and report status.

Table 11: Sample Issue Resolution Plan Template

Issue ID		**Issue Title**			
Issue Magnitude		**Issue Start Date**		**Issue Closed Date**	
Issue Owner					
Issue Description					
Issue Impact					

<table>
<tr><th>Closure Criteria</th><td colspan="4"></td></tr>
<tr><th colspan="2">Resolution Activities</th><th>Start Date</th><th>End Date</th><th>Resource</th></tr>
<tr><td colspan="2">1.</td><td></td><td></td><td></td></tr>
<tr><td colspan="2">2.</td><td></td><td></td><td></td></tr>
<tr><td colspan="2">3.</td><td></td><td></td><td></td></tr>
<tr><th>No.</th><th colspan="2">Issue Resolution Revision History Description</th><th>Date</th><th>Revised By</th></tr>
<tr><td>0.0</td><td colspan="2">Draft Issue Resolution Plan</td><td></td><td></td></tr>
<tr><td>1.0</td><td colspan="2">Approved Issue Resolution Plan</td><td></td><td></td></tr>
</table>

The Risk and Issue Management Plan is implemented at start up and continues execution throughout the life of the project until project closure. Active risks and issues at project closure will be transitioned to M&O if mutually agreed by the consent of the State. Identified risks to the project are shown in section 14.2, Issues, Challenges and Potential Risks.

While every project has risks and issues, the IBM team will work with the State of Arkansas to minimize their impact on the IE-BM project. The methods described have been used successfully on large and complex project performed by IBM and have helped our customers experience success without costly work stoppages or time delays.

1.3 Project Data and Document Management

It will be the Vendor’s responsibility to provide the tools and processes to manage the Project data and documents. **Instructions:** Describe the Vendor’s approach to managing the Project lifecycle and M&O documentation. This should include, at a minimum, a discussion regarding the repository that will be used to store and share Project and M&O documentation, and the approach to ensuring Project team members use the repository, maintaining documents, document security, repository back-up and transition of ownership at the end of the Contract period.

Many of the deliverables in the IE-BM project are documents or a collection of documents. Many of these deliverables contain multiple documents that are large in volume and will be authored incrementally as Agile sprints are executed. We understand that these documents may have many authors within potentially overlapping time periods. With these realities as a backdrop the IBM team has identified a clear path for document management that has proven successful on similar large and complex projects for other customers in the health and human services industry utilizing a SharePoint repository tool with standardized naming conventions, which is described in further detail in this section.

This path includes the following processes, procedures, activities and artifacts that will be implemented on the IE-BM project for project data and document management with a high-level documentation process flow described below:

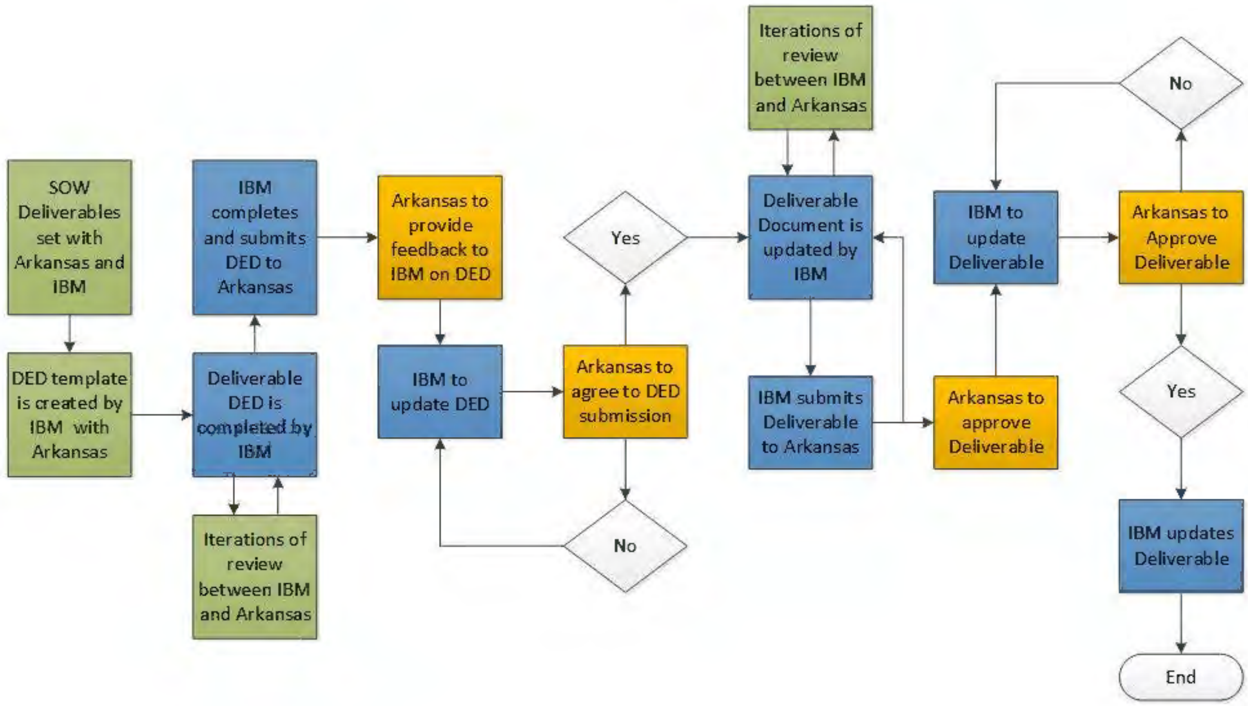


Figure 8: IE-BM Document Management Process

1. Create a Document Management Plan for planning and providing clear and consistent document management instructions to participants on the project. The Document Management Plan will be closely coordinated with the Communication Management Plan and the SOW, where specific types of project documentation may be specified.
2. Conduct a Document Management Method Adoption Workshop between IBM and DHS to finalize document management process and procedure decisions and help facilitate the needs of project stakeholders are met in appropriate detail.
3. Create a document creation process that includes variations for simple, medium, and complex documentation.
4. As part of our document quality assurance and document creation process we will create sub-processes, activities and artifacts illustrated in Figure 8, IE-BM Document Management Process, consistent with DHS best practices for:
   a. document initiation and where applicable DED creation, review and approval,
   b. collaborative document content storyboarding and outlining
   c. document writing principles and standards
   d. formatted document templates for standard documents or subsections of documents
   e. formal document review, submission and approval
   f. definition and handling formal and informal document types. Formal document types are explicitly specified in formal project documents such as the contract or the SOW; informal documents are used for informal or ad hoc communication methods.
   g. revising existing documentation
5. Implement a document naming convention and versioning procedure to establish, organize, track, and manage document assets as configuration items.

6. Implement a SharePoint document repository in the current DHS version to organize documents and make it easy to find related sets of documents and their appendices in various states such as documents in work, documents in review and documents approved.
7. Provide project documentation process and procedure training to team members from the combined IBM and State team during onboarding.
8. The State and IBM team will both be collaborating in the document repository which will allow for transition of the documentation after the project is completed. **[I1.24]**

The proposed document versioning system will incorporate the following key principles:

1. Documents will follow a project naming convention consistent with DHS standards. In the absence of DHS direction, the naming convention will follow:
   a. Provide a meaningful document name,
   b. Provide a version number in vX.X format
   c. Provide a date in yyyy-mm-dd format
   d. Provide a document extension required by the tool for the document

   Example: “Technical Design Document v1.0 2017-05-07.docx”
2. Draft document versions will have a major and minor designation.
   a. Major version 0 is a draft document prior to initial approval.
   b. Major versions will increment by 1.
   c. Minor versions will start with 0 and increment by 1 for each separate minor document release that occurs between major releases. When a major release is incremented, the minor release number will start over at 0.
3. Complex document deliverables will contain a main document that has content common to the entire deliverable and appendix documents that have content unique to a particular work effort such as an Agile sprint. For example, the Technical Design Document would have a main document that provides overall principles for user interface design along with a high-level story board of the entire user interface. It would be accompanied by appendices from each sprint that contain detail design features of the user interface screens being implemented or modified for the features of each sprint.

   Example: “Technical Design Document v1.0 2017-05-07.docx”
   “TDD Appendix XYZ UI Detail Design v1.0 2017-06-18.xls”

The SharePoint document repository tool will be used to store and share documents at major check points in the document lifecycle, including submission for review, reviewer comments, and approved statuses. The documents will be named as identified per the approved file naming convention, using standard file names and versioning. The main purpose of the repository is to provide a cost effective, centralized location where those with access can reliably go to download or review the latest version of a deliverable document set or other project critical documents. This will allow for document security to be maintained based on SharePoint access and security controls.

Meta data captured at document check in includes the document name, brief document description, version number, document type (deliverable xyz, sprint xyz, etc.), document status (for review, commented, revised, approved), and other important cataloging and sorting fields as may be determined at the Document Management Method Adoption Workshop and recorded in the Document Management Plan.

State run backups will be performed for the SharePoint document repository consistent with established DHS policy. In addition, the IBM team will use an internal document repository, IBM

Project Work Center (IPWC) that is separate from the State document repository. This is used for internal IBM purposes and will be maintained as a secondary backup document repository in the event of State SharePoint system or document back up failure. Documents in IPWC will share the same file naming and versioning policies and procedures, with similar cataloging and organization by document type and deliverable document sets.

1.4 Quality Management

A quality solution is the result of a focus on quality throughout the implementation process to ensure quality work products are produced, including:

- The approach to managing the quality of the Solution as it relates to the requirements. This includes the identification of inconsistencies between the requirements and the detailed design/work products.
- The practices and procedures the Vendor leverages to ensure the detailed design results in a System that addresses the business goals including techniques to solicit user input.
- The practices and procedures that will be followed for reporting, tracking and resolving problems or issues identified in software design, development, System transition and System maintenance.
- The processes to ensure high quality work products are developed, delivered and maintained by Vendor’s subcontractors/partners.
- The approach to identification and management of business process and policy changes that will be required to deliver the highest quality System (i.e., usage of the System results in the highest quality business processes).
- The configuration management activities that include baseline control and monitoring the software library. Approved changes to baseline software and/or documentation should be made properly and consistently in all products, and no unauthorized changes can be made.
- The Vendor’s approach to tracking quality metrics throughout the Project. This should describe how measurements will be identified, collected and analyzed to ensure quality goals, including management and DHS’ Project goals, are being met. It should also describe the types of Project metrics used.
- The Vendor’s organizational structure, and the roles and responsibilities of Vendor staff, as they relate to quality management including the Vendor’s internal QA processes and policies.
- A description of the processes and management of the Defect and Issue Tracking Solution for resolution of items and, if applicable, how corrective action plans will be developed to address more significant issues.

Instructions: Describe the Vendor’s approach to ensure the quality of the Project and System, and include details on: management of requirements through the traceability matrices, change readiness, metrics to analyze quality goals and management of defect and issue tracking.

Throughout the stages of the project delivery life cycle, from planning to deployment, IBM’s Quality Management Plan (QMP), Quality Techniques, and Processes are structured and designed to achieve stated goals and meet the State's expectations. The IBM team, as the single point of accountability, is focused on working with key stakeholders to unify actions and hold IBM team members accountable. This will result in a solution that is accurate, usable, and meets the programmatic needs of the State.

Overall, the QMP describes the quality processes and procedures to be followed throughout the project. Team members from the IBM team and the State will have clearly defined roles in the implementation of the QMP. The review of DEDs and deliverables will set expectations and drive a higher quality end product. Implementing Software Quality Processes and Procedures will set the expectation that we are operating with the best practices and industry standards as prescribed in the Institute of Electrical and Electronics Engineers (IEEE) Society of Software Engineering Quality Standards and by the International Software Testing Qualification Board (ISTQB). Moreover, IBM's Software Quality Processes and Procedures have been implemented successfully on other projects, such as the ConnectWellSD for the County of San Diego Cúram implementation, which resulted in a major reduction in defects to the point where no severity 1 or severity 2 defects have been found in the production environment based on the quality and clarity of requirements, design, and development while being communicated with the team and client. Our recommended quality management approach is designed to result in a robust and operationally sound solution that meets the State's expectations.

Section 1: Quality Management Plan

The project Quality Management Plan, in the format prescribed by the State, contains details of Quality Planning, Project Quality Assurance, and Project Quality Control. At the outset, the IBM team will work closely with the State to identify and create objectives and measures consistent with Department of Human Services and federal standards to facilitate the QMP supports project deliverable expectations. Moreover, by establishing mutually agreed upon acceptance criteria, the QMP provides consistency with the Statement of Work and governs the entire system development life cycle, encompassing the creation of deliverables for planning, software, and documentation. Roles and responsibilities are clearly defined to support the development, review, approval, and implementation of the QMP as described in the functional organizational chart below.

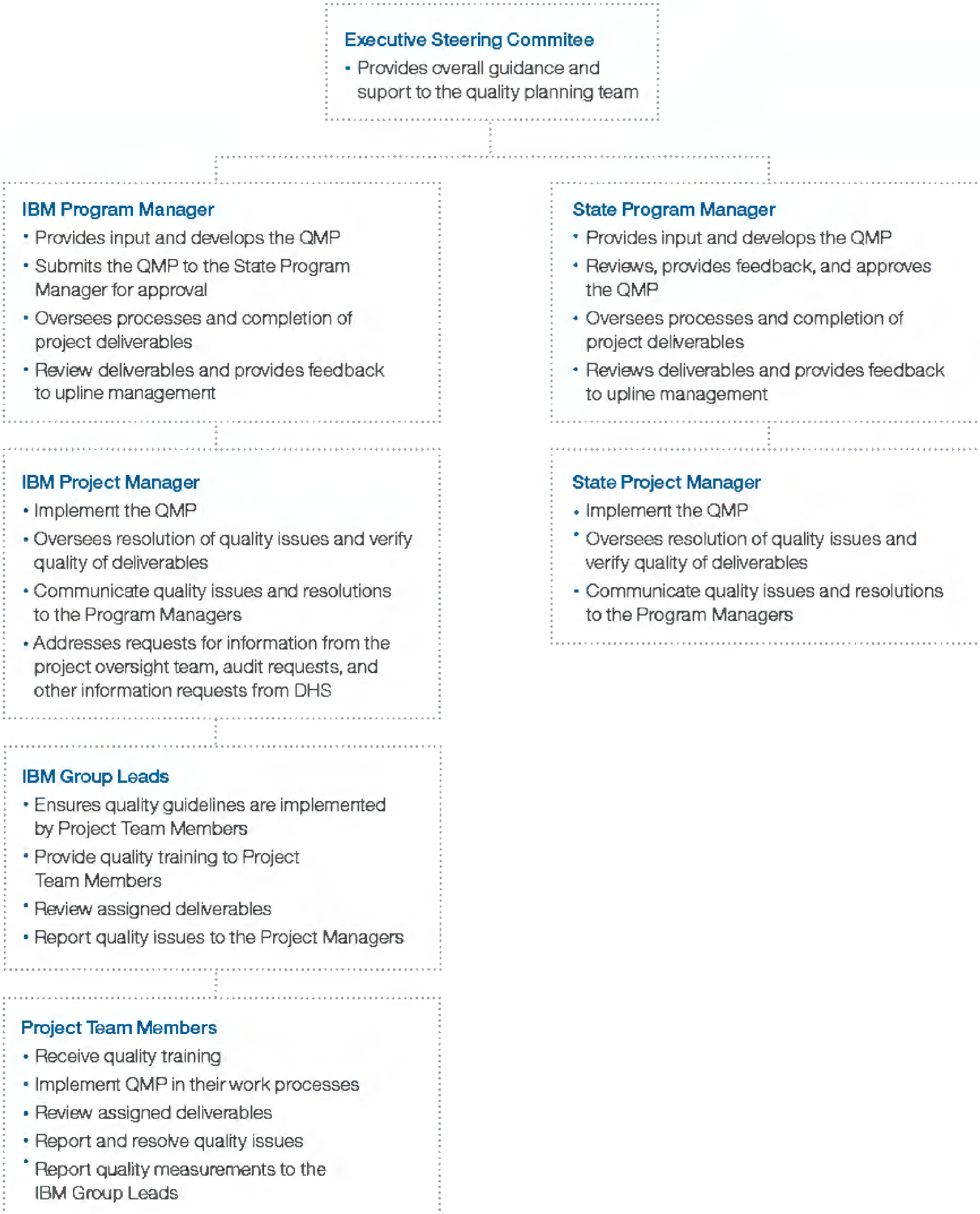


Figure 9: Quality Management Organization Structure

Action Caption: Clearly defined roles facilitate an efficient creation and implement of the QMP.

The State Program Manager and IBM Program Manager will work in lockstep during the process of creating the QMP. The State Program Manager will be responsible for working with the IBM Program manager to provide input for the QMP, review, and approve the QMP once it is submitted for approval. The IBM Program Manager will be responsible for overseeing the execution of project processes and completion of project deliverables in accordance with the QMP. The State Program manager and IBM Program manager will also work closely together to review project deliverables, measure, monitor, and provide feedback to upline managers and committees. The Project Steering Committee and Implementation Panel will be perfect avenues to discuss and drive issues to closer that may arise.

The State Program Manager and the IBM Program Manager will work together to implement the QMP. They will also oversee the resolution of quality issues and verify the quality of the project deliverables. Along with the Project Managers, they will review project deliverables, communicate quality issues, and resolutions to the IBM Program Manager and State Program Manager. The IBM Program Manager will also promptly address requests for information from the project oversight team along with audit requests and other request for information from the State. [I1.38]

IBM Team Leads will coordinate with project team members so that quality processes and guidelines are implemented. They will also provide quality training to project team members as it applies to their deliverables and review assigned deliverables throughout the delivery process. Leads also monitor, measure, and report quality issues to the IBM Project Manager.

Project Team Members will receive training and implement the QMP in their individual responsibilities and work processes. They will also review assigned deliverables throughout the delivery process and report quality issues for resolution, resolve quality issues, and report quality measurements to the appropriate Group Lead. Each member the team will identify and implement opportunities to continuously improve the quality of the product.

IBM will work with the State to determine the deliverables in the Statement of Work that require a Deliverable Expectation Document (DED). The DED contains a description of the deliverable to be created and the acceptance criteria for the deliverable. The DED serves to align our expectations and prevent re-work.

In line with our goals of timeliness, accuracy, and consistency, each DED and deliverable will proceed through a standardized review and approval process. During IBM's initial draft and internal review, we will evaluate the quality of the DED or deliverable based on the following metrics:

- Content of deliverable is complete and conforms to the SOW and associated requirements.
- Content of deliverable is consistent with content of pre-existing deliverables.
- Format and convention is uniform.
- Grammar, spelling, and punctuation is correct.

After internal review, we will submit the DED or deliverable to the State for review. Within ten working days, the State will complete their review and provide questions and comments to IBM. IBM will resolve these questions and comments within five working days and resubmit to the State. The State will have five additional working days to review the changes to the documentation and provide approval. If there is no response within the 5 working days from the State on a review, the DED or deliverable is considered approved. (See Section 4.1 – Requirements Validation and System Design Methodology for additional information). Our methodology for DEDs and deliverables mitigates risk and aims to meet the State's approved standards and conform to the requirements.

When creating our Project Work plan, we will also take into consideration time needed to comply with the required Centers for Medicaid Services Expedited Life Cycle (CMS XLC) deliverable checkpoints. These checkpoints include Architecture Review, Investment Selection Review, Preliminary Design Review, Detailed Design Review, Operational Readiness Review, and Post Implementation Review. IBM will work together with the State to prepare for meetings with the Governance Review Board to demonstrate compliance with federal regulations.

Section 2: Quality Assurance Techniques and Processes

IBM's Quality Assurance Techniques and Processes provide a method to check quality at each step in the system development life cycle. Each technique utilized adds an additional check to the overall quality of the project and results in a cleaner and more efficient IE-BM solution. The cornerstones of our approach consist of the following four main components: Reviews, Walkthroughs, Validations, and Evaluations.

Reviews

As a first step, the IBM team will perform a review of project deliverables to determine the content is complete, there is an understanding that alignments with the State and IBM's vision, the pertinent requirements are covered, and the acceptance criteria is met.

The IBM team will then perform Document Quality Reviews, Software Quality Reviews, Deliverable Quality Reviews, and IBM Internal Process Reviews. These reviews will be completed through many style of reviews, which include peer review, internal IBM team review, reviews, and individual reviews, where both the IBM team and the State will participate. Subject matter experts from the State will be included in the review sessions to assist in determining that the content of the deliverable meets expectations. Reviews will be completed as designated in the project work plan (See Section Response T-14) and may also be supplemented by ad hoc reviews as decided upon by the IBM team and the State.

Software reviews on both custom code and the software source code will be completed by the development team. Reviews may be internal to the IBM team or completed by the IBM team and State staff. In addition, IBM is recommending the use of an automated software code analysis tool to assist in identification of issues or inefficiencies so they can be promptly remediated.

Walkthroughs

Walkthroughs will be completed on a regular basis during the sprints. A member of the development team will facilitate the process and perform a demonstration of the application feature that has been developed up to that point in time. The State Product Owner and the IBM team business analyst will consider the functionality being presented in context of the relevant requirements and provide feedback to the developer. These walkthroughs will allow defects, ambiguities, and misconceptions to be identified and resolved early in the process, which will result in fewer defects found during User Acceptance Testing and after the release has been deployed to the production environment. In addition, it will allow for a greater level of understanding of the system functionality by the IE-BM stakeholders. Involving State SMEs and the Product Owner will allow us to validate the functionality as it is developed. This will help us identify problems early and help accelerate the release process.

Validations

Validation efforts will be performed by the IBM team to determine that requirements being implemented during the sprints are in agreement with the approved deliverables. These validation efforts will be scheduled during the sprints as regular checkpoints to perform a check that our development is in sync with what has been specified in the deliverable. There is a risk of requirements being missed or incorrectly implemented when implementing new features or changes to existing functionality. Performing validation of the new functionality and comparing the newly developed features to the content of the deliverable mitigates this risk and assists us in our efforts to produce a quality product that meets the expectations of the State.

Evaluations

Evaluations will be used to check the performance and quality of work for individuals and teams on the delivery team. We will perform an evaluation every six months for each person on the IE-BM project. The quality of each team member will be evaluated and coaching and mentoring will be provided to help team members hone their existing skills and develop new ones. Evaluating each team member allows us to provide feedback and maintain a high level of accountability. Project level evaluations will also be performed using metrics agreed upon with the State as outlined in the deliverables in the SOW and the Project Work plan.

Section 3: Software Quality Processes and Procedures

When developing the IE-BM solution, we need to focus not only on meeting requirements but also on the overall quality of the software. The IBM team will take into consideration overall software guiding principles to determine that we are producing a quality finished product. We will follow quality guidelines compiled from the Institute of Electrical and Electronics Engineers (IEEE) Society of Software Engineering Quality Standards and the International Software Testing Qualification Board (ISTQB). Examples of these quality guidelines can be found in metrics, including the following:

Table 12: Quality Guidelines

Quality Guidelines	
Auditability	Ability to provide supporting evidence to trace processing of data.
Continuity of Processing	Ability to continue processing when problems occur and ability to recover after failure.
Correctness	Ability of a program to process data according to prescribed rules and specifications and the extent to which controls over transactions and data field edits provide an assurance of accuracy and completeness of data. Requirement documents reflect business processes and test plans and scripts reflect requirements.
Efficiency	The amount of computing resources and code required by a program to perform its function.
Flexibility	Effort required to modify an operational program.
Security	Assurance that the system/data resources will be protected against accidental and/or intentional modifications or misuse.

During the proposal response, a comprehensive fit gap analysis was performed for both the functional and technical requirements to determine our ability to meet the requirements established by the State. The details of the fit gap analysis are included in our response in Sections T-6 and T-8. The completion of this analysis identifies where requirements can be met using out-of-the-box functionality or where customizations need to be made to meet the requirements. At the beginning of the Project Start Up phase, the IBM team, will meet with the State to perform a high-level requirements validation to determine that the IE-BM solution is being built to the specifications of the State.

During each sprint, we will implement multiple levels of quality assurance as we aim to deliver the highest quality software possible. We will manage requirements using traceability matrices. Prior to the beginning of the sprint, we will map requirements designated for inclusion in the sprint to the test scenarios using a Requirement Traceability Matrix. The RTM will help to see that requirements are covered by specific test scripts and it will be the main point of reference when the IBM team testers are developing detailed test scripts at the beginning of the sprint. If changes to requirements or new change requests are introduced during the sprint, the mapping performed in the RTM will give the State and IBM team test lead a clear view of how testing will be impacted and the specific test scripts that may need to be modified or re-executed. This will inform our decisions by providing a detailed view and inform our understanding of impact to scope and delivery.

Change readiness is a key aspect to our approach and will be managed by the IBM Organization and Change Management team. IBM OCM team members will be involved during the sprint and will be in dialogue with both the IBM Business Analyst and the Product Owner. Including both testing and OCM team members will provide necessary context when planning OCM materials during the sprint. Our aim is to not only understand the content of the change, but how the change will impact the end users in comparison to the processes that are currently in place. This collaboration will yield higher quality training materials, courses, and communications that are tailored specifically to the IE-BM end users rather than taking a one size fits approach. (Please reference Section 7.1 – Organizational Change Management for additional information).

IBM testers will receive feedback on the detailed test scripts from the Product Owner and the Business Analyst to determine that the content of the scripts will verify the functionality delivered will meet the expectations of the State. Unit testing is executed by each developer and results are documented for every completed build. At the conclusion of the sprint, we will execute regression testing to determine that new functionality or changes to functionality have not broken pre-existing related features in the system. Defects are tracked in the IBM Rational software and the IBM Test Lead reports daily on the status of outstanding defects. Our defect policy during SIT is that there will be zero severity 1 or severity 2 defects before entering into user acceptance testing. These combined processes will drive a very high level of quality when we deploy our releases to the production environment. (See Section 6.0 - Approach to Testing, for additional details on the testing process).

IBM will also perform incident trend analysis to identify and track where defects have occurred to better improve our processes and reduce the number of defects going forward. After each sprint, we will facilitate lessons learned sessions to identify problem areas observed during the sprint. These sessions will allow a venue to share what we have learned throughout the sprint and share best practices that will be adopted in future sprints. Sharing of knowledge will help to mitigate future risks and continually improve our process which will result in fewer defects going forward. When a defect is identified, root cause analysis will be performed to identify the cause of the defect. Analysis will also be performed to identify other areas of the solution where the same or similar issues are occurring or may occur in the future. Problem, impact, resolution statements will be included in each defect to clearly state the nature of the problem, the impact that the issue has on end users of the solution, and the proposed resolution to the problem.

Conclusion

As described above, the IBM team has the tools to deliver effective quality management planning and will leverage best practices and resources from our other successful Cúram projects that have benefited the public sector. Throughout the entire system delivery life cycle, IBM's Quality Management Plan, Quality Techniques, and Processes are structured and designed to achieve stated goals and meet the State's expectations. Moreover, the IBM team, as the single point of accountability, is focused on working with key stakeholders to unify actions and hold IBM team members accountable. This will result in a solution that is accurate, usable, and meets the programmatic needs of the State.

1.5 Team/Resource Management

DHS views resources as one of the most important success factors of this Project. The Vendor should provide a compelling approach to managing resources, from identification of the resource needs, through onboarding and retention. This should include the processes the Vendor will use to identify the required skills/resources the Project requires and identifying, selecting and onboarding team members and to address any performance issues with members of the Project team.

Instructions: Describe the process the Vendor will establish to manage the Vendor's Project team composition, as well as the coordination approach with other project entities including incumbent EEF Vendor staff, DHS/DIS staff and others.

Based on IBM's past performances on projects of similar size and scope to the IE-BM project, we have developed an approach to managing resources that brings a qualified team with the right breadth and depth of skills to successfully execute the State's objectives. The IBM team's staffing and personnel management focuses on identifying key resources who will be available Day 1 to work with State staff in kicking off the project startup activities and seeing the project through to completion.

Success requires the right team with the right skill sets, and resources brought together at the right time. Resources are forecasted and assigned based on need, keeping in mind the scope of the project throughout the project schedule and the skills and expertise required. As such, resources are on-boarded and rolled off the project according to the Project Plan.

We will forecast resources to meet the State's objectives within the proposed schedule, and the project leadership will continue to monitor the Project Plan closely and take appropriate action should there be a need for additional staff. We are committed to maintaining appropriate staffing to support the delivery of services on schedule. The following staffing process minimizes adverse impacts to the implementation schedule and expedites the staffing process should a need arise.

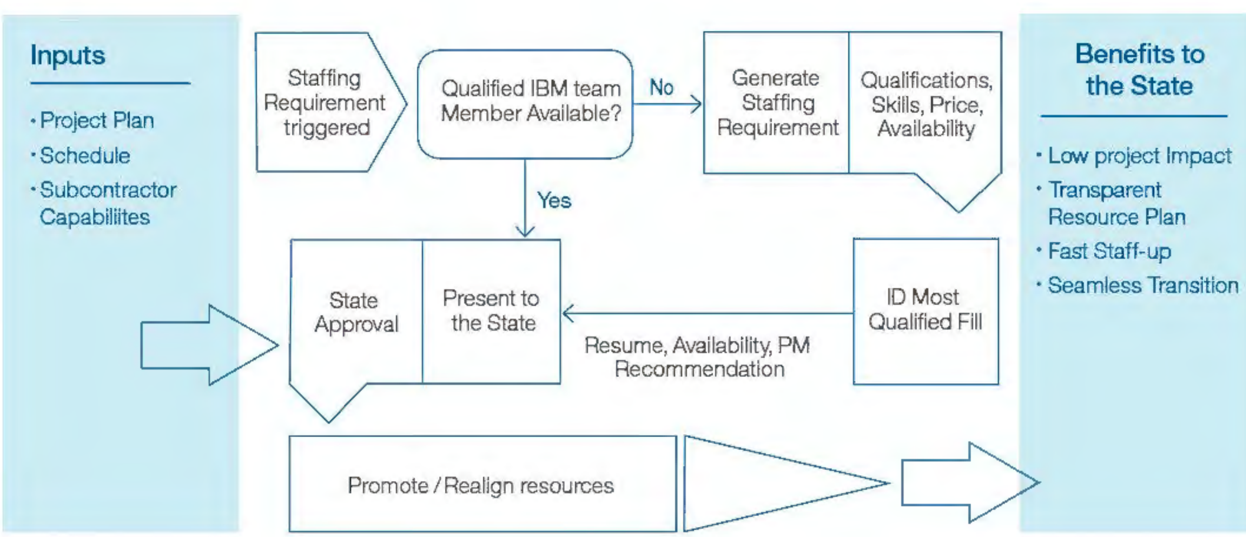


Figure 10: Implementation Staffing Process

The IBM team's approach to staffing focuses on speed and quality. IBM is fast because of the depth of its reach back – IBM has the ability call on a community of thousands of health and human services consultants and hundreds of Cúram application-skilled consultants. IBM brings quality resulting from the commitment to leveraging experienced industry and technical leaders throughout the engagement from within IBM. The objective of resource management is to provide project continuity and stability through staff retention and replacement. The IBM team has three tenets to resource management shown in the table below.

Table 13: Tenets of Resource Management

Approach	Description
A Commitment from Key Personnel to be Ready on Day One	The IBM team has taken these steps to provide a team with the highest level of commitment to the success of the State's implementation. The IBM team chose individuals who have a history of successfully seeing Cúram projects through to the end with similar scope.
Strategies to Minimize the Impact if Staff Members Leave the Project	Through disciplined archiving of work products and deliverables, redundancies where necessary, and succession strategies for key personnel.
A Culture that Promotes a Long-term, Satisfying, Career-focused Environment	Competitive benefit packages, internal and external training and education programs, proactive management development programs, career development centered on empowerment, team-building, and a supportive environment that builds trust and confidence. The unified project team approach integrates sub-contractors, passing on many IBM programs to strengthen the overall team.

Along with the 3 tenets, the IBM team uses the following processes for identifying, onboarding, and retaining resources. This also includes the coordination and collaboration between EEF vendor staff, DHS staff, and other key stakeholders/partners.

1. **Recruiting of Personnel.** IBM begins with the core staff and hires highly qualified incumbent personnel where appropriate. For project vacancies, IBM and its teaming partners will have the opportunity to bid for the vacant position. The company that provides the qualified person in a timely manner will fill the vacancy if the assignment complies with the State's work scope requirements. This competitive approach to finding the best resource in the shortest time incentivizes members of the team. IBM establishes goals, such as filling a vacant position in no more than two weeks lapse with a fully qualified replacement. IBM also uses key advertising sources, such as Internet job sites to continuously monitor for additional candidates. The basis for the job description postings are based on the position's specifications as required by IE-BM work plan.
2. **Job Qualifications.** IBM screens potential personnel. As part of the screening process, applicants demonstrate proof of their qualifications and provide certifications for the vacant position. Using experienced, skilled staff, IBM fully verifies that the candidate is qualified and able to successfully perform in the position. The State will have final approval over key personnel changes.

3. **Candidate Evaluation Process.** As part of the project staff selection process (internal IBM or external hiring process), our Project Manager oversees the assessment of each candidate's skills and qualifications.
4. **Background Check Policies.** At IBM's expense, the IBM team initiates background investigations prior to extending employment offers. IBM's Human Resources personnel perform checks through the National Sex Offender Database, the National Criminal for court records and filings, as well as other applicable state sources. IBM eliminates applicants where there is evidence of a felony, drug conviction, or other disqualifying conditions.
5. **Onboarding**. Each new employee and contractor receives project orientation for understanding scope and performance expectations for the project, including the State's regulations and policies as well as the IBM team's implementation methodology.
6. **Knowledge Transfer.** Throughout the duration of the project, the IBM team will strive to produce adequate documentation through which, new members joining the team can quickly get up to speed and start contributing to the project effectively. In addition, the IBM team will aim to bring on the replacements for existing staff early enough to allow enough time for the incumbent to perform knowledge transfer in an effective manner.
7. **Collaboration**: Collaboration between IBM, NGC, DHS/DIS, and the incumbent EEF vendor staff is another crucial component in the understanding of requirements, early identification of defects, and stakeholder buy-in, which support a successful project sign-off and completion. To promote clear communication, we propose that the State identify a single point of contact for each project work stream (Functional, Development, Deployment, and Test) and IBM will regularly communicate current status and schedules to the contact in addition to meetings between the entire IBM and State Team.

1.6 Project Team Security Requirement

Ensuring security of Project information is critical to the success of the Project.

Instructions: Describe how the Vendor will ensure the Project team will conform to the State's and DHS' staff security requirements. This should include any applicable training the Vendor's employees complete, and any subcontractor requirements and policies.

Risks associated with security on the IE-BM project are mitigated with IBM's Data Security & Privacy (DS&P) practice and the IBM HIPAA Program Office (HPO). The DS&P practice is a specialized program with primary focus on developing and sustaining processes to protect customer sensitive data. The HPO provides regulatory oversight and coordination by identifying actions and assessing and recommending mitigation strategies necessary for HIPAA compliance.

We will develop an individually tailored security plan committed to minimizing data security risks for the State on the IE-BM project. Our DS&P and HIPAA focal points will provide close monitoring and protection of the access and use of sensitive data (PII/SPI/BSI), including regulated and electronically-protected healthcare and human services data to facilitate appropriate controls or actions are implemented.

Leveraging experience gained by applying security services at several federal, state, and local agencies, we develop an individually tailored security plan committed to minimizing data security risks to the State.

Security on the project is the responsibility of the program management office (PMO) for the project and is informed and audited by our DS&P and HPO practices and our strong industry expertise and experience. Our security strategy includes employee training, workplace inspection, workstation security, workforce planning and separation of duties.

Security Training for IBM employees and subcontractors is multifaceted. Employees and subcontractors are required to take IBM Business Conduct Guidelines training annually, which includes an overview of the importance of security, protecting property and proprietary information for IBM and our clients, how to report security-related incidents or violations, and references to IBM websites and security resources.

Security training also includes onboarding training and materials to teach employees and subcontractors on the IE-BM project about the importance of security, different types of security threats and strategies, and what do in various situations of a breach or attempted breach.

Workplace inspections are performed quarterly by the PMO using security checklists that are informed and approved by the DS&P and HPO offices. Inspections are done at random times anonymously to encourage compliance. Inspection audits are conducted to determine compliance and to mitigate the impact of inspection violations. Mitigation efforts include employee training, warnings, and up to and including release from the project or from IBM for repeated violations.

Workstation security is continuously monitored and implemented on IBM and subcontractor workstations. Workstation discs are required to be protected using industry leading PSP encryption software. Compliance is automatically monitored and violations are required to be fixed immediately. Passwords are also used on project workstations and will be changed every 90 days.

Workforce planning and separation of duties (SOD) is also performed by the PMO through the guidance of the DS&P and HPO offices. Policies and procedures are created for the project and are included in the onboarding training. They are followed throughout the project for onboarding and off boarding employees and subcontractors. Compliance is audited regularly by DS&P and HPO auditors. A security grade is assigned from the audits and mitigation actions and plans are performed for violations or risks.

HIPPA security and training. IBM understands the unique data privacy and confidentiality rules required of medical organizations and is fully aware of the requirements of the Public Law 104-191, the HIPAA Act of 1996 and the HIPAA Privacy Rule. IBM will operate under a HIPAA Business Associations Agreement (BAA) signed or to be signed with the State of Arkansas and will implement policies to safeguard Personal Health Information (PHI). IBM provides mandatory annual certification training to our employees supporting projects involving HIPAA requirements.

IBM HIPAA training is managed by security experts trained in HIPAA/HITECH, who serve as individually assigned “focals” to IBM projects where PHI is at risk. IBM’s HIPAA training is comprehensive and a prerequisite for employees during on-boarding to HIPAA projects. IBM HIPAA training consists of an overview of the HIPAA Act, basic and advanced coverage of HIPAA compliance, and the IBM HIPAA Compliance Program for managers and focals. IBM records and tracks employee HIPAA training, monitors security of employee workstations specially configured for handling sensitive information, and obtains from employees their signed acknowledgement of their individual responsibilities for safeguarding PHI under HIPAA. This training includes both the personal and corporate liability and possible sanctions surrounding potential HIPAA violations.

1.7 Relationship Management

The Vendor will need to effectively manage relationships with other entities including at least DHS, DIS, incumbent EEF vendor, and State's subcontractors to manage PMO, QA, Vendor's own subcontractors, partner vendors and suppliers (e.g. software and hardware).

Instructions: Describe how the Vendor organization will manage relationships with other entities. This should include a discussion of the treatment of account management, status reporting, performance review meetings, contract management, audits, quality assurance, planning, priority setting and service request management, and issue escalation processes.

IBM will be the prime contractor for the IE-BM project with the State of Arkansas. The IBM team, which also includes Northrop Grumman Corporation (NGC), have been working together on this proposal and will continue working through contract negotiation and project execution.

The IBM team will engage the right people at the right time the right way. Stakeholders to the IE-BM project will include the State of Arkansas, IBM, and NGC leadership, targeted end users of the system (DHS, DWS, ADH, DFA, ADVA, and DIS), the State's partners, as well as representatives from the State programs (Medicaid, CHIP, Arkansas Works, SNAP, E&T, LIHEAP, CCDF, TANF/TEA, WIC, CSE, and Veteran Services) in scope for this project.

To prioritize our stakeholder engagement strategy, we map stakeholders according to their impact on project success and their level of support for HHS KIP project, described below in Figure 11: Stakeholder Support and Influence Map.

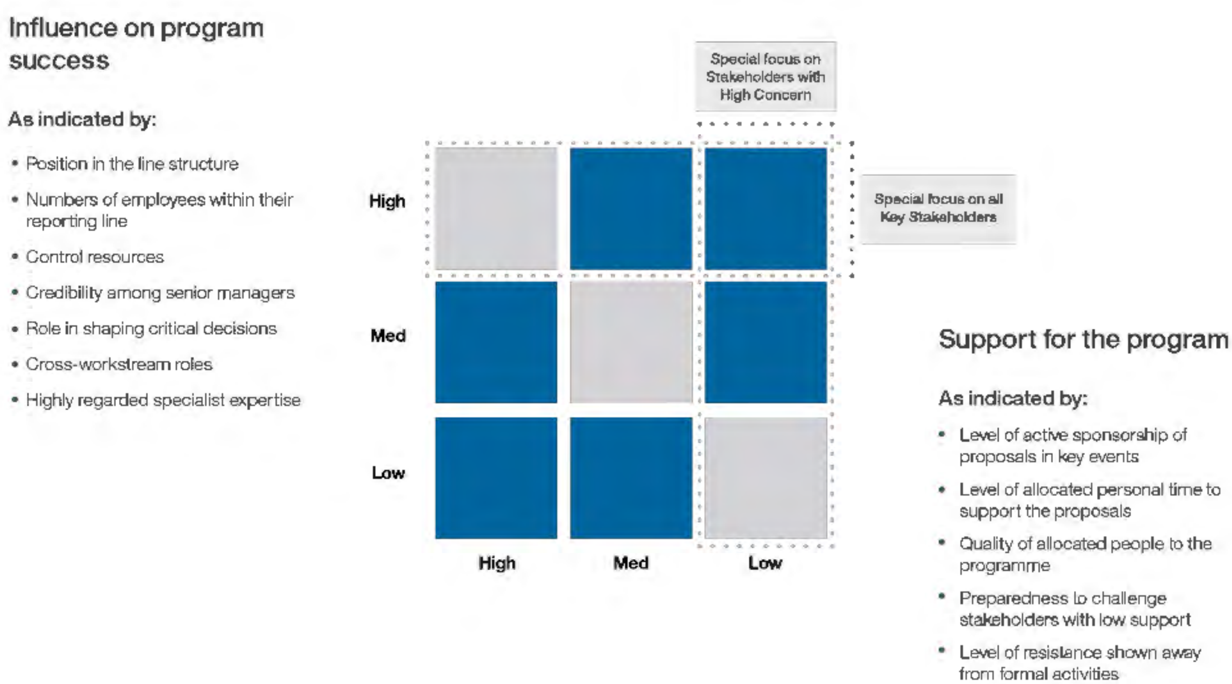


Figure 11: Stakeholder Support and Influence Map

We will use the stakeholder map, along with a communication plan to determine the frequency and method of communication. Key stakeholders will be involved early and communication will be more frequent – especially at the start of the project. For some of the State departments that are not directly impacted by the project, such as Appeals, communication will be less frequent.

For the State of Arkansas or DIS staff that are core project team members, communication can occur daily or more often depending on the project schedule.

The IBM's Stakeholder Relationship Management Process proactively addresses key stakeholder concerns with the aim of generating support for the change. The process is shown in Figure 12 below.

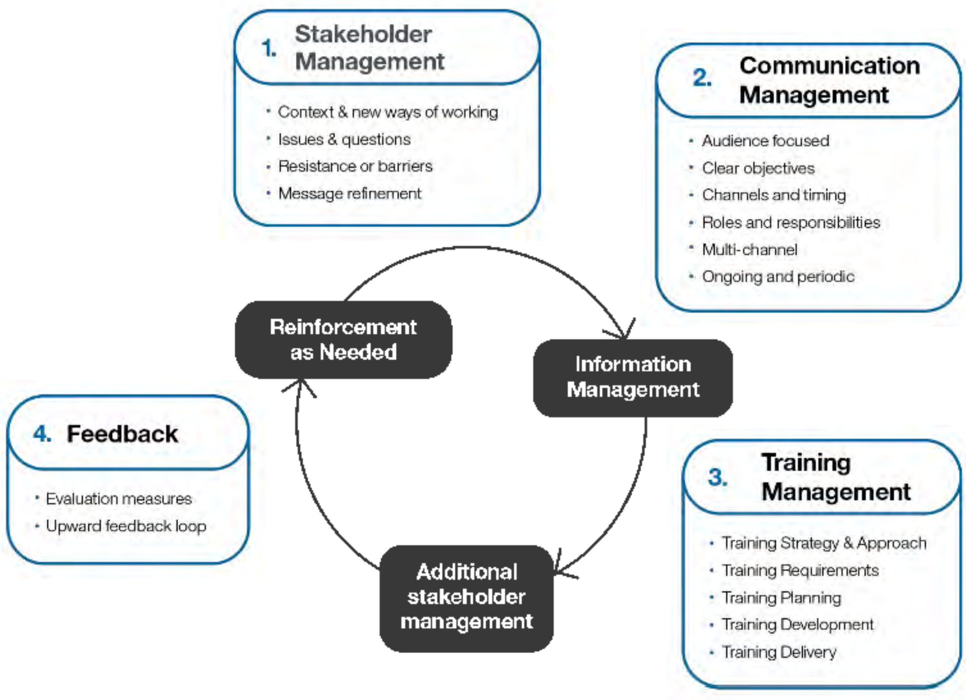


Figure 12: IBM's Stakeholder Relationship Management Process

The activities involved in stakeholder engagement are:

- Identify potential stakeholders and stakeholder groups
- Conduct community and stakeholder presentations, focus groups, and town hall type forums
- Collect and analyze information on issues raised by stakeholders
- Summarize findings and recommend engagement solutions for State Leadership
- Develop response and action plan to achieve target positioning of stakeholders
- Incorporate detailed stakeholder management activities into change management work plan
- Provide Input into the communications planning process
- Manage, evaluate and refine Stakeholder Management Plan throughout the project

IBM's Stakeholder Relationship Management Process contributed to the successful deployment and implementation of the IBM Enterprise-wide human services solution to the State of North Carolina Health and Human Services. Encompassing 100 counties, the State of North Carolina Health and Human Services required sound stakeholder management, communications management, training, and feedback. As a result, the State of North Carolina Health and Human Services is able to provide an array of social services to its, estimated 9.752 million, state population.

Approach to Organization Structure

A key success factor in the execution and integration of Relationship Management is the ability for IBM team and State members to operate as one team. The IBM team organization structure emphasizes our one team collaborative model and promotes outcome-focused team performance. The IBM team will manage the IE-BM project sub-teams as one program while allocating the required management and delivery staff for successfully deliver and support. Our enterprise team will deliver common processes and data standards across the project where possible and the Project Manager will be the single point of contact for resolving matters across the project.

1.8 Relationships with Third Parties

Instructions: Describe any financial relationship between the Vendor and any third-party hardware, software, or other vendors that may be used to provide services or products in connection with any phase of the Project, and whether such third party will be used by the Vendor as a subcontractor or contracted directly by DHS. The Vendor should also disclose any known or perceived conflicts of interest it or its leadership may have that would impact the Project and/or M&O.

The IBM team is primarily comprised of IBM and Northrop Grumman Corporation (NGC) working together to provide software, services, and project management as proposed in the IBM response. IBM and NGC have a long history working together that goes back over 50 years when we worked together to land a man on the moon. This experience of both companies working together has created a familiarity between the teams that is fueled by a rich legacy of successfully solving difficult problems where others have failed.

NGC will have primary responsibility to fulfill data conversion requirements and deliverables such as the Data Conversion Plan (Deliverable I.2.6) and the Data Conversion Testing Report and Results (Deliverable I.5.1). In this capacity, NGC will develop each of the Data Conversion and Management Deliverables outlined in the SOW to be submitted to DHS with IBM. They will also have primary responsibility, under IBM to fulfill requirements related to data conversion activities. On top of that, they will be contributors to other functional and technical deliverables, as needed. **[I5.1, I5.2, I5.3, I5.4, I5.5, I5.6, I5.7, I5.8, I5.9, I5.10, I5.11, I5.12, I5.13, I5.14, I5.15, I5.16, I5.17, I5.18]**

IBM will flow down requirements and contractual obligations to NGC and other subcontractors who may have primary responsibility for a deliverable or set of requirements on the project. NGC will be contractually responsible to create deliverables or parts of deliverables assigned to them using methods that are consistent with DHS needs and IBM contract and delivery oversight. Management of NGC personnel will be the responsibility of NGC subject to the terms and conditions of the subcontract between IBM and NGC. Likewise, NGC will be required to follow IBM processes for the following activities identified by DHS for status reporting, performance review meetings, contract management, audits, quality assurance, planning, priority setting and service request management, and issue escalation processes. The intent is to create a working environment as one team providing a unified and integrated IE-BM solution and deliverables to DHS from the IBM team.

2.0 Approach to Planning the Software Development Life Cycle (SDLC)

The Vendor should ensure that the responses to this section are in alignment with the requirements set forth in Template T-10 – Implementation Requirements Traceability Matrix, Section I2.

DHS plans to have the Project follow the Vendor's SDLC and expects this to be comprehensive. DHS does not envision a pure waterfall (with one phase and a big bang go-live) nor extreme agile methodologies with high number of release cycles, but does envision adopting certain best practices such as:

- Breaking the project into smaller releases, but within manageable range
- Not waiting until development is complete before testing – DHS anticipates testing completed functionality while developing other functionality
- Leveraging automated testing tools to support regression testing and help ensure functionality built/tested early on does not break with latter releases
- Including user validation/usability testing as an integral part of the development methodology and iterate on the user interface design
- Co-locating DHS functional staff for the duration of the project to resolve ambiguous items real-time, usability, policy decisions/changes and ongoing testing
- Continually/frequently consolidating code to support ongoing testing
- Leveraging application life-cycle management tool

Instructions: Describe the Vendor's SDLC methodology. Include in the response a description of what the Vendor believes will be an effective SDLC methodology (e.g., Waterfall model, Rapid Application Development, etc.) for both the Vendor and for DHS during the implementation of the proposed System. This should focus on how the different phases inter-relate to ensure the requirements and Use Cases are further defined and result in a tested Solution which addresses DHS' business objectives.

DDI of the IE-BM system will follow the IBM Watson Agile SDLC methodology created by IBM in the Watson Health organization shown in the figure below. It is based on principles extracted from the Agile Manifesto and elaborated by the Scrum Alliance and Project Management Institute as described in Section 1.0 Approach to Managing the Project. The IBM Watson Agile SDLC methodology iteratively creates software and documentation deliverables required to implement large and complex systems integrations in a health and human services environment using best industry practices. **[I2.3]**

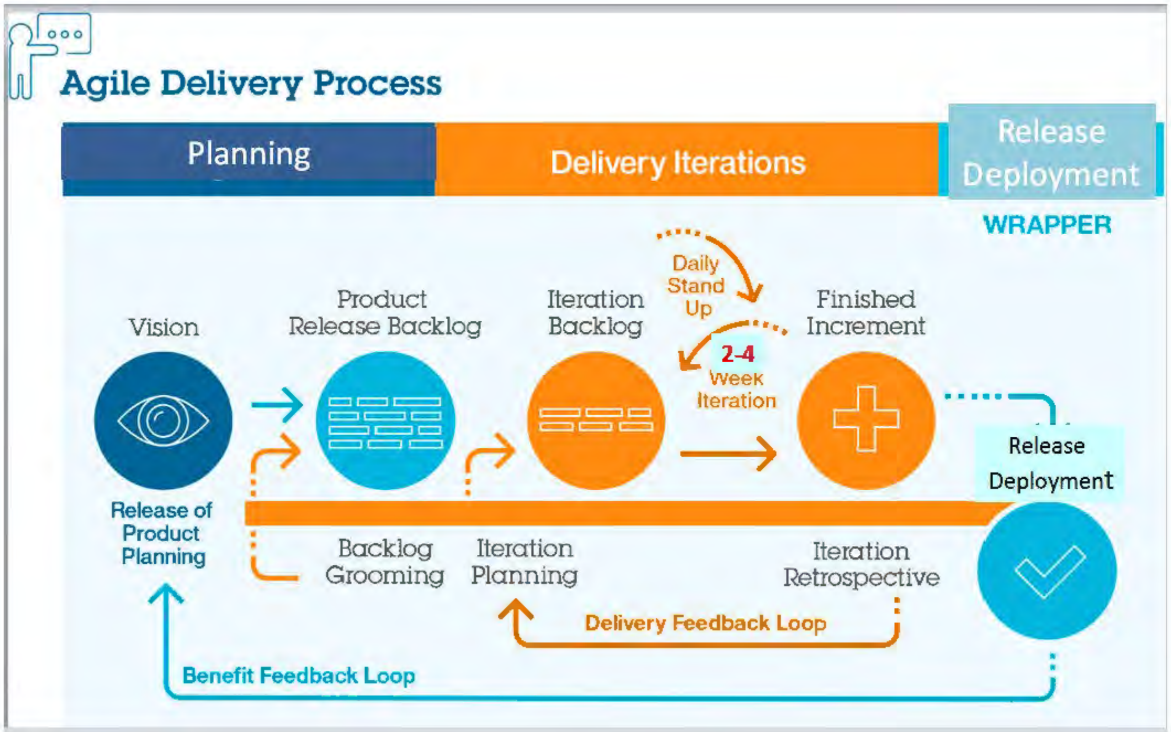


Figure 13: IBM Watson Agile SDLC Methodology

The IBM Watson Agile Methodology will release new IE-BM system features comprised of the results of multiple iterative development sprints executed using agile principles. Key phases of the methodology are Planning, Delivery Iterations, and Release Deployment. Our methodology allows IBM to provide a consistent tailored delivery model that meets the specific requirements of the project and satisfy Arkansas policies and standards established by CMS Enterprise Life Cycle (ELC). [I2.1, I2.2, I2.3, I2.4, I2.5, I2.6 and I2.7]

Planning is conducted at multiple levels:

- Project start up
- Release planning
- Agile backlog grooming
- Sprint planning

Project Start Up Planning. The IBM Watson Agile Method includes creation and review of several project-level plans to define and guide the implementation of project standard procedures throughout the SDLC process. These plans include the following identified in the IE-BM RFP in the Planning Phase (Task 2) of Table 1: IE-BM Project Phases.

Table 14: List of Implementation Deliverables

No.	Deliverable Title
I.2.1	Overall SDLC approach plan
I.2.2	System Architecture
I.2.3	System Security Plan
I.2.4	Technology Environment Specifications and Infrastructure plan

No.	Deliverable Title
I.2.5	Organizational Change Management Plan
I.2.6	Data Conversion Plan
I.2.7	Master Test Plan

Each of these will be created, reviewed, and approved during the IE-BM project startup phase as described in Section 1.0. Approach to Managing the Project and Section 1.3, Project Data and Document Management. Updates may be made to these documents throughout the project to periodically apply lessons learned.

These plans will be created from WWPMM templates provided by IBM, customized to follow State of Arkansas standards. Method adoption workshops will be conducted between IBM and DHS to discuss needs and reach decisions on items where preference, collaboration, or mutual understanding is required. **[I2.1 and I2.2]**

Release Planning. High level planning is conducted to plan the overall release schedule. The release schedule proposed is shown in Section 1.1 Project Management under the heading "Release Schedule Management" and is reproduced here for convenience.

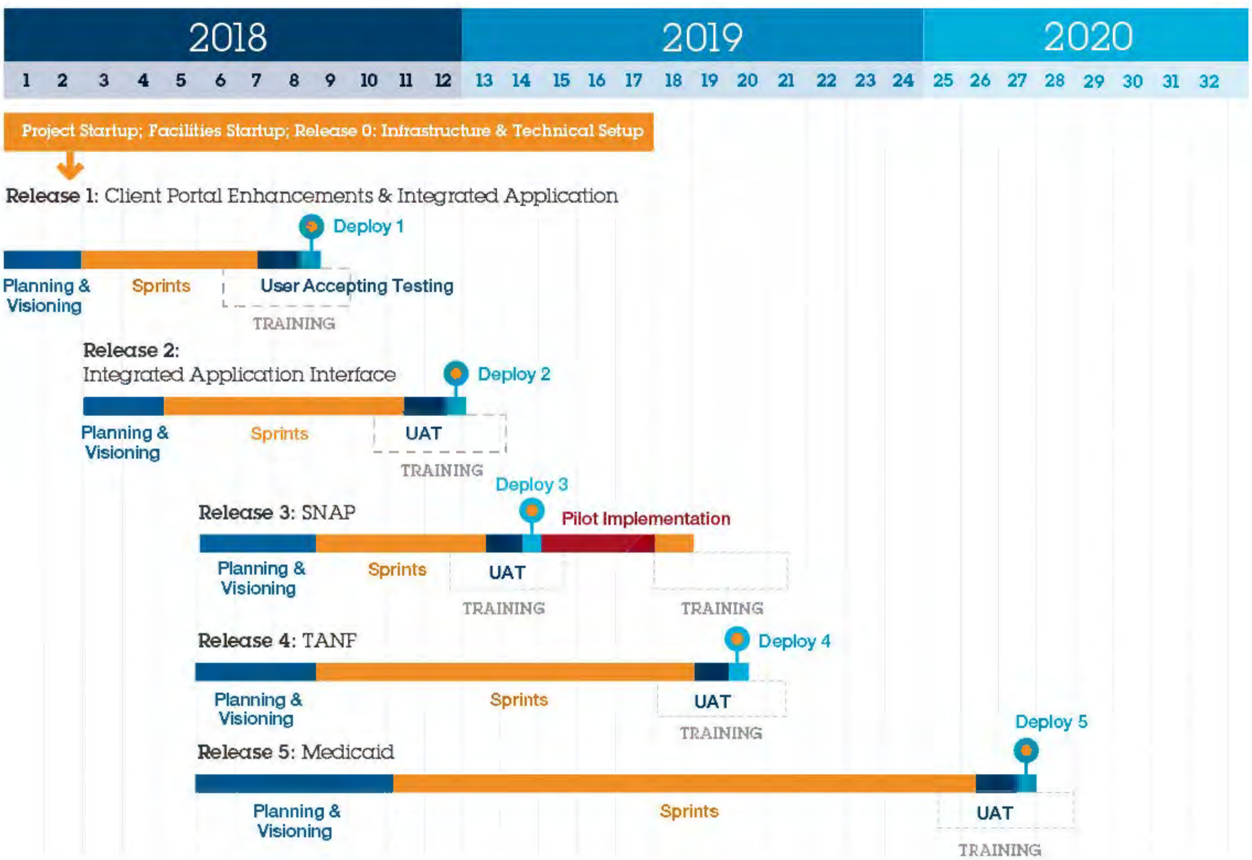


Figure 14: IE-BM Proposed Project Delivery Timeline

The planned releases are derived from the State of Arkansas RFP and SOW and include:

- Release 1, Claimant Portal Enhancement & Integrated Application Implementations
- Release 2, Integrated Application Interfaces Implementations

- Release 3, SNAP Implementation
- Release 4, TANF Implementation
- Release 5, Medicaid Implementation

The SNAP release has a requirement to perform a pilot implementation for 90 days prior to going live statewide. IBM understands that the same group of State workers performs both SNAP and TANF business processes. With this in mind, the TANF release is planned to release at the same time as the completion of the SNAP pilot project as shown. This will allow users to make a complete cut over to the new tools and systems produced by IE-BM, while minimizing or eliminating time spent working simultaneously with new systems alongside legacy systems.

The following Use Cases are initially allocated to the releases as shown in the table below. Validation and refinements to this implementation plan will be performed at project start up during overall project planning discussions. **[I2.3, I2.6 and I2.7]**

Table 15: Recommended Use Case to Release Mapping

Use Case ID	Use Case	All (Integrated)	SNAP	Traditional Medicaid	LIHEAP	Child Care	TEA (TANF)	WIC	Child Support	Veteran's Services	Additional MAGI
1	Complete Self-Service Anonymous Pre-Screening	**1**			**1**						
2	Apply for Benefits Online	**1**									
3	Apply for Benefits in Person	**1**									
4	Apply for Benefits with a Paper Application	**1**									
5	Conduct Eligibility Interview		**2**				**3**				
6	Submit Additional Electronic Documentation	**1**	**1**	**1**		**1**	**1**	**1**	**1**	**1**	**1**
7	Process Documentation Received in Hard Copy		**2**	**4**		**1**	**3**	**1**	**1**	**1**	
8	Process Eligibility Determination or Redetermination		**2**	**4**			**3**				
9	Determine Spend-Down and Submit Expenses			**4**							
10	Send Authorized Benefits Information to EBT Vendor		**2**				**3**	**2**			
11	Complete the Redetermination Application/Semi-Annual Report online	**1**	**2**	**4**			**3**				

Use Case ID	Use Case	All (Integrated)	SNAP	Traditional Medicaid	LIHEAP	Child Care	TEA (TANF)	WIC	Child Support	Veteran's Services	Additional MAGI
12	Complete the Redetermination Application/Semi-Annual Report with an Intake Worker	**1**	**2**	**4**			**3**				
13	Process the Semi-Annual Report (SAR) or Annual Review		**2**	**4**			**3**				
14	Complete the Redetermination Interview		**2**	**4**			**3**				
15	Submit a Client Change Online	**1**									
16	Process Client Change		**2**	**4**			**3**				
17	Medical Review Team			**4**							
18	Establish Overpayment Information		**2**	**4**			**3**				
19	Conduct Quality Control Audit/Review		**2**	**4**			**3**				**2**
20	Track an appeal of an Eligibility Determination/Redetermination		**2**	**4**			**3**				**2**
21	Schedule an Appointment (Self-Service)	**1**									
22	Manage Caseload		**2**	**4**			**3**				**2**

Agile Backlog Grooming. Agile planning will also be conducted as an integral part of DDI activities, including backlog grooming where Agile epics and stories are created based on IE-BM system features that are related to infrastructure, business use cases and requirements. Agile Stories are written to identify system features to be configured or developed during the project. They will be cataloged according to their corresponding release and organized in a feature breakdown structure to facilitate planning completeness. Each Agile Story is a simple statement describing system features in role-activity-outcome format:

> “As a <role identifier> I would like to <functional action or activity> in order to <expected outcome>”

The stories are associated with requirements and use cases in the Requirements Traceability Matrix (RTM) for tracking, approval and sign-off. **[I2.4 and I2.5]**

Sprint Planning. Planning at the sprint level includes review of the stories, requirements and use cases prior to beginning the sprint. Edits are made to the stories before the sprint starts based on comments from Joint Application Design (JAD) sessions, table-top demonstrations of system capabilities and elaborations made to requirements during validation to make them specific, measurable and implementable.

Once the stories are finalized for the sprint, estimates will be validated and refined prior to starting the sprint. Adjustments to estimates may result in changes to the sprint schedule or scope subject to change management procedures.

Part of the sprint planning effort is the identification of upstream activities that need to occur before the start of the sprint. These may include high level functional and technical design, joint application design (JAD) sessions, user input solicitation, complex problem solving, and long lead items such as planning and coordinating with third data source vendors.

Planning efforts for the project for each of these areas are recorded in the project work plan and tracked and adjusted as needed during execution of the project. Delivery iterations and release deployment activities implement the features identified in the planning process. [I2.4 and I2.5]

The IBM Watson Agile Method provides the opportunity to:

- Collaboratively plan release content with diverse stakeholders, including product owners and other end users,
- Elaborate requirements and business processes much closer to the time when system modules and functionality are being configured and customized,
- Adjust priorities to changing needs prior to development and implementation,
- Prepare to execute sprints without interruptions and costly delays,
- Plan for releases with content structured in a way to best meet operational realities, and
- Focus on working software at a much earlier stage of the SDLC.

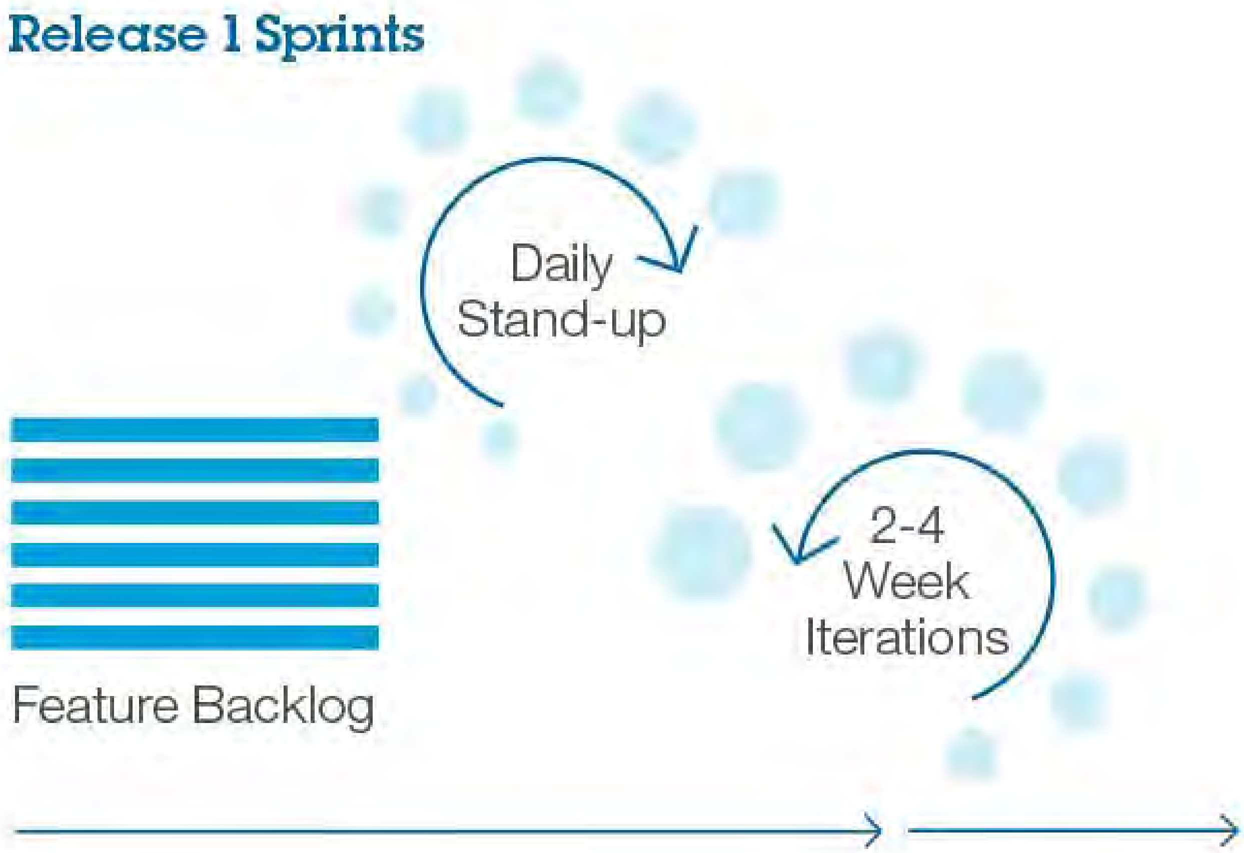


Figure 15: Agile Backlog and Sprint

3.0 Approach to Managing the Environments

The Vendor should ensure that the responses to this section are in alignment with the requirements set forth in Template T-10 – Implementation Requirements Traceability Matrix, Section I3.

3.1 Environment Specification

It is the State's intention to provide the production, non-production and disaster recovery environments/infrastructure to the IE-BM project within the State's data centers. This will include the core technology infrastructure (e.g., servers, storage, and network). The State expects the Vendor to propose to leverage the existing COTS software and/or provide COTS software for the DHS IE-BM Solution as well as non-production type environments using the State's architecture guidance. There are currently six (6) environments (development, integration test, user acceptance testing, staging (sub-production), production and disaster recovery) and the expectation is a similar configuration will be required for the IE-BM solution. However, the Vendor can combine and/or include other environments as it deems appropriate.

Instructions: Describe the environments the Vendor requires to complete this Project and the necessary hardware, software and tools required for the required environments. This should include all environments being proposed. This description should include all hardware and software items that will be required to make the environments functional and how these will leverage/can be leveraged by other DHS IE-BM Solution related efforts.

IBM will work with the State and verify the State provided environments to develop, test and deliver the desired software functionality of the IE-BM project meet the below environment specifications:

- Development – a server to build and deploy the latest code checked in by developers, allowing them to test the latest code in a deployed environment later in the process. This is where continuous integration build will be happening and generated code made ready for deployment to other environments.
- Unit Test – a server to build and deploy a version of the application along with other modules or components that will be used by the system to allow testing of parts of the application and subsystem. This is where the daily deployment will be happening and this environment will be used for smoke testing and incremental functionality unit testing.
- System Integration Test – server to build and deploy a version of the application, and deploy it along with the constituent parts that comprise the entire system to allow testing of the system as a whole.
- Out-of-the-Box – a server that has built and deployed the OOTB version of the Cúram application, with minimal configuration and no extensions or customizations included. For IE-BM solution this will be a stable recent version of the current EEF project code base. This will be used as reference environment by the team to perform new functionality design.
- User Acceptance Test – a server to build and deploy a particular release, and allow testing by the intended users of the application.

- Staging/Pre-Production Test – a server environment that mimics the Production deployment environment, to allow configuration and testing of the application in an identical environment.
- Production – the server environment that hosts the live application.
- Disaster Recovery – a server environment to test high-availability, failover, and disaster recovery techniques. This is also the stand by server for failover.

The following table lists the hardware and software that our IE-BM solution will be using for each of the above environments. Since IBM is proposing to use the current State hardware and the EEF software in our solution, we will work with the State data center team to make necessary changes to this proposed configuration.

Table 16: Proposed Configuration Requirements

<table>
<tr><th>Environment</th><th>Hardware</th><th>Software</th></tr>
<tr><td>Development</td><td>Linux on Intel:
– Application server:
▪ 2 Core Intel Xeon 2 GHz
▪ 8 GB RAM
▪ 60 GB disk space
– Database server:
▪ 2 Core Intel Xeon 2 GHz
▪ 8 GB RAM
▪ 60 GB disk space</td><td>Jenkins, Ant, WebSphere, DB2, MDM, ESB, Cognos, Informatica</td></tr>
<tr><td>Unit Test, System Integration Test, Out of the Box</td><td>Linux on Intel:
– Application server:
▪ 2 Core Intel Xeon 2 GHz
▪ 8 GB RAM
▪ 60 GB disk space
– Database server:
▪ 2 Core Intel Xeon 2 GHz
▪ 8 GB RAM
▪ 60 GB disk space</td><td>WebSphere, DB2, MDM, ESB, Cognos, Informatica</td></tr>
<tr><td>User Acceptance Test</td><td>AIX on Power:
– Application server:
▪ 2 Core POWER7 or POWER7+ system, POWER 8
▪ 16 GB RAM
▪ 60 GB disk space
– Database server:
▪ 2 Core POWER7 or POWER7+ system, POWER 8
▪ 16 GB RAM</td><td>WebSphere, DB2, MDM, ESB, Cognos, Informatica</td></tr>
</table>

Environment	Hardware	Software
	▪ 60 GB disk space	
Staging/Pre-Production Test	AIX on Power: – Application server: ▪ 4 Core POWER7 or POWER7+ system, POWER 8 ▪ 32 GB RAM ▪ 120 GB disk space – Database server: ▪ 4 Core POWER7 or POWER7+ system, POWER 8 ▪ 32 GB RAM ▪ 2 TB disk space	WebSphere, DB2, MDM, ESB, Cognos, Informatica
Production, Disaster Recovery	AIX on Power: – Application server: ▪ 4 Core POWER7 or POWER7+ system, POWER 8 ▪ 32 GB RAM ▪ 120 GB disk space – Database server: ▪ 4 Core POWER7 or POWER7+ system, POWER 8 ▪ 32 GB RAM ▪ 2 TB disk space	WebSphere, DB2, MDM, ESB, Cognos, Informatica

3.2 Integration with Operational Processes

As the DHS IE-BM Solution is a critical foundation to the future of DHS, the IE-BM Project will need to drive the maturation of some of the existing operational processes across the State enterprise (DIS/DHS) as the State embarks on maturing their alignment with ITIL v3 processes (e.g., Change/Release, Configuration, Incident Management etc.).

Instructions: Describe the Vendor’s approach to integrating a major implementation project with State’s existing operational processes as well as with the State’s continuous improvement goal to align with ITIL v3 processes. Detail any experiences the Vendor has in a similar environment and situation, the challenges faced and how these challenges were overcome.

Team IBM has extensive experience in integrating our SDLC and operational processes with the existing client processes. We have a proven track record for this from our projects in San Diego, Missouri, North Carolina and South Carolina.

3.2.1 Change / Release / Configuration

In order to release software or implement an operational change with little to no impact to DHS, a well-established change management process is essential. While the process is essential, it cannot be so burdensome that the change is not even possible. Our process for change and release management complies with the JOPM, follows DHS and DIS policy and procedures, and requires minimum manual intervention.

Our change and release management process, which is described in more detail in the sections below and also in *Section 2.1.5 of Template T-13 Maintenance and Operations Requirement Approach* applies to DDI, M&O and enhancements. At a high level we: capture validate requirements with the State SMEs, perform the development/operational work in a development region, perform internal testing in our System Integration Testing region, have DHS test/verify the functionality in our User Acceptance Testing region, package the change for production implementation into a "Ready to Release" state, support the production implementation as needed, and identify and complete improvements to change and release management process as shown in the figure below.

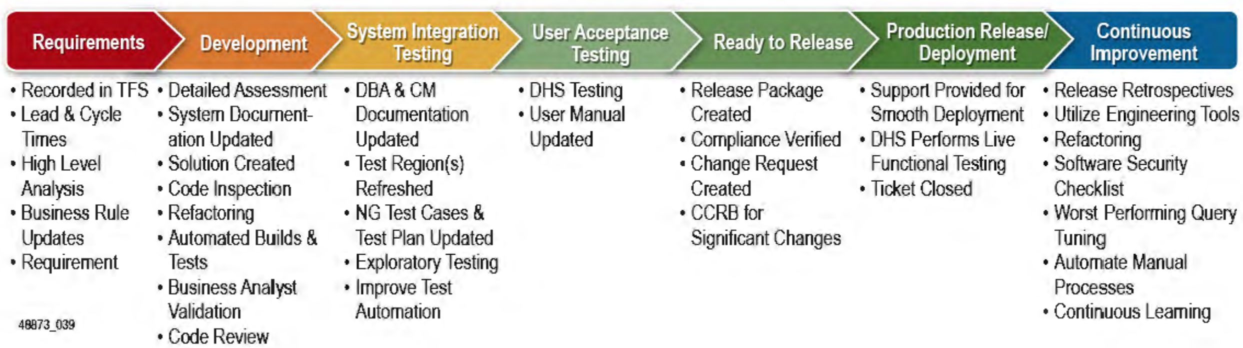


Figure 16: Our well-established Change and Release Management Process provides value throughout the SDLC cycle

To better understand how we perform change and release management, a detailed examination of each of the phases of the software development lifecycle is provided. In each phase, our emphasis is on compliance, efficiency, incremental improvement, and automation. These areas of focus help us to minimize the time required to provide DHS the solution while also making the product(s) and our service even better over the long term.

Once UAT is completed, the IBM creates the production implementation plan, just like the SIT and UAT plans that included proper steps by functional area. The scripts and code package from UAT are electronically provided.

Our PMO and Operations team takes lead on reviewing changes prior to the change review meeting with DHS/DIS. This review includes compliance where documentation be updated within 2 weeks of the change being introduced. Deficiencies in change requestors are sent to the change request creator and manager to be addressed. The change request is then reviewed as part of the normal DHS/DIS normal change review process. If a request/incident be fixed immediately, an emergency change request is required. An emergency change request requires approval from DHS Governance Body(ies) / Contract Manager. Emergency change requests are reviewed by our Operation Lead and Mission Assurance Manager to determine if process improvements and/or additional training is warranted.

Significant changes, including changes involving payments, benefits, or a large user population, require a Change Control Review Board (CCRB). The CCRB, consisting of a quorum of our

Executive Leadership Team and optionally DHS/DIS representatives such as the Contract Manager, is held to reduce financial risk for DHS/DIS and Team IBM. This is our final quality check to verify DHS and DIS processes have been followed.

Production Release / Deployment

Once UAT is complete and agreed defects are fixed and re-tested, the production release is ready to be deployed. We work with DHS/DIS for deployment as needed. Our production support team is online and available during the release to provide smooth deployment. After the release, DHS Program Manager and/or staff perform live functional testing. The DHS Program Manager notifies the release looks good and the production release is complete.

Continuous Improvement

When the release is complete we perform release retrospectives with stakeholders involved in the release. We collaborate with DHS/DIS to make improvements to the release and change management process. Additionally, we schedule meetings with DHS and DIS to discuss changes to DIS standard processes and the DHS Joint Operation Procedure Manual (JOPM).

Configuration Management

Team IBM understands the importance and approach to Configuration Management to provide seamless integrations, adaptability, continuity, availability, and integrity. Our team provides support to DHS/DIS by supporting the capture of software configuration, configuration changes, and reporting of errors. Our team possesses extensive knowledge and experience in Change/Release/Configuration Management, as well as Licensing/Provisioning Management. In order to best serve our client, we:

- Account for the IT assets and configurations within the organization and its services
- Provide accurate information on configurations and their documentation to support the other Service Management processes
- Provide a sound basis for Incident Management, Problem Management, Change Management, and Release Management
- Compare the configuration records against the infrastructure and correct exceptions

We know that Configuration Management is an integral part of other Service Management processes. There are many Arkansas EEF resources and vendors participating in system operations.

DIS Coordination

Team IBM coordinates with DHS and DIS for production changes. We attend Change Management Review calls for receiving final approval for implementation. Our team provides the release package and additional support during the release to provide smooth deployments. In the rare event that the deployment is not smooth, we hold Root Cause Analysis meetings to understand why the issue happened then take action so that the issue does not reoccur.

3.2.2 Incident / Problem Management

Team IBM's number one priority is maintaining the continuity and reliability of systems in production. This requires 24/7 monitoring and on-call support for DHS' production systems and daily checks on system activity and availability by our support staff and managers. Team IBM provides Tier 2, 3 supports for Application M&O for incidents. Incidents from Tier 1 are escalated to Tier Support for immediate resolution so that there is no interruption in the DHS business. If Tier 2 identifies that the resolution is outside Tier 2 support scope, we immediately escalate the incident to Tier 3 support. Our workflow is presented in Figure 17.

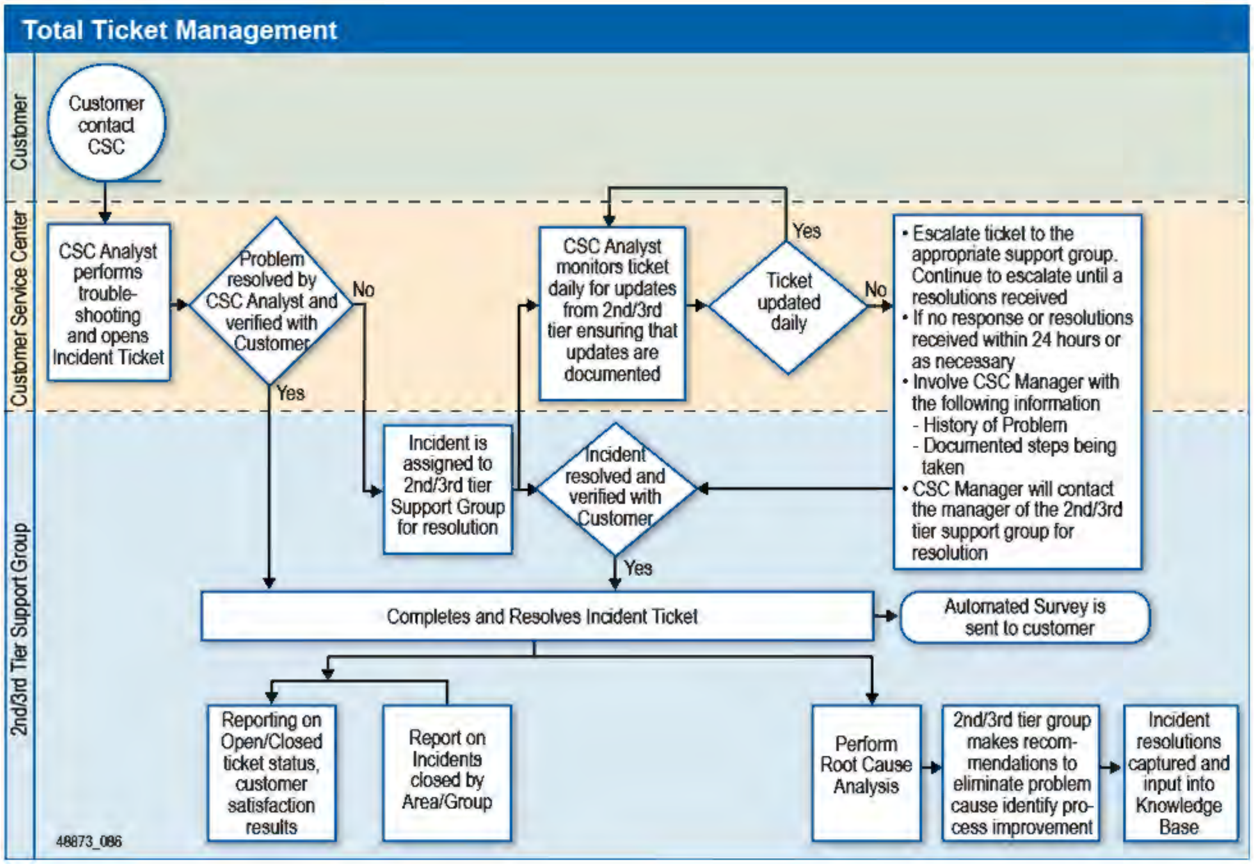


Figure 17: Our streamlined and responsive processes enable effective and efficient user support

Team IBM uses tools and analysis to continually look for ways to improve our service to the Arkansas DHS. The Operations team holds monthly retrospectives where we consider the activities of the month and plan action items on areas that we can improve. During this meeting, we review trends in the metrics and discuss items impacting DHS users. We also consider ways that we can reduce Technical Debt. Technical Debt is anything that makes software hard to manage. Hard to manage code can take time and therefore money. So, we are always looking for ways to reduce it.

Incident Management

Team IBM provides a process that manages incidents through their lifecycle with the aim of minimizing impact of disruptions to service. We communicate, coordinate with relevant stakeholders, and provide workarounds to restore service as quickly as possible with minimum impact to the DHS business operations, verifying agreed levels of service quality are maintained. We strive to improve user interaction.

Team IBM follows standard procedures that are used to respond, analyze, document, maintain and report on incidents. We work to increase visibility/communication of incidents to DHS, provide a professional approach to incident resolution, and improve and enhance business results. Quick response is provided to critical incidents so that there is minimum business operations impact and the incident is corrected as per Critical Incident Restoring of Service. Team IBM rapidly responds to security incidents and provides prompt notification to DHS as per SLR for Security Incident Response time when the security incident is identified and also submits in the security incident DHS Incident Reporting System.

Incidents sent to Team IBM Support staff by the DHS Service Desk are received by the following methods:

- Call, fax, email, etc.
- A trigger event management
- Directly from technical staff
- Directly from third party staff like DIS, HP etc.

Team IBM follows the activities of incident management lifecycle as show in the figure below.

Figure 18: Closed-loop resolution process shows that issues are tracked to completion

Problem Management

Team IBM follows the problem management process to manage problems through their lifecycle with the aim of preventing future incidents from occurring. We apply effective processes to reduce the number and impact of service failures, reduce number of repetitive incidents, reduce the frequency and cost of service problems, and improve the quality of change, release and deployment. The scope of problem management includes the activities required to diagnosis the root cause of incidents and to determine the resolution to those problems. Team IBM maintains a Knowledge Database that provides information of previous incidents and problems, resolutions and work around.

Team IBM follows the activities of problem management lifecycle as shown in the figure below.

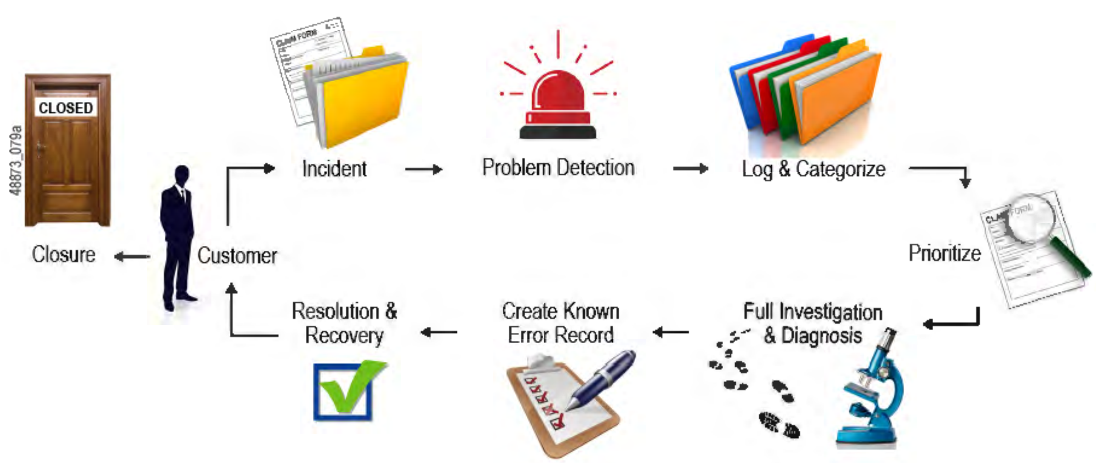


Figure 19: Root cause analysis allows creation of Knowledge Database records for quicker resolution of future issues

3.3 Environment Coordination

The DHS IE-BM Solution will be installed and maintained in a State controlled facility(s) either by State resources and/or another Infrastructure Vendor acting on behalf of the State to perform some of the tasks. The Vendor must collaborate with State resources and/or Infrastructure Vendor to identify, mitigate and resolve any issues arising from ongoing implementation.

Instructions: Describe the approach to deploying solution components to minimize the potential for issues resulting from concurrent development (e.g., ensuring the development environment has the most current versions) and how these activities should be coordinated.

To minimize issues occurring from concurrent development, the IBM team recommends a Continuous Integration approach to development. A JIRA task (ticket) will be generated to track bug fixes and enhancement requests. Developers will modify source code, and tag modified files with the JIRA ticket number when checking in code. This will allow us to produce a list of JIRA tickets for each release, to clearly track and understand what fixes and features are included in each release.

When a developer checks in code, the Jenkins automated builder will be configured to initiate a build, as well as unit tests and integration tests. The Jenkins server will then release deployable artefacts for testing if desired, and will assign a build label to the version of code it just built. Regardless of build success or fail, Jenkins will alert the team to the result of the build. In the case of failure, the responsible developer(s) will examine the reasons, fix code, and re-deliver at some point in the future and cause the cycle to repeat. For successful builds, the process can proceed to then deploying the latest version of the application for further inspection or testing.

In terms of Subversion source code control, the IBM team recommends that branching and tagging features of SVN be exploited. For stabilized code, it should be copied to a release branch. Teams continue to work in parallel – one team performs rigorous testing on the release branch, while other teams continue with new work. Bugs are ported back and forth as necessary, and eventually the branch is frozen for final testing before a release. The branch is then tagged and released. When testing is complete, the branch is tagged and copied as a reference snapshot, and is packaged for release to customers. The entire process repeats as milestones and releases are met and delivered.

3.4 Security and Regulatory Management

The Vendor must provide policies and practices to prevent, detect and resolve security breaches. In addition, the Vendor should demonstrate experience and ability to meet all regulatory requirements.

Instructions: Describe how the Vendor intends to maintain physical and logical security of the IE-BM technology stack and its implementation relative to the services it provides as part of the proposed Solution.

For the majority of IBM engagements, IBM does not need or require access to a client's Protected Health Information, as such term is defined in the Health Insurance Portability and Accountability Act (HIPAA). However, in some instances, IBM and its client will agree that in the course of providing certain services, IBM is required to use or disclose Protected Health Information, such that IBM would be considered a Business Associate or service provider to a Plan Sponsor, as such terms are defined in HIPAA. In those instances, IBM and the client will enter into a Business Associate Addendum or Plan Sponsor Addendum, as applicable, outlining the specific HIPAA privacy and data security requirements that will be applicable to IBM. IBM will comply with these requirements. In addition, IBM will further perform the services in a manner that complies with the client's security policies and procedures relative to such Protected Health Information, to the extent those policies and procedures are shared with IBM in advance and incorporated into IBM's proposed solution and associated transaction document terms.

IBM offers a broad range of security solutions to help meet a diverse array of data protection needs. We would be pleased to explain the benefits of our security options to help the customer determine what optimally meets its compliance needs to the extent it will be necessary for IBM to use or disclose Protected Health Information in the course of performing these services. IBM's current proposal includes a number of safeguards, such as described in the subsequent paragraphs in this section.

In the event that IBM project resources will have access to regulated data on this project, IBM expects that the client as the data owner will provide a data classification and be able to identify and disclose to IBM data inventories including regulated data and where said regulated data resides.

IBM strives to protect customer data by implementing leading security practices. IBM has a data incident response process that applies to our operations worldwide. The data incident response process provides direction regarding identifying and handling data incidents.

IBM complies with applicable laws and regulations relating to privacy and has established policies and procedures to properly process and safeguard personal information of its employees, customers and other individuals. IBM has a global network of privacy leaders who work together to identify local privacy and data protection legal requirements and collaborate with the business on implementation. Core to our global compliance program is the periodic assessment of our internal business processes and applications that handle personal information against applicable local legal privacy requirements and IBM's privacy and data security policies. Gaps identified through these assessments are reviewed, managed, and tracked to closure. This is covered in more detail under Section 1.6 Project Team Security Requirement.

Note that when IBM handles personal information on behalf of our clients as a service provider, clients are responsible for identifying and understanding the legal and regulatory environment which applies to the processing of their data and for specifying to IBM how IBM's processing of their data should be performed in order to meet the client's legal and regulatory requirements.

The IBM team will establish a System Security Plan (SSP), based on the NIST 800-53 publication which recommends security controls for federal information systems and organizations. Once the SSP is established and approved by the State, we then move forward with technical design, development and assessment of security controls.

The IBM team will leverage key features of the AIX operating system to implement a secure environment. Features such as Secure system installation and configuration, Trusted Computing Base, Login Control, Evaluation Assurance Level 4+, Stack Execution Disable protection, Role-based access control, Access Control Lists, Auditing subsystem, Encrypted File System, Pluggable Authentication Modules will be exploited to secure servers hosting the application. IBM will employ the security expert tool included with AIX to harden and protect the applications, middleware and database software of the solution. Linux servers can be hardened following the same AIX guidelines.

If not already in use, IBM recommends the use of IBM PowerSC software, which provides a security and compliance solution optimized for virtualized environments on Power Systems servers, running PowerVM and AIX or Linux.

PowerSC provides the following features and benefits:

- Security and compliance automation1 - Reduces administration costs for complying with industry security standards
- Real-time compliance monitoring - Continuous monitoring and alerting if changes occur that cause AIX systems to be non-compliant to security policies.
- Compliance reports1 - Reduces time and cost to provide security and compliance reports to auditors
- Preconfigured profiles for PCI, DOD STIG, HIPAA, NERC, COBIT security standards and database servers2 - Saves time, cost and risk associated with deploying industry security standards
- Web-based User Console - Provides datacenter-wide awareness of a datacenter's security compliance posture
- Trusted Boot - Reduces risk of compromised security by guaranteeing that an AIX operating system image has not been inadvertently or maliciously altered
- Trusted monitoring - Provides high levels of trust by displaying the status of AIX systems participating in a trusted system configuration
- Trusted logging - Prevents tampering or covering security issues by storing AIX virtual machine system logs securely on a central PowerVM Virtual I/O Server. Reduces backup and archive time via storing audit logs in a central location.
- Trusted network connect and patch management - Provides site patch levels policies are adhered to in virtual workloads. Provides notification of non-compliance when back-level systems are activated
- Trusted firewall3 - Improves performance and reduces network resource consumption by providing firewall services locally with the virtualization layer
- Trusted Surveyor3 - Provides visibility to determine segregation of virtual networks to maintain security compliance.
  - AIX, Linux
  - AIX for profiles, Linux for PCI & HIPAA only
  - VM Type, AIX, Linux

From the IE-BM application perspective, the application will be integrated with Computer Associates Site Minder to authenticate users via Single sign-on. The login process will be accomplished by configuring the Cúram application to delegate the verification of login credentials to the WebSphere application server, which will be configured to use CA Identity Access Management.

Within the application, Cúram role-based security will be implemented to secure users to a clear separation of duties. Cúram also employs product-based security, location-based security, field-based security, and sensitivity-based security, which can be used to further secure the system and control what users can view or do with cases.

Auditing will be enabled and captured within the main components of the system: IBM will leverage the delivered capabilities of Cúram to capture an audit trail on identified transactions. Cognos captures audit logs related query and report execution. MDM maintains a complete history of changes, and Guardium will be used to safeguard the IE-BM databases.

4.0 Approach to Solution Design, Development and Implementation (DDI)

The Vendor should ensure that the responses to this section are in alignment with the requirements set forth in Template T-10 – Implementation Requirements Traceability Matrix, Section I4.

4.1 Requirements Validation and System Design Methodology

The Vendor is responsible for leading the System design process which is critical to developing a Solution that meets DHS's needs.

Instructions: Describe the Vendor's System Design methodology. This should include a description of what the Vendor believes will be an effective approach to validating the requirements and developing detailed designs (e.g., JAD sessions, usability studies, managing policy changes) and should refer to relevant items in the Project Work Plan. Provide details regarding how these design sessions will be facilitated and how this approach will translate business requirements into a System architecture and design specifications for an integrated Eligibility and Benefits Management Solution.

IBM will perform requirements validation and system design in the IE-BM project during creation of the requirements and design deliverables specified in the RFP, which include:

Table 17: Requirements and Design Deliverables

No.	Deliverable Title
I.4.1	Requirements Validation and updates to RTM, BPA and Use Cases
I.4.2	Functional Design Document (FDD)
I.4.3	Technical Design Document (TDD)
I.4.4	Data Integration and Interface Control Documents (ICD)
I.4.5	Updated and Completed Functional and Technical Requirements Traceability Matrix

This effort starts during proposal as our response for the IE-BM Solution is developed. Some activities that have already taken place include a preliminary requirements fit-gap analysis, a solution functional design and a solution technical design that is included in our response.

Requirements Validation

During project start up, requirements validation will occur with an integrated IBM and State team to determine the requirements and add elaboration details. A plan will be developed to conduct interviews, Usability Studies, group workshops and surveys to refine the requirements. Proof of Concept (POC) can be used as part of the development approach which allows clients to change requirements during the design phase from client feedback while the design is being developed. This has been a proven approach during Functional Design (FDD) document review as well as Technical Design document (TDD) review. The IBM team will perform the following steps during requirements validation, which are included in the project work plan:

1. Establish a configuration baseline in IBM Rational or similar requirements tracking tool for the requirements as they have been presented in the RFP. This baseline will also be used to create the initial Requirements Traceability Matrix (RTM), including metadata about each requirement, such as requirement number, requirement description, requirement category, implementation sprint, implementation use case, test cases, and implementation strategy (out-of-the-box, configuration, customization). IBM will provide and implement application Life-Cycle Management to manage requirements throughout the entire SDLC.
2. At project start up IBM will review each requirement within related groups of requirements to identify questions or potential areas where clarifications or more detail are needed.
3. IBM will meet with the State to review questions and discuss requirements where more detail is needed. These discussions will include leveraging COTS product to validate capabilities, support in-scope functionality, business needs, and fit-gap assessments. Interviews, Usability Studies, group workshops, and surveys will be used to refine the requirements.
4. IBM will support Arkansas DHS in identifying staff with appropriate business knowledge required to attend the workshops. The workshops will be used to refine requirements as well as develop the detailed design based on both use cases and requirements. The Functional Design documents (FDD) and technical Design documents (TDD) will include detailed documentation regarding business rules as determined during the workshops.
5. The Usability Studies will be performed with identified end users, Clients, and Service Providers.
6. Requirement discussions will be the source for mutually approved elaborations or changes that will be tracked in IBM Rational or similar requirements tracking tool for later reference during design, implementation, and approval cycles, and to manage version control of software configurations and/or custom development. Requirements will be reviewed and formally approved by Arkansas DHS staff through the processes outlined in the Project Management Plan.
7. The IBM Team will develop each of the Solution Design, Development and Implementation Deliverables outlined in the RFP. These will be reviewed and formally approved by DHS staff, to be identified by DHS, through the process outlined in the Project Management Plan in Section T-11 1.1. The IBM Team will complete these deliverables in compliance with the Project Schedule and complete the deliverables approval process (e.g., invoice) in a timely manner as agreed to in the final Contract. **[I1.27]**

Requirements and Uses Cases will be considered configuration items (CI's) and will be subject to project change management policies and procedures outlined in the contract or the PMP Change Management Plan. Use Cases captured in the BPA will be maintained and changes be approved by Arkansas DHS staff. IBM will support Arkansas DHS staff in their review and approval of changes to Use Cases and Functional Requirements.

It's important to note that requirement changes do not always mean there is a negative impact to the project. Impact is often related to rework. Thus, in early stages of the SDLC changes may incur little or no impact to scope, schedule or budget before implementation work has been started. This concept may also hold true in later stages, even in Agile sprints, if rework is not necessary. **[I4.1, I4.4, I4.5, I4.6, I4.7, I4.8, I4.9, I4.10, I4.39]**

High level design is conducted during the project startup phase. It is preceded by requirements validation and results in the initial iteration of the Functional Design Document (Deliverable

I.4.2), Technical Design Document (Deliverable I.4.3), and the System Architecture (Deliverable I.2.2) deliverables.

The deliverable documents will be subject to review and approval by the State team. IBM will meet with State reviewers in a review kickoff meeting for each deliverable where the requirements, standards and contents of these deliverables will be reviewed. Organization of information and specific content will also be discussed to aid State reviewers in preparation for an efficient review. Questions will be encouraged and answers provided in the format needed, whether formal or informal communication is desired.

IBM will call upon a variety of design input techniques that will be used flexibly as needed to gather input from State stakeholders, including Interviews, Usability Studies, group workshops, and surveys. Consistent standards will be applied for development work as described in IBM's SDLC approach including coding, database, and naming conventions will be applied throughout development. As part of the design sessions the IBM team will provide input and provides conformity to DHS Enterprise architectural standards as well as lead and participate in architecture and design discussions to identify and components and services to be shared with other systems through the IE-BM Solution. **[I4.22, I4.23 T10-I4.24, I4.27]**

IBM Team will present decision reports on identified components to be shared across the DHS Enterprise as well as develop components and services deemed to have the potential to be shared across the DHS Enterprise. IBM will adhere to processes and procedures defined by DHS or its designee with respect to use of shared components and services including obtaining authorization from DHS for use of production system resources (e.g. source files) or data derived from DHS' production resources. **[I4.25, I4.26, I4.36, I4.37]**

Pre-sprint requirements and design activities. The requirements and high level design will be approved incrementally for implementation in CMS Requirement Reviews (RR), Architecture Reviews (AR) and Preliminary Design Reviews (PDR). Each of these reviews will be conducted for groups of related requirement and design areas, driven by use cases organized into the four primary planned releases following the IBM Watson Agile method for incremental sprints. These reviews will be considered pre-sprint activities conducted before the formal start of each sprint. Incremental analysis and review is performed to allow a quick start of sprints for each release with continuity and rapid focus on detail design and working software deliverables.

Sprints and detail design Detail design will be performed in pre-sprint activities and during sprints as may be needed to support the incremental creation of software in Agile sprints.

The detail design will be documented in appendices to the functional and technical design documents for areas on a sprint-by-sprint basis. For example, user interface (UI) storyboards and mockups will normally be produced during pre-sprint activities and added to the Functional Design Document as appendices to be approved with the sprint deliverable package. Technical UI specifications will normally be added to the Technical Design Document as appendices to be approved with the sprint deliverable package. As part of the detail design specific reports required will be defined and opportunities identified to consolidate reports into ad-hoc, parameter driven reports. Statutory reporting requirements are included in the 120-report count included in the RFP. The number of reports will be balanced evenly between phases 3, 4, and 5. Each of these phases will contain approximately 40 reports. If the breakdown of number of reports at each complexity level needs to change during the project, the following conversion will be utilized: reports will be converted as 4 low = 2 medium = 1 high. Report complexity and amount of data affect analytics performance, so there will not be a single SLA of report response time. Report performance will be evaluated on a report-by-report basis. **[I4.14]**

Designs for interfaces to source both internal and external systems will normally be performed during pre-sprint activities with sessions to be facilitated by the IBM Team and documented in deliverable I.4.4, Data Integration and Interface Control Documents (ICDs). A detailed plan to develop each interface will be documented In the ICD with support of external system resources. The IBM Team will support discussions with external and internal data source staffing teams in development of the ICD. The ICD will include the technical approach and tasks required. These will also be subject to CMS reviews identified in the Project Process Agreement (PPA) that occur prior to the start of sprints. Necessary design, configuration, development, and unit testing will be performed prior to implementation of interfaces. **[I4.18, I4.19, I4.20, I4.21]**

REQUIREMENTS VALIDATION AND SYSTEM DESIGN

IBM has successfully implemented a Design development process in South Carolina. IBM improved collaboration between the State and IBM Team, incorporated design sessions, and changed control processes to implement future releases.

Decision support: Specific components identified in the requirements and design, such as the User Security Matrix, System Security Plan, ICDs, Business Process Diagrams, specific reports required, and the UI will be developed in collaboration with State and source data stakeholders and incorporated in the FDD and TDD. The IBM Team will complete required state and federal security including, System Security Plan (SSP), Risk Assessment (RA), and Contingency Plan (CP). As part of the System Security Plan, Risk Assessment, and Contingency Plan detailed in T-10 Section 1.6, IBM will conduct and provide the results of a security risk and impact assessment prior to releasing the solution into UAT in alignment with NIST 800-30 guidance methodology and certify that the CWE/SNAS Top 25 Dangerous Software Errors (http://cwe.mitre.org/top 25) have been mitigated (and document the mitigation).In addition, IBM will perform necessary configuration, development, and unit testing required to implement the functional and technical designs. **[I4.11, I4.13, I4.15, I4.34, I4.35, I4.38]**

The State will be encouraged to form a “Model of Practice” community or focus group to provide IBM an informed body of stakeholders from which to solicit input and feedback. This group may be called upon in small subgroups, such as specific experts that provide input during business process analysis and design for each of the program disciplines in DHS. They may also be called upon as a body to provide input regarding custom developments such as user interface storyboards, look-and-feel of custom wizards, or task and queue workflow configurations.

The State will also be encouraged to participate in a Course of Action Committee (COAC) to review operational intent together with IBM by providing timely and rapid policy decisions whenever needed throughout the project. Items brought to the COAC will be analyzed and written in a concise format to identify issues, recommended actions, decisions needed and follow up action items.

Numerous workshop sessions will be held for each functional technical design topic with input from the Model of Practice Committee and decisions from the COAC as may be required. Where feasible, IBM will summarize needs through analysis and presentation formats appropriate to the design task (such as presentations, white papers, or executive summaries) to interact with the State and facilitate timely decisions and clear communication.

Review and approval support Each deliverable will require a review and approval period. IBM will support state staff in their review of Deliverable Expectation Documents and customizations related to design, development, and implementation as outlined in the Scope of Work. IBM proposes a 10-day initial review period for State reviewers to provide feedback to IBM. IBM will then have 5 days to update deliverables based on comments from the State. The State will then have 5 days to provide final approval for the deliverable after the second review. In keeping with the IBM Watson Agile method, comments may be delivered to IBM by the Product Owner and updated by IBM formally through comment logs or informally through emails or other forms of verifiable communication. IBM will support the review process by working flexibly with the State by providing review kickoffs where requested or working flexibly with the State in working sessions to update documentation to reflect the as-built state of the working system. **[I4.2, I4.12]**

4.2 System Development and Configuration Methodology

The Vendor must provide the processes and approach for managing the custom development and configurations to ensure high quality code and documentation required for supportability. **Instructions:** Describe the Vendor's System development and configuration methodology.

Agile Development. Development will be conducted primarily in Agile sprints according to the IBM Watson Agile methodology. A hybrid waterfall/agile approach with fewer number of release cycles is a desirable approach for Arkansas DHS. The IBM Watson Agile Methodology is an incremental Agile approach that is flexible and does not rely on extreme agile methodologies with a high number of release schedules. This Agile incremental approach is highly recommended with 3 week sprints for each as part of development. The intent is to develop working software as early in the SDLC as possible and to produce complete document deliverables using just-in-time and as-built principles. Pre-sprint planning and other activities will be performed as described in Section 2.0 above before development commences. Development in each sprint will be confined to functions planned in Agile stories for that sprint. The Scrum team will work together to gain a common understanding of the software or system components to be developed in the sprint and provide the developer rapid response to questions and resolutions to issues encountered.

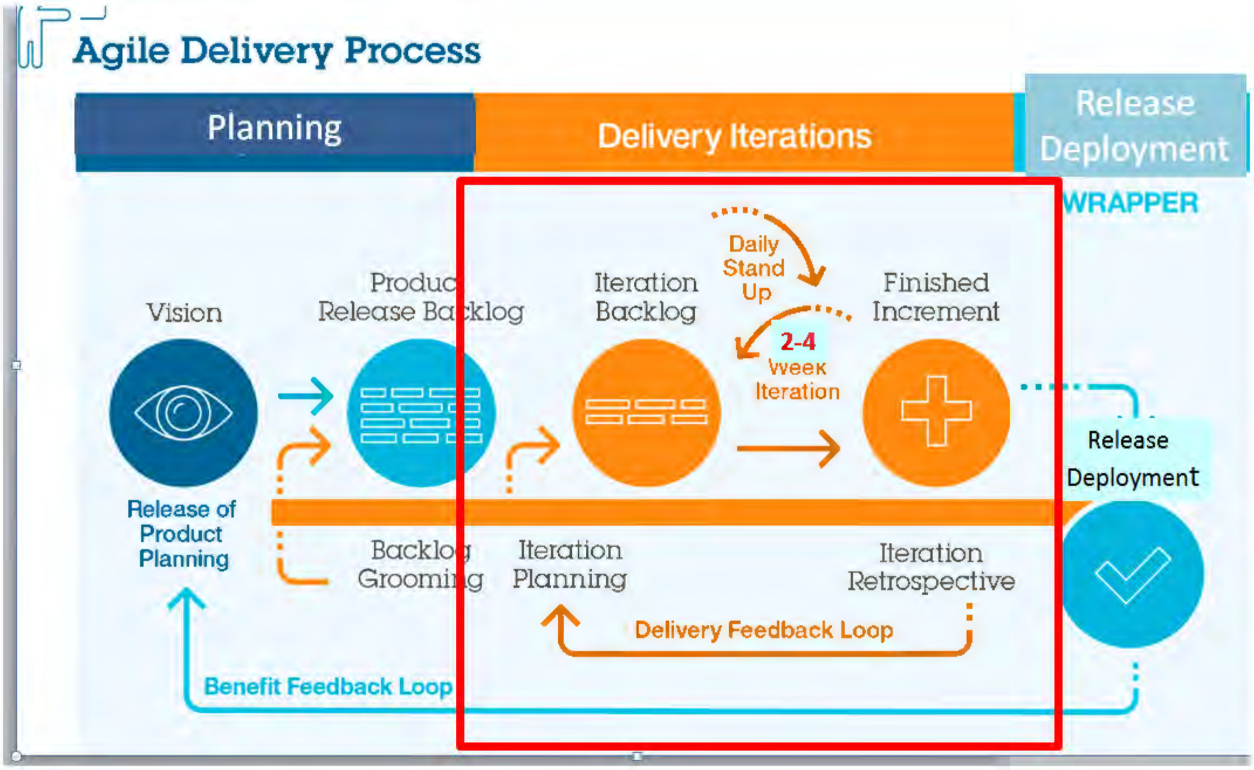


Figure 20: Agile Delivery Iterations

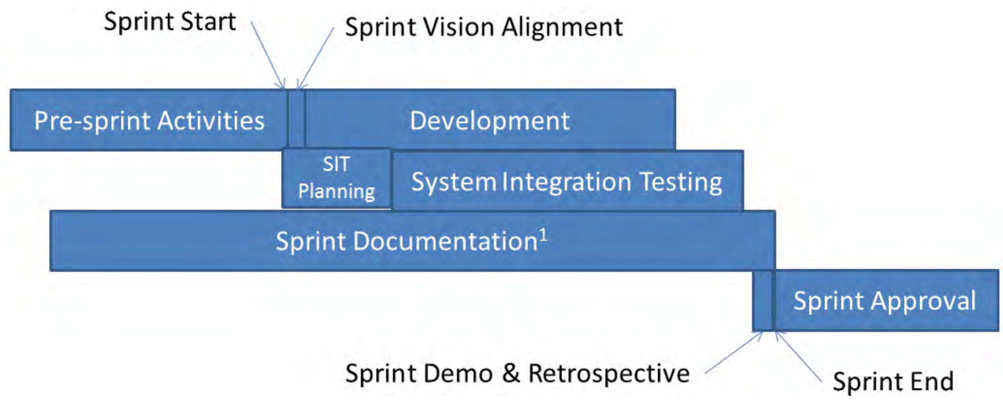
Delivery Iterations. Delivery iterations occur through the execution of multiple sprints planned for each release. As sprints are completed they are staged for user acceptance testing (UAT) and release deployment. Each sprint contains a work pattern that includes creation of working software and incremental additions to the sprint deliverables identified in the table below:

Table 18: IE-BM DDI Deliverables

No.	Deliverable Title
I.4.1	Requirements Validation and updates to RTM, BPA and Use Cases
I.4.2	Functional Design Document (FDD)
I.4.3	Technical Design Document (TDD)
I.4.4	Data Integration and Interface Control Documents (ICD)
I.4.5	Updated and Completed Functional and Technical Requirements Traceability Matrix
I.6.1	Completed SIT Readiness Checklist
I.6.2	SIT Testing Report and Results

Incremental additions to these deliverables are generally achieved by creating and adding appendices representing the features implemented in the sprint. Each of these documents be updated in each sprint, packaged as a sprint package, and uploaded to the project SharePoint document repository for review and approval in order to consider the sprint complete as described in Section 1.3, Project Data and Document Management. Review and approval cycles continue after the end of the sprint to incorporate feedback from Arkansas DHS on DDI activities. **[I4.16]**

The following figure shows activities that are performed during the sprint in their approximate sequence.



[1]Sprint documentation includes incremental updates to:

- Functional Design
- Technical Design
- RTM Updates
- SIT Results

Figure 21: IBM Watson Agile Sprint Activities

Agile sprints produce higher quality working software

While many Agile methods call for fixed duration sprints, the IBM Watson Agile Method provides variable sprint durations of two to four weeks in length, depending on the features planned for the sprint and their expected level of effort to design and develop. This is a more flexible Agile approach. Sprint progress is monitored by preparing burndown charts showing the percent complete of development and testing activities. This allows the flexibility to optimize sprint content according to features and not simply the passage of time in the schedule.

Before the sprint starts, pre-sprint activities are performed. These include anything necessary to allow the sprint to proceed uninterrupted, including:

- Sprint planning
- Requirements elaboration
- Estimate elaboration
- High level functional design
- High level technical design
- Complex problem and algorithm design
- Long lead items such as planning and coordination with source system vendors
- Operational policy making
- Business rule identification

As the sprint starts, a visioning session is held to review high level designs, stories, use cases, requirements and estimates for the sprint in an effort to gain greater common understanding between members of the scrum team.

SYSTEM DEVELOPMENT AND CONFIGURATION

IBM had a high level of success implementing the Agile methodology as part of the ConnectWellSD Project. The Project for the County of San Diego consisted of three phases. The first phase began with a waterfall methodology but phases two and three used an Agile approach as certain functional requirements were not being met due to pending policy decisions. The decision to go to an Agile methodology was a joint decision between IBM and the County of San Diego. Within two weeks IBM and the County were conducting agile sprints. This efficient and effective change from Waterfall to Agile was in large part due to the established line of communication between IBM and the County.

Development. Development starts immediately after the visioning meeting to begin enabling, configuring and customizing the features of the system based on the high-level design and the team's common understanding. Daily stand up meetings between IBM and identified Arkansas business staff will be held to review progress, plan for the upcoming day and identify problems or assistance needed by developers and testers to perform effectively and efficiently. This will provide another opportunity to incorporate feedback from Arkansas DHS into the design and development. Developers will address reported defects and resolution 2 to 5 times per week in daily stand up meetings to achieve continuity and alignment between stakeholders, requirements, and high level designs.

Unit testing. Unit tests will be written and executed by developers to promote a high level of quality as described in Section 1.4 Quality Management above. Nightly build tests will be executed to provide rapid feedback if anything developed has negatively impacted the build. Testers and business analysts will assist developers in the creation of unit tests to facilitate complete requirement coverage and maximize time spent configuring, developing and unit testing software.

Testing. At the start of development, testers also begin creating test cases and test scripts for system integration tests (SIT) that will be performed during the sprint. Individual SIT test cases are performed incrementally as soon as software features are developed and unit tested by the developers rather than waiting until the features in the sprint are finished. Testing is a collaborative approach between IBM and Arkansas DHS and will include component testing, system integration testing, and user acceptance testing.

Training. Training developers participate in the sprint and begin development of training materials on a parallel track, even though training materials are aligned to a release and module rather than a sprint.

Configuration and change management in development. Configuration and change management is an important process during development. Developed software is considered a configuration item. Many small adjustments to the software will be facilitated by the IBM Agile process during the sprints that will not require extensive rework or invocation of a Change Request. These adjustments help fine tune the working software to improve usability and adoption of the new IE-BM system features.

In some cases, a CR is warranted by the magnitude of the impact from a change to update or rework configuration items including software and documentation deliverables. If the change cannot be accomplished in the time or budget allocated to the sprint, the sprint will be placed on hold and referred to the PMO to resolve with the State before proceeding with the sprint. Once the CR is approved, the sprint will be rescheduled and work resumed to sprint completion

Sprint Roles. A designated staff member from IBM is assigned the role of Scrum Master, shown in the following figure, to resolve problems, and facilitate and manage the work efforts of the scrum team. The BA is responsible to determine that each deliverable is updated appropriately during the sprint and that lines of communication flow freely within the team.

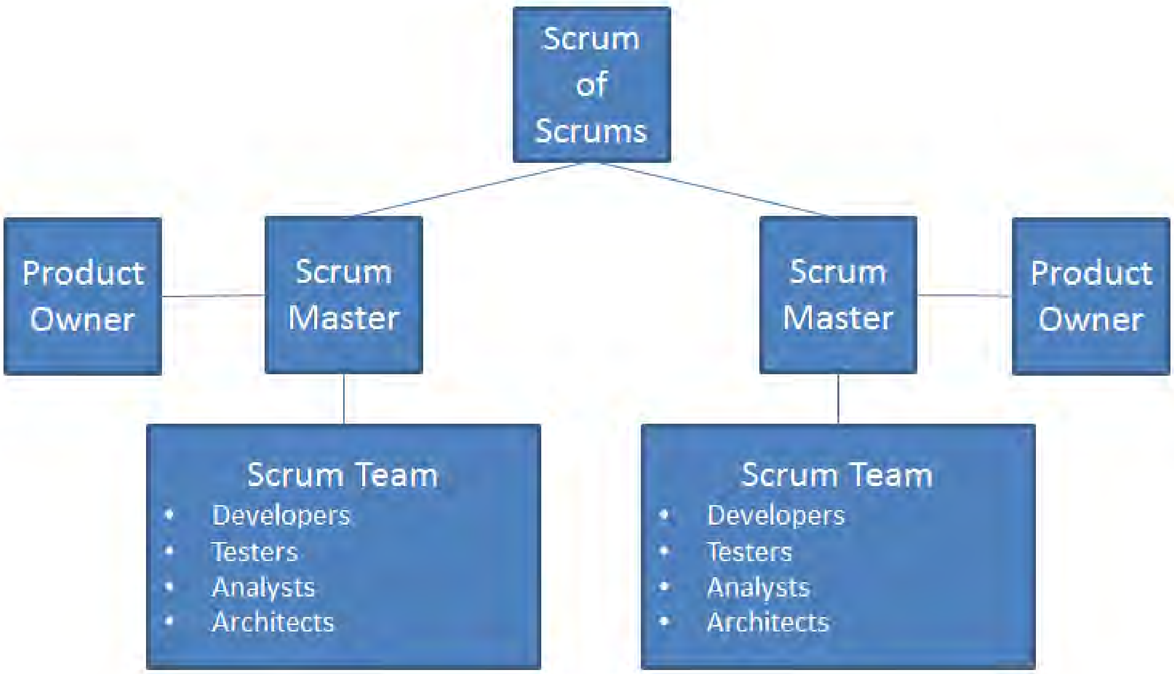


Figure 22: Agile Sprint Roles

Integrated IBM and DHS sprint teams create high quality software and documentation

A State employee who is a subject matter expert (SME) who is skilled at interpreting legislation and defining departmental policy for the business functions in the sprint is assigned the role of Product Owner to review working software and provide functional guidance and user insights during the sprint. The Product Owner should have a working knowledge of key business processes corresponding to the sprint, the ability to rapidly facilitate or make decisions, and a feel for the operational concepts of the system related to the sprint. The IBM BA will train and work closely with the State Product Owners to facilitate their learning of the features and functions of Cúram, MDM, Cognos and other COTS products in the system as needed to improve their effectiveness and decision making ability.

Other persons may also participate in the sprint such as system architects, data architects, database administrators, end users, and business managers. These perform varying roles according to their expertise, depending on the needs of the system and the Scrum team.

In addition to the system demonstrations held during the sprint, a final demonstration and retrospective is held at the end of the sprint to review the system features, check off requirements, review defect fixes and other items necessary to close out the sprint and identify improvements for future efforts.

Release Deployment. Each release is the aggregation of the implemented and customized system features planned for the release. As sprints are completed they are staged to go to the release level activities such as UAT, Performance Testing, Regression Testing, Data Conversion, Deployment, Warranty, and Transition to M&O.

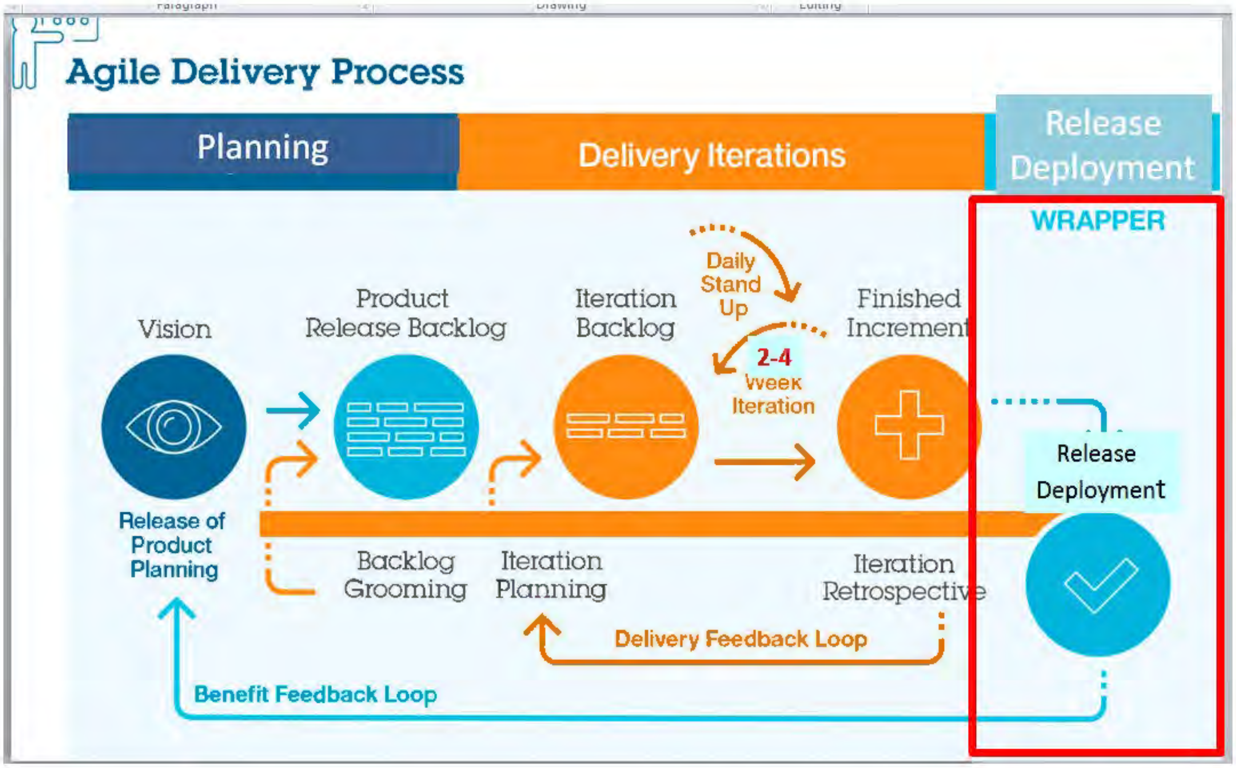


Figure 23: Release Deployment

Each deployment contains features from multiple sprints and user stories

Deployment occurs on a predetermined date corresponding to reach release in the proposed project work plan. Releases proposed by the IBM team are focused on DHS program at the State level. Point releases are pre-identified for Release 1, Integrated Application and Release 2, SNAP. Other point releases may be identified through planning efforts at project start up or to accommodate legislative or other changes that occur during the project period of performance.

The IBM Watson Agile Method provides the following benefits to the State of Arkansas through our approach to iterative development:

1. We avoid big bang implementation problems such as delivered software that doesn't meet current needs of end users.
2. Software features are aggregated in releases to support DHS program needs instead of being separated from the operational realities faced by end users.
3. We focus on the working software early in the process while eliminating unnecessary, wasteful document iterations that can delay configuration and development efforts.

4. We collaborate with product owners and end users in multiple paths throughout design and development and demonstrate project status through working software instead of written status reports alone.
5. We produce a complete set of documentation that is built alongside the software instead of through separate efforts.
6. We will provide DHS access to both source/object codes or software components and documentation.
7. We will perform code reviews to determine customized software and interfaces comply with coding standards to reduce defects.
8. We will support the DHS staff in reviews of documentation and code to determine the solution is conforming to the IE-BM standards.
9. We will provide DHS with well documented, readable source code and object (executable) code, documentation for functionality developed by the Vendor outside of COTS configuration. New software functionality built on top of COTS software will be owned by DHS.
10. We will provide DHS with well documented readable source code and object (executable) code, and documentation for COTS functionality and escrow of source code for the custom developed and/or integration related code. New software functionality built on top of COTS software will be owned by DHS.
11. We will deposit into escrow the Software source code, together with subsequent updates to the source code as and when they become available, and DHS will have the right to access the Software source code upon the occurrence of an Insolvency Event, in which case DHS may continue to use the Software for the remainder of the Term or the Renewal Term, as the case may be.
12. Documents are delivered in manageable chunks that reduce the challenges of reviewing large documents at once.
13. Tools, such as Rationale, will be provided to manage the version control on software configurations and custom development.

[I4.17, I4.28, I4.29, I4.30, I4.31, I4.32, I4.33]

4.3 End-to-End Integration Approach (State Hub)

DHS envisions what the Vendor will lead the effort to conduct end-to-end integration to support the person-centered model of practice envisioned by the Department by building a “State Hub”. The Vendor will lead the effort to integrate with systems external to the IE-BM, and the vendors that support these systems through the State Hub – combination of a true Enterprise Service Bus (ESB) coupled with Master Data Management (MDM) functionality.

Instructions: Describe the Vendor’s approach to integration including a description of how they will interface via the DHS IE-BM Solution and approach to supporting the enablement of common shared technology components & services and shared business functionality.

The IBM proposed DHS IE-BM system will interface with enterprise wide source systems that are external to IE-BM through IBM Integration Bus (IIB) and MDM component of the solution as main end point for demographic data to build Master Client Index (MCI), Cúram and Cognos for other related data for enabling person-centered model of practice.

Integration Patterns

Our solution supports a finite set of integration patterns, as listed below. For each interface, a pattern is chosen from this set that best fits the source system architecture and interface requirement. IIB mediates the interaction between source systems and IE-BM using a Store and Forward pattern. This mediation provides the flexibility whereby a range of transport and messaging protocols may be applied, depending on the source system. (However, a small, finite number of patterns are preferred for efficiencies in implementation and maintenance.) The Service Bus transforms the source system input into standard messages for MDM and other end points.

Table 19: Recommended Integration Patterns

Pattern 1 **Instantiated by source system**

1a **Event driven push of source system changes into IIB**

Transport Protocol	Message Protocol	Message Format	Endpoint (IIB)
HTTP	REST	XML/JSON	WADL
HTTP	SOAP	XML	WSDL
JDBC	SQL	SQL	Stored procedure (PL/SQL)
SQL*Net	SQL	SQL	Stored procedure (PL/SQL)

Pattern 2 **Instantiated by IIB (or AUTOSYS on behalf of)**

Periodic pull of source system changes into IIB

Transport Protocol	Message Protocol	Message Format	Endpoint (Source system)
HTTP	REST	XML/JSON (with file attachment)	WADL
HTTP	SOAP	XML (with file attachment)	WSDL
JDBC	SQL	SQL	Stored procedure
SQL*Net	SQL	SQL	Stored procedure (PL/SQL)
SFTP	File	XML	Folder
SFTP	File	Delimited text	Folder

Customer Integration Data Model

Demographic data from source systems will be integrated into IE-BM, via the IIB. This data is used to build a master client index (MCI) in MDM, which will then be used for search and lookup by Cúram. In addition to the demographic data, several other required data sets are added to the integration. These non-demographic data sets are source unique, and do not require MDM resolution. This data is sent to another schema in Cúram Database through a SQL interface, and is retrieved by the Cúram application through a stored procedure call.

The following diagram (Figure x) shows the detailed architecture for the customer data integration. The feeds into IIB are split into 2 conduits – demographic data that needs to go through MDM resolution, and source unique data sets (or extended client data) that does not need to be resolved in MDM. The extended data sets are written into a separate schema in the Cúram database, separate from the schema used by the Cúram application.

When a customer search and lookup is performed in Cúram using the MDM API, and an aggregate record persisted, a cross-reference of identifiers – Cúram ID to various source system IDs – is also persisted. At that point, the user can navigate to the extended data pages. A stored procedure will read this extended data schema and populate the page. For the sake of flexibility, the call to the stored procedure is managed through a façade layer object, which can potentially be pointed to other data sources.

To minimize the performance overhead and to maintain statelessness, the stored procedure is called every time the user navigates to the page. The extended data sets are not physically stored or cached in the Cúram application. The stored procedure operates with the Cúram identifier alone, and uses the xref table in the Cúram database to assemble the information from the various source systems.

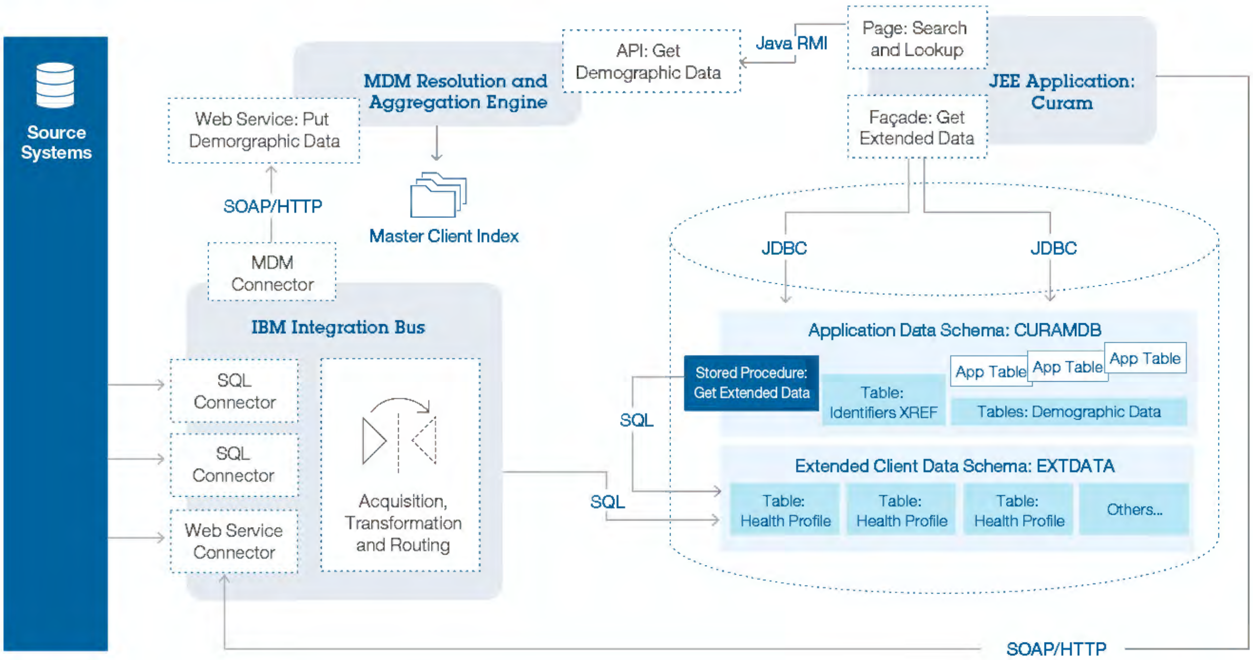


Figure 24: Customer Data Integration Architecture

Interface Control Documents (ICDs)

Interface Control Documents (ICDs) define the interaction between a pair of systems, and the requirements each participating system fulfills. It is a recommended control for interconnection security in the NIST 800-53. IBM solution will use ICDs as a precursor to building the interfaces.

5.0 Approach to Data Conversion

The Vendor should ensure that the responses to this section are in alignment with the requirements set forth in Template T-10 – Implementation Requirements Traceability Matrix, Section I5.

5.1 Data Conversion Strategy, Approach and Timeline

Instructions: Describe the Vendor's approach to Data Conversion that will optimize the level of automated conversions including the tools that will be used. Describe how the Vendor will ensure data integrity and consistency through all releases of the Project.

The Vendor should describe their approach in detail around mapping of data elements between the source and target systems, extraction, transformation and load. The Vendor should provide details on how they intend to achieve the desired data conversion rate as required by SLAs and how that transforms into providing the expected benefits to every one of the participants who will transfer from the old system to the new system.

The Vendor will be responsible for all activities involving data mapping, transformation and conversion, except for Source system data cleansing, which will be the responsibility of DHS.

The IBM team offers DHS and the State of Arkansas a low risk data conversion solution that meets requirements. Our data conversion approach is based on the successful methodology employed in the EEF SNAP program as executed by Northrop Grumman Corporation (NGC). Our approach utilizes DHS preferred tools, maximizing use of the existing processes and hardware and software infrastructure.

NGC, the data conversion team member, has been the ISS vendor for over a decade and currently maintains the legacy Access AR portal and ANSWER/ACES/FACTS systems. As such, the data conversion team has an understanding of the business environment, legacy data usage, and functionality unparalleled in the vendor community. As the data conversion vendor for EEF SNAP, NGC completed the entire cycle of data conversion from legacy systems source to the Cúram target from business analysis and requirements specification and data element mapping through the successful execution of six dry runs. The SNAP conversion timeframe benchmark attained was within 36 hours with over 99% case activation. The combination of NGC familiarity with the legacy systems and EEF data conversion experience, coupled with IBM's unequaled knowledge of Cúram as the product owner, provides DHS and the State of Arkansas a team uniquely positioned to deliver a low risk IE-BM solution.
The data conversion team starts on day one with the full participation in IE-BM startup. The conversion Technical Manager is an integral part of the IE-BM management team contributing to overall IE-BM project management and technical deliverables. Once a baseline is established, the data conversion team participates in the maintenance of applicable project documentation, including hardware, software and tool inventories as it relates to the temporary data conversion environment(s). **[I5.15, I3.2]**

During project startup, the data conversion team will work with DHS to establish software/hardware/security environments and processes allowing close collaboration between us and the State staff. We will acquire authorization from DHS to use unmasked production data during data conversion development and test, working with DHS to establish a suitably secure development/test platform associated processes and procedures. **[I5.11]**

Figure 25 Data Conversion Development/Test Stack, depicts the data conversion development/test environment configuration. The conversion team will work with "conversion stacks". A "conversion stack" consists of a frozen copy of the legacy source application and database, a staging database with enough capacity to store a full set of reorganized data, and a copy of the target Cúram application and database populated with production data as it appears on the same date as the frozen legacy source. The target Cúram application and database are also frozen and be current with the recently completed application sprint, including MDM. Maintaining frozen snapshots of both legacy source and target Cúram databases allows the State staff to perform side by side comparisons of the converted data with the legacy data without the complication of the shifting values that would occur if the comparison was between the Cúram data and live production data. Upon completion of static conversion testing, the environments would shift to time-warped environments to align with DDI testing.

We will develop procedures and scripts to automatically convert the production data from legacy systems to the IE-BM proposed solution within required timeframes, as documented in the approved Data Conversion Plan. Use of copies of full production data on platforms scaled to production capacity assures that test executions of Data Conversion, including Dry Runs and UAT conversions, accurately reflect production conversion timelines. **[I5.4, I5.5]**

The conversion team works with two conversion stacks for each active application development track. One is used for data conversion development, and the other is made available to State test staff. Upon the first deployment to production, the conversion team maintains a single stack mirroring the production system to allow analysis and resolution of production issues. The number of stacks required varies as application tracks are started and others move on to deployment. Given the schedule shown in Figure 26 Proposed Data Conversion Timeline, the conversion team requires two stacks at the start of Integrated Application/MDM planning and visioning, building to eight stacks during Medicaid planning and visioning. At the deployment of the Integrated Application Interfaces/MDM, the number of stacks begins to fall from the peak. Although references to documents may be subject to conversion efforts, DocuShare will remain the CRM and the documents themselves are not within the scope of Data Conversion. **[I5.18]**

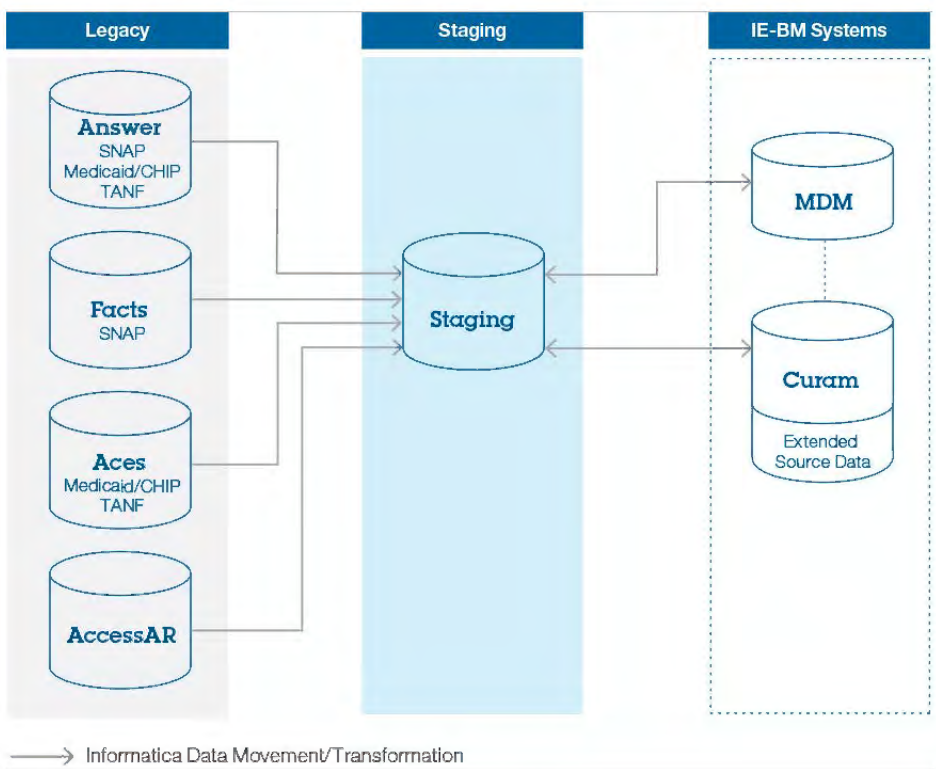


Figure 25 Data Conversion Development/Test Stack

A fixed snapshot of the production legacy data allows side-by-side comparison of client and case data

Data Conversion follows the Cúram DDI timeline using a Scrum Agile methodology. The first phases of the project implement and populate the MDM, making it available in subsequent phases to provide consistent and accurate person and family demographic data. We found during our EEF SNAP conversion efforts that a majority of the data issues centered on matching clients and their demographics between source and target databases. Creating an MDM with a consistent and accurate database of clients is essential to minimizing manual corrections in later releases as more programs are implemented within the IE-BM proposed solution.

[I5.2, I5.16]

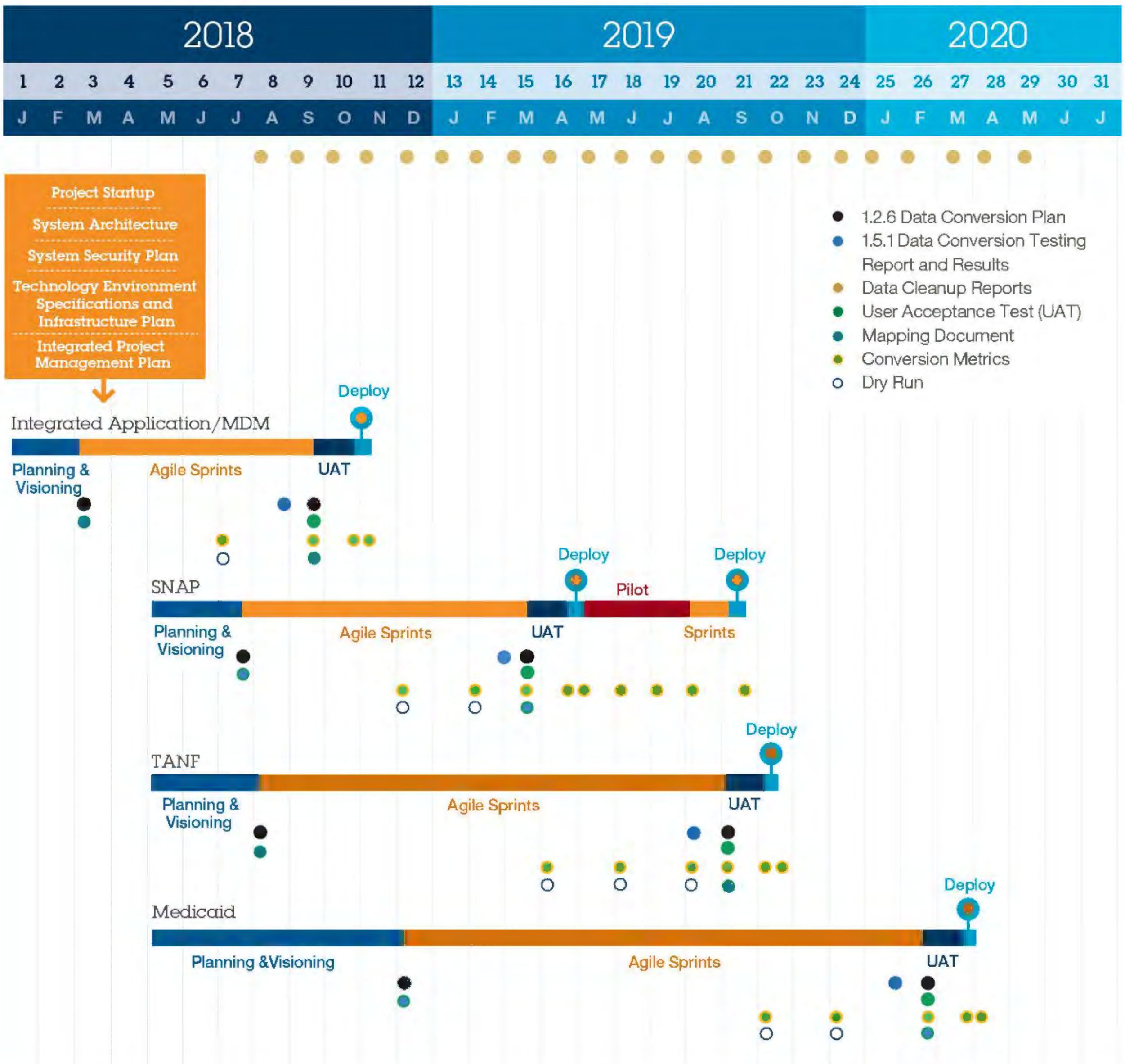


Figure 26 Proposed Data Conversion Timeline

The data conversion timeline follows DDI, giving State test staff immediate access to functionality with real data

Agile Development Means Testing Early and Often

- **Coordinated Cúram/Data Conversion development**
- **Early unit and integration testing**
- **Internal Data Conversion Quality Assurance independent of developers**
- **Frequent Dry Runs**
- **State staff has early access to functionality with production data**

As shown in Figure 26 Proposed Data Conversion Timeline, data conversion starts with two months of planning and visioning for the Integrated Application/MDM. The SNAP, TANF/TEA and Medicaid tracks start at the same time in month five of the IE-BM project with planning and visioning. At the conclusion of the planning and visioning period, the conversion team delivers at Baseline Data Conversion Plan (deliverable I.2.6) and a first version of the Mapping Document, a work product mapping source to target data elements. During mapping and design sessions over the course of agile sprints, the Data Conversion Plan and Mapping Document are refined, adding more refined requirements and more detailed mapping from source to target databases. Both the Data Conversion Plan and Mapping Documents are compliant with DHS standards, utilizing existing data dictionaries, data models, data flow models, and process models. Where these artifacts are necessary and do not already exist, the conversion team will either create them or collaborate with the responsible parties to create them, again, compliant with DHS standards. As these two key documents are refined, data conversion is coded accordingly. Data conversion requirement definition, mapping, and data conversion coding is coordinated with application coding to allow data conversion dry runs approximately every two months. In addition to providing the opportunity to test and fine tune conversion procedures and scripts, as well as the interaction of ourselves, and the DHS and DIS organizations in preparation for IE-BM deployment, frequent execution of dry runs facilitates thorough System Integration Test and allows State test staff immediate access to application functionality with real data prior to formal UAT. **[I5.2, I5.4, I5.5, I5.8, I5.9, I5.10, I5.13, I5.14, I5.17]**

The Data Conversion team executes System Integration Test utilizing quality assurance staff specifically retained to provide test development and execution independent of development staff. Data conversion quality assurance staff utilizes several methods of verification including code inspection and analysis and, for critical algorithms, independent development of code and comparison of results. Utilization of quality assurance independent of development staff during the EEF SNAP data conversion effort identified several issues, including duplication of records in the target system and defects in person matching algorithms design and implementation. Data conversion quality assurance staff will share analysis tools and scripts with State staff. **[I5.8, I5.17]**

Figure 26 Proposed Data Conversion Timeline, depicts the development timeline, showing the data conversion deliverables and work products to be submitted. Each data conversion track follows the same deliverables and work product development and delivery guidelines. The Data Conversion Plan and first version of the Data Mapping document are delivered at the beginning of agile sprints and updates delivered prior to UAT. The update to the Data Conversion Plan and Data Mapping documents provides the opportunity to document resolution to issues and deployment dependencies discovered during agile sprints and dry runs. The Data Conversion Test Report and Results are delivered 30 days prior to each UAT. Conversion Metrics are delivered at each dry run and, if applicable, monthly after deployment. **[I5.6, I5.12]**

Our approach to data conversion is based on the successful model, incorporating lessons learned, used in the EEF SNAP data conversion effort. Central to that methodology is the formation of a team that incorporates the expertise of both technical and business experts. In particular, we assume active State Subject Matter Expert participation in the data conversion process, including data conversion design and mapping sessions. Such active participation assures a business-centric conversion that reduces the backlog of cases once they are converted to the target system. This methodology is the basis for effective and efficient progress in the implementation of a complete and accurate conversion of the data required to support State eligibility determination and benefit management, and forms the strong relationship between you and the IBM team required to make decisions and resolve issues as they arise**. [I5.3, I5.7]**

Data Quality

- **Additional data quality work products track resolution of data quality issues**

Especially given our experience during EEF SNAP conversion efforts, we understand the impact of data quality on the transition from the legacy systems to the IE-BM proposed solution and have constructed our work products and required deliverables to measure and track identification and resolution of data quality issues. Table 20 lists data conversion deliverables and work products, including a Data Cleanup Report, generated monthly, as well as Conversion Metrics, generated for each execution of Data Conversion. Data Conversion deliverables are subject to the same review and acceptance processes and procedures as IE-BM deliverables. **[I5.1, I5.4, I5.5, I5.6, I5. 12]**

Table 20: Data Conversion Deliverables and Work Products

Work Product/Deliverable	Description
I.2.6 Data Conversion Plan	Required deliverable defined in Sections 13.1 Implementation Deliverables and Deliverables Expectations Document Delivered at the end of Planning and Visioning and updated at the beginning of UAT for each release. Defines the schedule, activities, methods, processes and procedures to develop scripts and work flows to automate data conversion with a minimum of manual intervention. The Data Conversion Plan also specifies dependencies between Data Conversion and other deployment and post deployment activities, including required manual activities.
Mapping Document	Work product detailing the mapping between legacy source data elements and target data elements. A first version is delivered with the Data Conversion Plan. It is refined over the course of agile sprints and a final version delivered at the beginning of UAT in conjunction with the Data Conversion Plan.
Data Cleanup Reports	Work product listing data quality issues in both legacy databases, including existing Cúram data, along with planned resolution and statistics on number of instances found, fixed and remaining. The report is delivered monthly starting with the completion of the first month after Dry Runs have begun through deployment of these phases.
Conversion Metrics	This work product reports the number of clients and cases that have been successfully converted vs the total. The report includes

Work Product/Deliverable	Description
	statistics on error conditions for failed conversion. The report is produced for each dry run, UAT conversion, and deployment.
I.5.1 Data Conversion Testing Report and Results	Required deliverable, reporting the results of System Integration Test, defined in Section 13.1 Implementation Deliverables. Delivered 30 days prior to UAT.

Deliverables and Work Products are focused on maximizing data quality

The IBM team brings the skills and the experience with Arkansas systems to provide the best value services in developing the Integrated Eligibility/Benefit Management project overall, and specifically for the data conversion component. We are familiar with DHS standards, processes and procedures. Our proposed solution reflects the lessons learned in Arkansas in a nearly identical effort, uniquely positioning use to deliver that solution with minimum risk.

5.2 Data Governance

Instructions: Describe the Vendor's experience establishing data standards and coordinating with other projects/solutions which have shared data standards. This is an important step in achieving the vision of establishing a State Hub – combination of a true Enterprise Service Bus (ESB) coupled with Master Data Management (MDM) functionality.

Data Conversion is a relatively short term activity with the main focus on quickly and accurately transferring large volumes of data. In order to attain the performance necessary to complete Data Conversion within the short duration of a production deployment, we will implement Data Conversion using Informatica flows, including extraction from legacy source databases, translation, and loading into IE-BM databases. This use of direct Informatica connections to the source and target database and transport, without the introduction of intervening calls to the ESB, maximizes performance. At the same time, a number of the algorithms to be incorporated within ongoing IE-BM services, such as the person matching used within MDM, be implemented within the Data Conversion flows. This provides early and extensive tests of these algorithms during Data Conversion dry runs.

Performance is Key

- **Data Conversion minimizes overhead**
- **Direct connect to source and target**
- **Early test of MDM algorithms**

There are several other reasons we have chosen a solution that does not directly involve use of the ESB, including:

- Data Conversion and ESB are developed concurrently. Thus, Data Conversion is unable to take full advantage of ESB functionality over the life of the Data Conversion effort.
- Data Conversion is retired, along with the source legacy databases, once the IE-BM proposed solution has been fully deployed. Consequently, Data Conversion would not be available as a service to be called through ESB.

Although Data Conversion and ESB are functionally independent, the concurrent development of the two will create synergies. Data Conversion development and test provides the earliest view into both source and target databases, and with that comes the earliest discovery of data issues.

One of Data Conversion's more significant work products is the data cleanup report. The report describes data issues found during Data Conversion unit test, integration test and dry runs, specific methods for resolving those issues, and lists statistics on the number of instances detected and resolved. Types of issues may include:

- Deceased persons included in active cases
- Duplicate person records
- Inconsistent person relationship data
- Inconsistent, missing and/or incomplete addresses and phone numbers

Many of these issues will be fully resolved prior to full IE-BM deployment, either through automated processes during deployment conversion or manually prior to deployment. Other issues will be on-going, and Data Conversion provides an early test for algorithms to be incorporated in IE-BM services, such as MDM.

One concrete example of an algorithm to be exercised in Data Conversion is that for person matching. This algorithm is incorporated in MDM to implement person matching in case management to determine if a client is already in the system or be created.

6.0 Approach to Testing

The Vendor should ensure that the responses to this section are in alignment with the requirements set forth in Template T-10 – Implementation Requirements Traceability Matrix, Section I6.

Instructions: Describe what the Vendor believes to be an effective Testing approach to ensure that the System is functioning and processing the data correctly. This plan should include the testing approach from unit testing through UAT. This should also include a discussion regarding the anticipated level of automated testing scripts and how these will be handed off to the M&O team for ongoing regression testing, as well as a thorough description of how the vendor will work with IE-BM project related Federal mandates to ensure proper compliance for testing guidance and requirements.

Section 1: Master Test Strategy

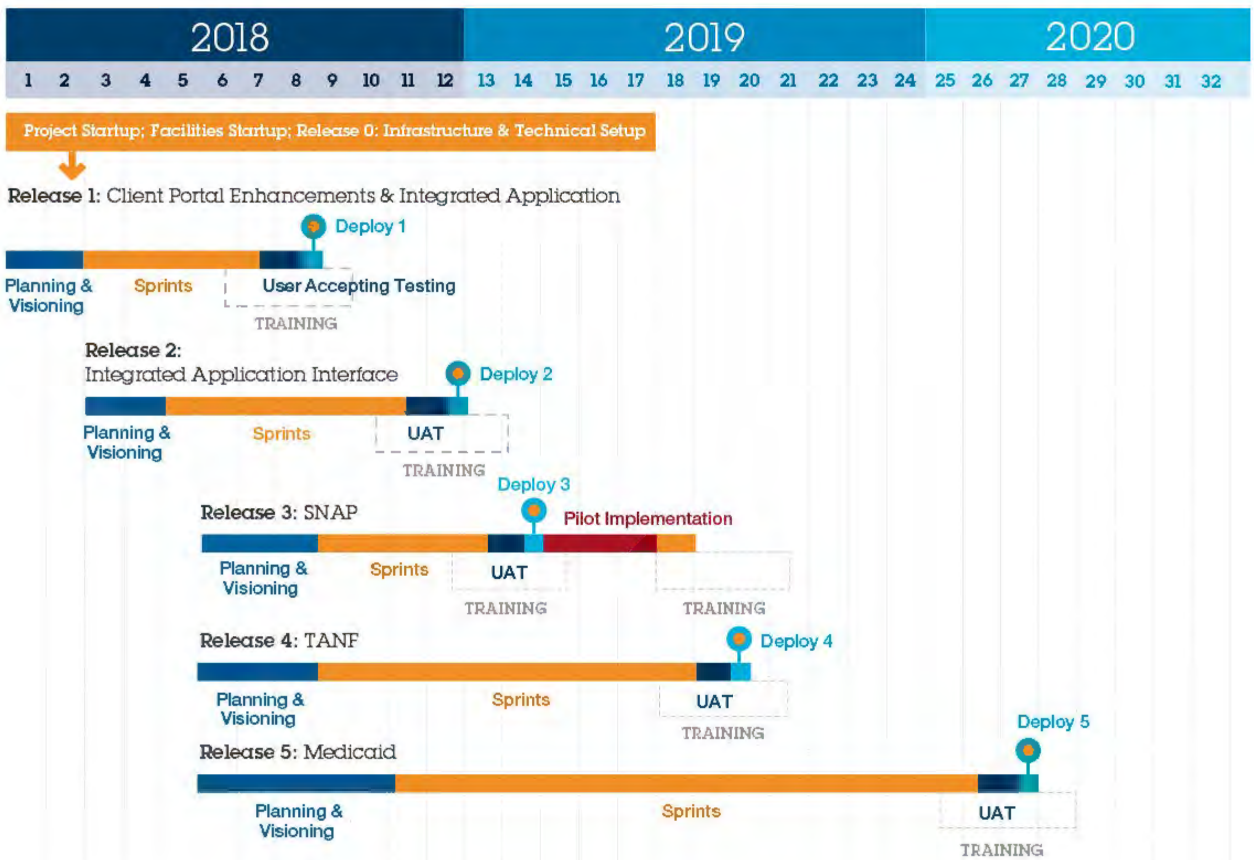


Figure 27: IE-BM Proposed Project Delivery Timeline

IBM's unique and extensive testing experience using the IBM Watson Agile Method is well positioned for system implementation and optimal testing solution for the State of Arkansas' IE-BM project. The IBM Watson Agile Method is collaborative and includes involvement with the State at every phase throughout the SDLC. As described below, a resource from the State (Product Owner) is involved at every stage of testing providing input and validation that requirements are working as designed. It is assumed that the State Product Owner will possess the ability to interpret legislation and define departmental policy as it relates to the requirements.

The IBM Watson Agile methodology approach provides at the critical early stages of testing the ability to identify defects and/or issues with daily stand up reviews of the testing progress. The Scrum Master is responsible for facilitating sprint meetings, priority of sprint tasks, removal of obstacles to progress, and keeping team on schedule. The Product owner is an integral part of the team which provides validation requirements are functioning as designed. The testing team works collaboratively to write test cases, test execution and deliver requirements as designed within each sprint. Entrance and Exit criteria for each testing cycle will be outlined for each sprint. The Defect process will be outlined in detail and agreed upon between the State and IBM. IBM will leverage CTD (Combinatorial Test Design) to generate sprint test plans, manual test cases and automated regression test cases. RFT (Rational Functional Tester) will be leveraged to test potential security issues with externally facing internet applications. RFT will be leveraged to execute Performance testing. [T.10.I6.6, I6.9, I6.10, I6.11]

Combinatorial Test Design (CTD) is a smarter approach that helps to identify the test cases that are more likely to expose defects and provides a higher percentage of test coverage with fewer test cases. CTD does this by taking a systematic approach to modeling the things that need to be tested, then uses advanced Mathematical Algorithms to dramatically reduce the number of test cases while providing coverage of conditions and interactions and provide higher coverage within each Sprint. CTD is poised well to work within the IBM Watson Agile Methodology due to reusability from Sprint to Sprint and the resources needed to work with CTD are part of the defined Sprint team. CTD Benefits are focused on quality improvements, optimization of effort, and time to market reductions through advanced technologies.

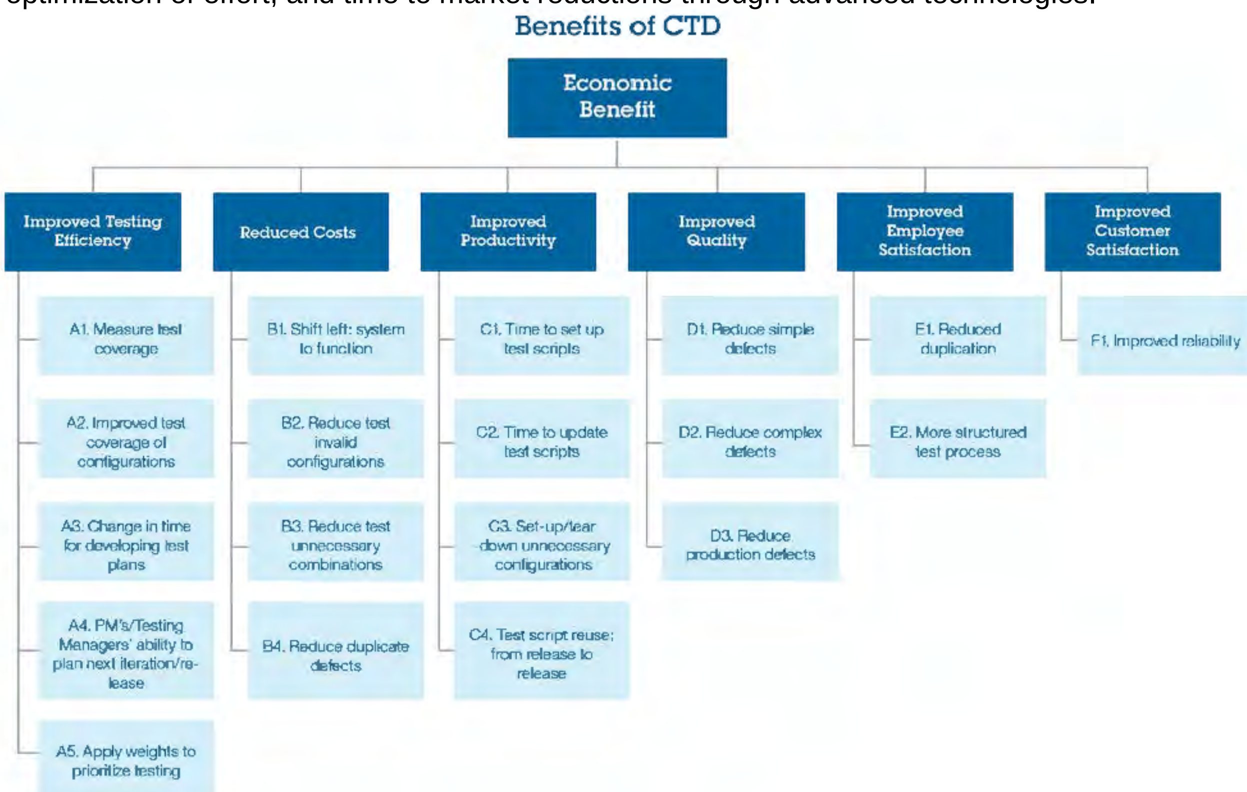


Figure 28: Benefits of CTD

The Master Test Strategy is a document deliverable that outlines each aspect of the testing process being performed and will be part of the Testing DED. The Master Test Strategy will include the following deliverable sections: [I6.1, I6.2]

Table 21: Master Test Strategy

Master Test Strategy			
Project and Release Scope	Entry and Exit Criteria	Defect Process	Testing Readiness Checklist
System Integration Test Readiness Checklist	System Integration Testing Results and Report	User Acceptance Testing Readiness Checklist	User Acceptance Results and Report
Regression Testing Readiness Checklist	Regression Results and Report	Sprint Test Plan(s)	Requirements Traceability Matrix
System Integration Schedule	User Acceptance Schedule	Regression Schedule	Roles and Responsibilities

The Sprint Test Plan details the activities prior to the beginning of each sprint and the schedule of each test cycle. The Sprint Test Plan will be updated for each sprint and will include the requirements selected from the product backlog. The Sprint Test Plan will be reviewed and obtain conditional approval prior to the start of each new sprint by the State and IBM. The Sprint Test Plan will be added to the Master Test Plan Strategy. The Sprint team will hold daily standup meetings to include requirement clarity, test case development, design and development, entrance and exit gates and supporting State of Arkansas IE-BM project to make informed decisions during each sprint. IBM will support State of Arkansas IE-BM Project in the evaluation of test case results from each sprint. **[I6.3, I6.7]**

The Sprint Test Plan will contain the high-level test scenarios that are associated with the sprint requirements which were determined during the Planning & Visioning phase for the sprint. Each completed and approved Sprint Test Plan will be added to the approved Master Test Strategy. **[I6.5, I6.6]**

The Use of de-identified data in lower test environments is recommended when possible for Unit and SIT testing. When performed on “production-like” data as opposed to working with data sets that are manually generated the results are aligned with data typically encountered in production. The benefit with this approach will result in higher quality results and the ability to remediate more defects before the functionality is released to UAT for testing. **[I6.4]**

There will be certain test cases which will require the testing environment be set to a pre-established date and time to test time-sensitive functions, policies and processes. The identified time sensitive test cases will have a designated environment for this execution. The point of time that this testing occurs during SIT may vary based on the requirements within the Sprint. The time sensitive testing approach and process will be in the Master Test Strategy and within the Sprint Test Plan. The test team will work with the development team to execute the time-sensitive test cases to verify that this testing does not have a negative impact on other development or testing efforts that are occurring concurrently. **[I6.8]**

Section 2: System Integration Testing

The State and IBM will review the System Integration Test Readiness Checklist prior to SIT execution to determine the entry criteria conditions have been met. At the beginning of each Sprint the requirements and relevant high-level test scenarios are selected from the product backlog as detailed in the Master Test Strategy. The test team will develop detailed test cases based on the high-level test scenarios at the same time the Developer team begins to develop code. The Development team will perform scripted unit testing as well as sandbox testing on their own work prior to passing the functionality over for SIT execution. The test team will produce test cases that can include integration, security, user interface, data, logic, and error testing. Questions or clarifications regarding the specifics of the test cases will be reviewed by the Product Owner (State SME), Scrum Master (Business Analyst) and the Testing team. The testing teams collaborates with these resources during each sprint to facilitate delivery of requirements as designed. Sprint testing progress and reports will be generated and delivered during the sprint. [**I6.12, I6.13]**

The IBM Watson Agile Methodology includes the Product Owner (State SME), Scrum Master (Business Analyst), Development and Testing team, which helps to decrease the number of defects encountered while the testing team completes SIT. Defects that are found during SIT will be entered into JIRA and resolved by the development team utilizing information from the documented defect and the daily sprint stand-up meetings. Defects with code related changes will pass through Unit and SIT retest. Upon retest of the defects, the development and testing team will provide the results with the Product Owner (State SME) and the Scrum Master (Business Analyst) to facilitate that both IBM and the State have the same understanding that the defect has been resolved and can be closed. Defect results will be documented within JIRA and will be managed during the sprint and not carried over as part of a defect backlog to the next sprint. The IBM Watson Agile Method level of testing and participation by each member of the team yields a high quality finished product and this process greatly reduces the number of issues that may be found in production. **[I6.14, I6.15, I6.16]**

Once development in the Sprint is complete, testing will continue until test cases relevant to the sprint are executed and passed to determine that the entirety of the functionality is working as designed. This testing will be performed with specific user security/permissions enabled as new or changing security settings will be developed during the sprint. **[I6.13]**

When each testing cycle has been concluded as part of the sprint, automated smoke tests will be performed to test the functionality that was developed or changed during the sprint. Rational Functional Tester will be utilized to execute and track the results of the automated smoke tests and these tests will be specific to the functionality developed or modified in the sprint. Regression test scripts will be identified and added to the master regression test suite which will be executed in future sprints and will ultimately be transitioned to the M&O team for ongoing maintenance. Using the determined automated solution, the automated smoke tests and regression testing will be run on the code during every cycle to determine that existing functionality is operating as designed with the changes made. **[I6.17, I6.18]**

After each Sprint in the release has been completed, the results of the unit testing, system integrated testing, smoke tests and regression testing results will be reported by the Scrum Master (Business Analyst) in the SIT Testing Report and Results. The review of this documentation is performed to determine that defects have been addressed and that severity 1 and severity 2 defects from the Sprint are resolved and do not cross over into the next Sprint Phase. Identified defects will be included in this documentation along with problem-impact-resolution statements that describes the issue, the impact of the issue on the overall system, and the resolution developed to address the issue. A SIT completion review meeting will take place at the conclusion of SIT to determine that the team is ready to exit SIT and enter User Acceptance Testing. **[I6.13]**

The benefits of IBM Watson Agile Method can be seen from ConnectWellSD which went from Waterfall Methodology to IBM Watson Agile Method. The below shows the reduction in defects when moving to the IBM Watson Agile Method.

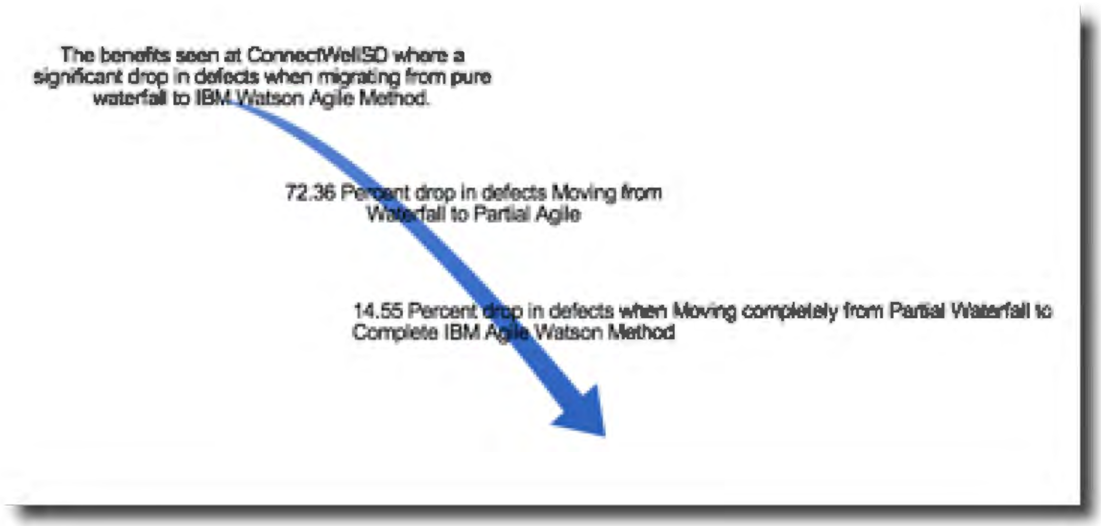


Figure 29: Benefits of IBM Watson Agile Methodology

Section 3: User Acceptance Testing

UAT will begin after meeting SIT exit criteria, successful Regression execution, outstanding severity 1 and 2 SIT defects have been resolved and the UAT Test Readiness Review meeting has occurred. As part of the Test Readiness Review meeting between the State and IBM, the completed UAT Readiness Checklist from the Master Test Strategy for the current phase will be completed and approved to facilitate entry into UAT.

Prior to the beginning of UAT, the IBM team will support environment readiness activities to produce de-identified data sets that will be produced from production data. The data sets will be loaded into the UAT environment for use by the state testers. The IBM team will support required updates to the environment data sets taking into consideration data issues that may have been encountered during the SIT testing. The details of the required data will be included in the Master Test Strategy. **[I6.21]**

IBM will support the State test team with test case development, attend daily stand up review meetings for the UAT test effort. Test cases that were executed during SIT (including security test cases) will be shared with the State UAT test team. IBM testing team and business analyst will also work with State testing team to develop additional test cases necessary for UAT. As SIT test cases are more technical in nature, IBM encourages and will support the State in creating more business process centric UAT test cases. The UAT test cases will be business centric and include end-to-end test cases as part of the UAT Test Suite. **[I6.20, I6.22, I6.24]**

The identified defect solution will be used to track defects during the UAT phase. State end users have a unique and valuable view on their business processes based on real world experience. These users may find defects that were not discovered by the IBM test team, the Product Owner (State SME), or the Scrum Master (Business Analyst). IBM resources will be available to the State UAT test team should questions or clarification be required through the course of UAT. Agreed to defects found will be sent back to the developers to be remediated and will be unit tested by the developer and SIT tested by the IBM test team prior to returning the defect to the State UAT test team for retest. Changes to requirements that occur during the UAT phase will be addressed using the process described in the State of Arkansas IE-BM Project Configuration and Change Management. **[i6.22]**

UAT test cases may require time-sensitive system function testing similar to testing that occurred in SIT. The IBM test team and the development team will work with the State during UAT to accommodate requests to modify the system date and time to support their testing in a dedicated testing environment. The plan for time-sensitive testing for UAT will be included in the Master Test Strategy.

As part of UAT exit criteria automated Regression execution will be completed with that has been developed to date to verify that existing functionality is still working as designed and new or changed functionality is working as designed. The Regression Results and Report will be delivered and reviewed by the State and IBM team. The full regression test suite will be transitioned to the M&O team for their use in ongoing system maintenance. **[I6.8]**

Performance testing will be performed by IBM in a dedicated environment on a copy of production data or on a de-identified copy of production data based on the security requirements of the State. Performance and Security test cases will be developed and reviewed with the State. Performance testing will be performed using the Rational Performance Test tool to simulate high utilization of the system. Identified system degradation or bottlenecks that result in a negative impact to the user experience will be identified and reported to the State and a plan for remediation or mitigation will be implemented to address these issues. **[I6.23]**

After the UAT Report and Results meeting has concluded and each party has agreed that necessary tasks have been completed, the release will be deployed to Production. Immediately after the production deployment, automated smoke testing will be executed to determine the system functionality is performing in the production environment is operating as expected. Regression test scripts will be identified and added to the master regression test suite which will be utilized in future sprints and will ultimately be transitioned to the M&O team for ongoing maintenance. Using the determined automated solution, the automated smoke tests and regression testing will be run on the code during every cycle to determine that existing functionality is operating as designed with the changes made. **[I6.27]**

The Master Test Strategy will include the Test Readiness Checklist that will include the Federal guidelines, reports and supporting materials for review prior to deployment to production. IBM will also develop reports and supporting materials required to pass required or requested Federal review of the UAT test results prior to the pilot. The pilot results will be compliance with Title 7 for 277.18(g)(2)(ii)), which states "Prior to statewide rollout of the system there will be a test of the fully operational system in a live production environment. Pilots operate until the agreed state of routine operation is reached with the full caseload in the pilot area. The design of this pilot shall provide an opportunity to test the components of the system as well as the data conversion process and system performance. The duration of the pilot will be for a sufficient period of time to thoroughly evaluate the system (usually a minimum duration of three months). The State agency will provide documentation to FNS of the pilot evaluation. FNS approval to implement the system more broadly is a condition for continued FFP". (For additional reference see ection 11 Approach to Supporting Federal Review). **[I6.25, I6.26]**

7.0 Approach to Managing Organizational Change, Training and Knowledge Transfer

The Vendor should ensure that the responses to this section are in alignment with the requirements set forth in Template T-10 – Implementation Requirements Traceability Matrix, Section I7.

7.1 Organizational Change Management

Instructions: Describe what the Vendor believes to be an effective Organizational Change Management approach including providing details for a stakeholder analysis, change readiness assessment, gap analysis, and recommendations for organizational and process changes.

IBM Managing Organization Change

IBM recognizes that the state of Arkansas requires a strong organizational change management program for a successful implementation of the IE-BM solution. The IBM Digital Change™ method (which includes Design Thinking) is an approach that will achieve DHS's goal of delivering a high-quality customer experience, promote transparency and accountability, while meeting DHS administrative and procedural needs.

IBM ORGANIZATIONAL CHANGE MANAGEMENT

IBM is recognized for applying design thinking methods to envision, plan, and help deliver product and service innovation for change management. Specifically, IBM excels at:
- Building necessary scope and scale of digital strategy services
- Helping to maximizing overall engagement value to enterprise stakeholders
- Helping limit execution failures and delivery risks

This methodology for managing change has been successful in other states where Cúram was implemented including the State of Missouri, and State of South Carolina. Additionally, in 2016 and 2017 IBM was recognized by IDC Marketscape as a global leader in digital strategy services in organization and change consulting.

Table 22: IBM OCM Key Features and Benefits

Key Features of IBM Digital Change	Benefits to DHS
Business Processes Align with System Functionality	Consistent processes and accurate eligibility determinations across the organization
Policy & Process Drive Workflow Processes	Increased field staff productivity, faster adoption of technology changes

Key Features of IBM Digital Change	Benefits to DHS
Change Leadership & Change Champion Network	Two-Way Communication, Continual Process Improvement

Based on the needs of the State of Arkansas and IBM's extensive experience, IBM is uniquely qualified to help DHS prepare the end-users and stakeholders for the implementation of the Cúram solution.

The Vendor should ensure that the responses to this section are in alignment with the requirements set forth in Template T-10 – Implementation Requirements Traceability Matrix, Section I7.

IBM Training and Knowledge Transfer

IBM has over 75 years of experience in training and is the world's largest training provider with a multitude of learning and training clients throughout the world. Our instructional design professionals possess deep experience designing and delivering train-the-trainer for complex implementations to large, geographically dispersed audiences.

In the past five years, IBM has developed and delivered:

- +5,000 instructor-led training (ILT) courses
- +1,500 web-based training (WBT) programs, and
- +1,000 webinar and internet courses.

Within those trainings, we have delivered over 200,000 hours of training to state, local, and federal clients. And recently, IBM created a successful training solution for the County of San Diego which delivered the following Cúram specific trainings:

- 25 web-based courses,
- 11 virtual learning sessions,
- 39 system simulations,
- 44 step-by-step transactional job aids,
- 12 quick reference guides, and
- Train-the-Trainer program with corresponding instructor/student guides for each course.

Additionally, as a learning organization, we are very proud of the numerous industry awards and recognitions we have received from organizations such as Brandon Hall Training Research, Chief Learning Officer (CLO) magazine, and the American Society for Training and Development (now Association for Talent Development).

IBM Learning Awards and Recognitions

Brandon Hall Excellence Awards

SILVER: 2014 "You Can't Make This Up" Custom Content Series

BRONZE: 2014 Best Use of Social/Collaborative Learning – Better Change for IBM Community – Change Exchange

GOLD: 2013 Best in Competencies and Skill Development Cornerstone Program – Building Executive Performance

GOLD: 2013 Best Use of Mobile Learning – IBM's SAP Practice

SILVER: 2013 Best in Learning Strategy and Governance for a Smarter Learning Catalyst to Deliver Excellence

GOLD: 2012 Sharpen Client Focus, Project Management University, Customized Community Based Learning Curriculum; 2009 – 2010 Project Executive Virtual Negotiation Program, Inclusive Leadership for Emerging Leaders

SILVER: 2012 SimArchitect Serious Game; 2011 First Line Sales Manager, Trusted Advisor Network; 2009 – 2010; Global Sales School; Global Mentoring at IBM; Experienced to Expert Learning Program

BRONZE: 2011 Project Management: 2009 – 2010 Lean Six Sigma Green Belt Blended Learning Program; Blue Opportunities Learning Program

2011 Top 20 IT Training Companies
Training Industry.com

Training Magazine
Top 10 Hall of Fame since 2008

2009: #1 World's Best Company for Leaders

ASTD Excellence in Practice Awards
2012 Citations: First line Sales Manager

2010 Citations: IBM Cross-Enterprise Career Framework: Sales Eminence: Building Relationships and influence for Woman
2009 Citations: Learning Portfolio Management Practice

2012/2009: PMI Continuing Professional Education Provider of the year Award
2011 Outstanding Product of the Year

2010 best in Leadership Development: Large Organization
2011 Ranked #4 in Leadership 500

2012: Gold Awards: Global Learning and Delivery Leadership, Industry learning

2012 Certificate of Merit: Practitioner Innovation Awards. Succeding at IBM
2011 Chief learning Officer – learning Elite "Pinnacle" company #1 Learning Impact
2010 CLO Magazine Learning in Practice Awards: IBM Sales Learning. GTAS e-simulation gamified WBT

Top Companies for Leaders 2011 FORTUNE

2011 Bersin & Associates Learning Leaders Awards: End to end user experience of learning website

India: Golden Peacock National Training Award, IBM Global Process Services

1st – Place – Enterprise wide Collaborative Knowledge Sharing, 2012 Americans Most Admired Knowledge Enterprise (MAKE)
As a 14 time Global MAKE award winner, IBM is a member of the MAKE 2012 Global Hall of Fame

Figure 30: IBM Industry Awards and Recognition

Through effective collaboration between an integrated State and IBM Training team, we will successful complete and deliver a successful Training and OCM program at every milestone for the IE-BM end-users.

7.1.1 Organizational Change Management

> **Instructions:** Describe what the Vendor believes to be an effective Organizational Change Management approach including providing details for a stakeholder analysis, change readiness assessment, gap analysis, and recommendations for organizational and process changes.

The IBM OCM team will work in unison with designated DHS partner who is skilled at defining departmental policy and whose primary role is managing change within DHS. This joint team, which going forward will be referred to as the joint DHS-IBM OCM team, will develop stakeholder engagement activities and end-user communications that will help facilitate the successful implementation and acceptance and adoption of the DHS IE-BM Solution. **[I7.1, I7.2, I7.3].**

The purpose of this approach is to help mitigate project risks, enable an efficient transition, and drive long-term benefits (see Figure 31 below):

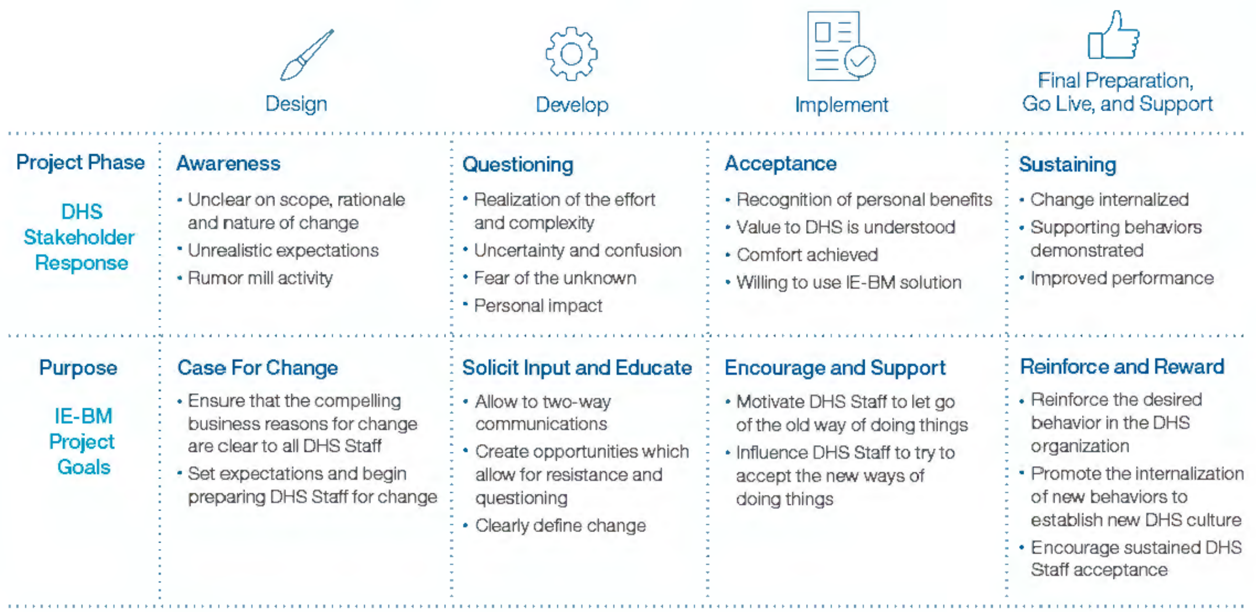


Figure 31: Organization Change Management Purpose and Goals

7.1.1.1 Organizational Change Management Participant Roles and Responsibilities

The joint DHS-IBM OCM team will work to develop a change management team comprised of Change Leaders, Change Managers, and Change Management Team members. **[I7.1, I7.6].**

These three groups are comprised of state employees who are not only respected amongst their peers but also are bought into the DHS IE-BM Solution. By leveraging these groups, the State and IBM will find opportunities to address user challenges and issues that hinder user adoption that could have otherwise gone unknown.

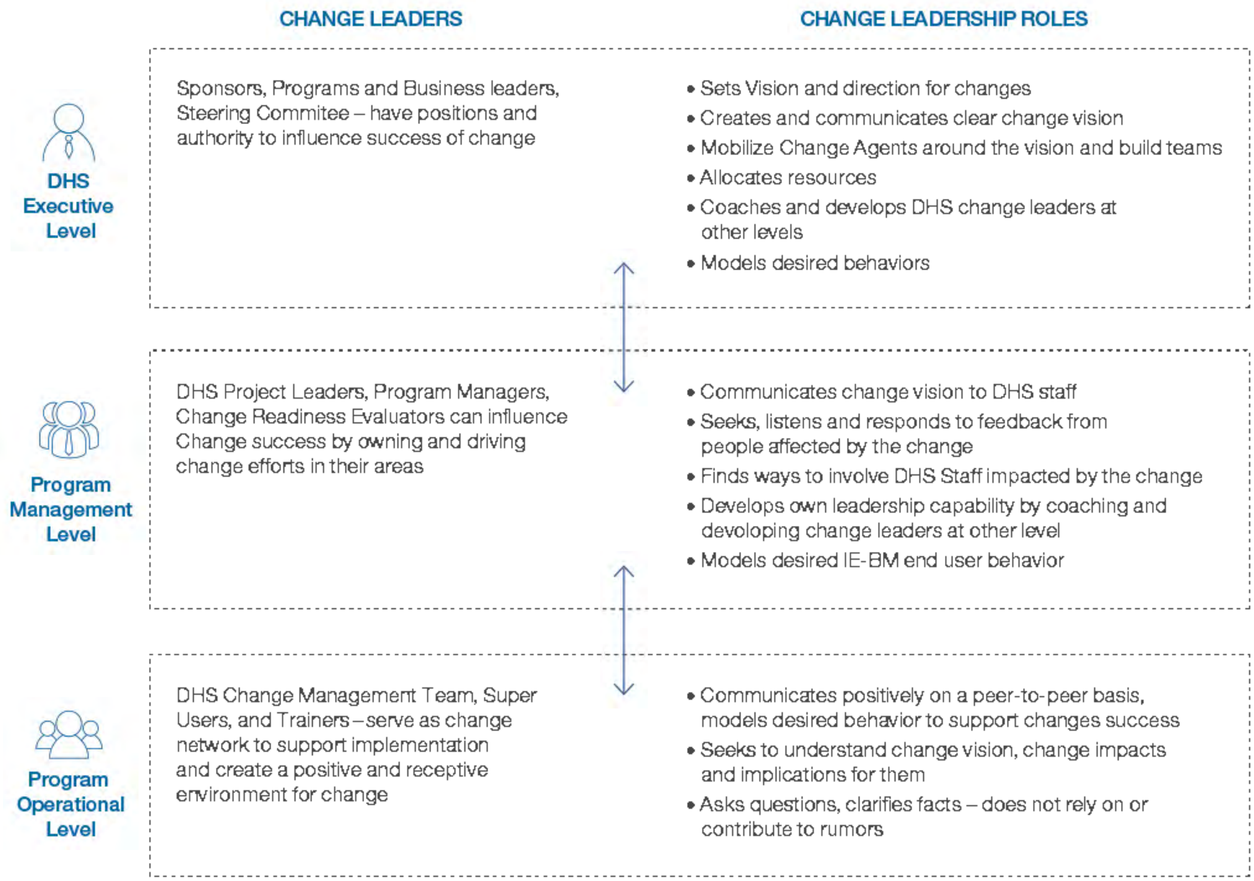


Figure 32: Change Leadership Development Approach

SUCCESS IN MISSOURI

The IBM Team partnered with change leaders and change agents in the State of Missouri to gain user perspective and needs. With this information, the OCM team was equipped to build tools and resources for end-users that better met their needs.

Benefits: *Accelerated user buy-in*

7.1.1.2 Change Leaders

The most senior of these three groups is the DHS's Change Leaders. This group sets and provides direction, demonstrates personal commitment for the change, and influences others to support and commit to the change program. To support this initiative the IBM OCM team will give guidance and leverage learnings from previous engagements, however the state will be responsible for the following activities:

- Engage and align DHS executives and senior leadership
- Mobilize and equip DHS change leaders throughout the organization to drive change
- Equip DHS leaders with change management skills, tools, and resources to support them in their role of leading change for DHS

- Identify the DHS leaders and managers who will have roles in change leadership and identify key actions that they should implement to synchronization of OCM activities and keep the change momentum going

The development of change leadership should be based on the principle that change leadership is not defined by position or hierarchy. To be successful, organizations need change champions at every level of the organization. The diagram below outlines the key components of the change leadership program.

SUCCESS IN MISSOURI

After a major system update in the State of Missouri, the OCM team organized for change Leaders to visit each of the processing centers, where majority of end-users work, to improve morale, give users an opportunity to ask questions, and express concerns.

Benefits: *The time that leadership committed to visiting with the end-users reinvigorated and enhanced trust in the State's strategy and vision.*

7.1.1.3 Change Managers

The second group is DHS's Change Managers. These managers are critical to the sustainability of stakeholder management. With the guidance of IBM, the DHS OCM team will empower this group to do the following activities:

- Develop, update, and execute the IE-BM Change Management Plan
- Monitor the effectiveness OCM activities and achievement of objectives, and recommend actions to resolve issues
- Coordinate change management activities with staff assigned to OCM-related roles defined within the DHS project training and communication plans
- Amend the IE-BM OCM management plan as significant decisions for changes are made through the project change control or governance processes

7.1.1.4 Organizational Change Management Team Members

The third group, change management team members, is comprised of individuals who come from sources internal or external to the project. The IBM OCM team will provide guidance on how to select and manage this group, however the state will be responsible for the following activities:

- Identify IE-BM functional and process changes and their impact; perform analysis functions, such as planning for and assessing the impacts of change
- Delineate and implement change management activities (for example, develop and schedule outreach programs, workshops, and town hall meetings; develop written communication materials such as newsletters, web content, e-mails, posters, and leaflets)
- Participate in evaluating proposed changes
- Coach and mentor DHS team members and other stakeholders in providing effective OCM

- Monitor the effectiveness of OCM activities and make recommendations to help resolve issues
- Act as champions of change for their respective functional areas

SUCCESS IN MISSOURI

The OCM team created communication tools and resources that change agents for the State of Missouri could leverage in "Weekly Huddles" where each field office would come together to learn about upcoming system changes, policy clarifications and new processes.

Benefits: *This empowered change agents to lead conversations with their peers with more accuracy and thoroughness.*

7.1.1.5 Organizational Change Management Plan

The joint DHS-IBM OCM team will develop a Change Management Plan which leverages practices published in IBM's "Making Change Work1" study which IBM identified four essential factors of change that when employed resulted in up to an 80 percent project success rate. This is twice the success of organizations that did not leverage these four essential factors and achieved 41 percent success rate.

The four essential factors that will be incorporated are:

1. **Real Insights, Real Actions** - Strive for a full, realistic understanding of the upcoming challenges and complexities, then follow with actions to address them.
2. **Solid Methods, Solid Benefits** - Use a systematic approach to change that is focused on outcomes and closely aligned with formal project management methodology.

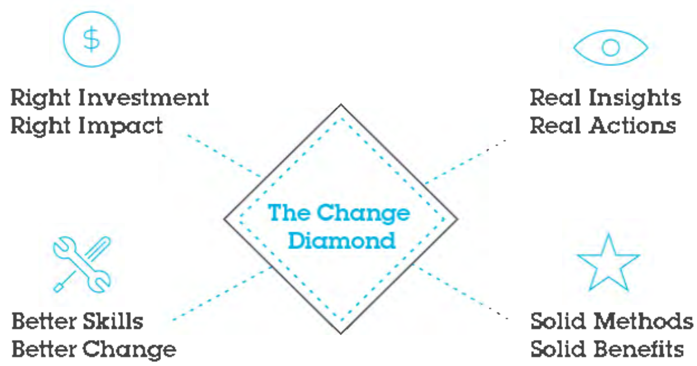


Figure 33: The Change Diamond

3. **Better Skills, Better Change** - Leverage resources appropriately to demonstrate top management sponsorship, assign dedicated change managers and empower employees to enact change.
4. **Right Investment, Right Impact** - Allocate the right amount for change management by understanding which types of investments can offer the best returns, in terms of greater project success.

[1] (http://www-07.ibm.com/au/pdf/making_change_work.pdf)

The joint DHS-IBM OCM team will draw and analyze key associated sources of information to develop the Change Management Plan to align with the DHS Communication and Implementation Plans in addition to DHS Training activities. [I7.1, I7.2, I7.3].

IBM's experience working with other states implementing the IE-BM solution shows that the successful implementation of the Change Management Plan relies on the following critical success factors: **[I7.6]**

- Strong, ongoing executive and senior leadership support to deliver business change
- Well-defined scope and clear vision
- Measurable objectives tied to strategic direction
- Effective planning
- Dedicated, skilled project team with clarity on roles and responsibilities for tasks and transaction with good governance
- Ability to embrace processes and people in addition to the system
- Committed, change "champion" network
- Engaged and informed stakeholders across the organization
- Effective management and minimization of project impacts on each stakeholder
- Tracked and monitored business benefits
- Proactively planned and monitored communications
- Change readiness assessment and monitoring to help mitigate risks
- Detailed communications matrix

7.1.1.6. Communication Process

For both the State of Missouri and State of South Carolina, the DHS-IBM OCM team has successfully developed Communications Management Plans when implementing the Cúram application. This is a critical component to drive user adoption and will be a robust plan that follows the multiple stages of communication campaigns (see figure 21 below) and uses several channels of communication.

The DHS-IBM OCM team will coordinate with the DHS communications team to develop a Communications Campaign that will include the following activities: **[I7.6]**

- Addresses IE-BM Project end user group requirements and raise awareness
- Addresses the needs of the DHS staff target audience and create understanding
- Explains IE-BM project benefits to motivate DHS Staff to commit to the IE-BM solution
- Reinforces DHS staff behaviors to sustain the IE-BM solution and end user adoption

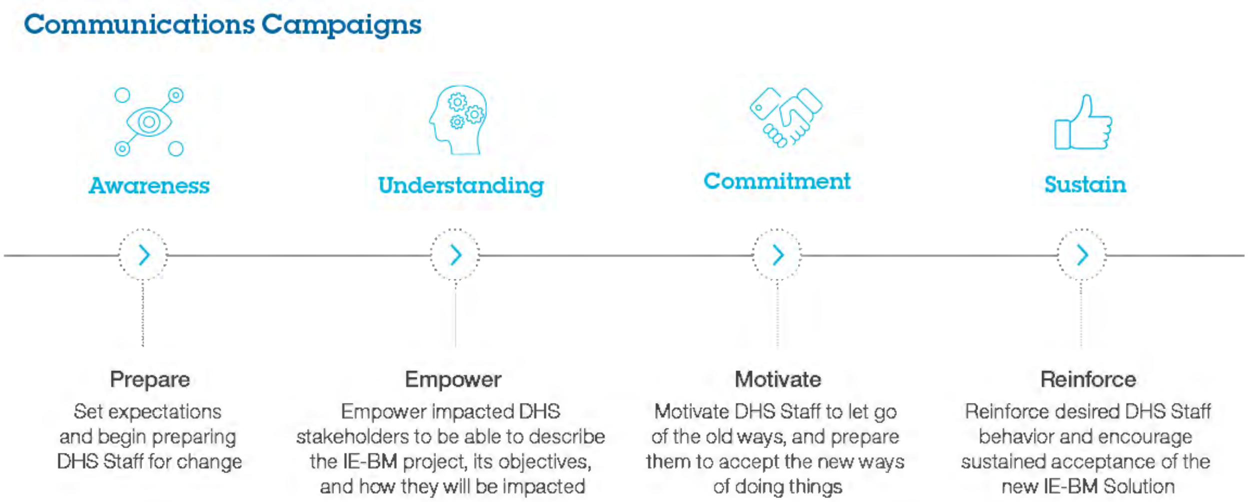


Figure 34: Stages and Results of Communication Process

In partnership with DHS communication team, the joint DHS-IBM OCM team will focus on the following Communication plan goals:

- Create interest and jump-start the IE-BM Project
- Document a plan that describes the two-way communication activities that will occur during each release and foster a DHS culture of continual process improvement
- Help develop communication events, activities, and materials targeted to the needs and requirements of different DHS stakeholder groups
- Provide relevant and current IE-BM Project information to help facilitate change
- Help reduce the spread of misinformation
- Help facilitate the building of DHS Staff commitment and increase their readiness to change through an interactive communication process
- Facilitate provision of targeted DHS communications at the right time, in the right amount, through the appropriate channels

Each communication requires a unique approach and timely communication messages to be effective, as depicted in the following figure below. **[I7-3, I7.6]**

With the communication in place, DHS OCM team will be equipped to communicate proactively and efficiently which will allow for faster user adoption.

Table 23: Proposed Communication Plan

Communication Plan										
#	Delivery Date	Message Purpose	Audience(s)	Frequency	Owner or Creator (Responsible for Preparation)	Media (Internal or External)	Distribution Method	Metric of Success	Sender (Responsible for Delivery)	Message Status

SUCCESS IN SOUTH CAROLINA

The IBM OCM team and the State of South Carolina created a communications team dedicated to keeping end users directly informed of project progress and specific changes coming from each release. The Team developed and delivered weekly Newsletters, weekly Supervisor talking points, FACT sheets, FAQs, and leadership messaging to prepare staff for upcoming system enhancements and available training.

Benefits: *Enhanced project communications effectiveness (understanding, awareness, and enthusiasm) resulted from sending the "right" message to the "right" group at the "right" time.*

7.1.1.7. Organization Change Management Roadmap

The joint DHS-IBM OCM team will develop an initial OCM roadmap that captures the OCM change management approach and include key milestones and corresponding OCM activities to achieve the following objectives: **[I7-1, I7.2, I7.6]**

- Facilitate IE-BM project awareness
- Facilitate encouragement of DHS Staff's desire to change
- Depict how planned changes may benefit each stakeholder and IE-BM end user
- Provide stakeholders and DHS leaders and managers with the tools to help them make the change
- Celebrate successful change

7.2 Knowledge Transfer

Instructions: Describe what the Vendor believes to be an effective approach to Knowledge Transfer including a description of the approach to ensuring super users and technical personnel have an appropriate level of understanding of the System. Describe how DHS Staff will be provided the required technical training.

The goal of knowledge transfer is not to capture knowledge, but rather prioritize the knowledge that is important to DHS in support of the long-term success of the IE-BM solution and the greater DHS organization. It involves applying the collective knowledge and abilities of the entire workforce to achieve specific DHS organizational objectives. The joint DHS-IBM OCM team will collaborate to identify key change positions and roles, assess and identify OCM critical processes essential to IE-BM solution success, and develop a plan of action to capture the critical knowledge and transfer it. [I7.20] To effectively transfer knowledge, the IBM OCM team will provide guidance and best practices in employing a Readiness Assessment tools which empower the DHS OCM team to measure the following:

- Stakeholder Engagement Effectiveness
- Communication Effectiveness

- Training Delivery, Knowledge Transfer Effectiveness
- DHS program and local program preparedness

7.2.1. Measuring the effectiveness of Change Management

Once DHS has collected the Readiness Assessment results, the IBM OCM team will help determine whether additional measures are required to validate that DHS Staff have the appropriate level of understanding of the IE-BM system. Should additional activities be required as a result of a gap analysis, DHS OCM team will be able to update the OCM Change Management, Communication, or Training Plans to address identified gaps. Additionally, as a means of continual process improvement, lessons learned will also be captured to improve the effectiveness of subsequent IE-BM project releases. **[I7.1, I7.2, I7.6, I7.22]**

With the guidance of the IBM OCM team, the DHS OCM team will monitor the effectiveness of the OCM activities and conduct assessments to monitor progress toward achieving readiness to implement the IE-BM Project, and to identify specific areas requiring further effort to successfully make change occur. The DHS OCM team will be guided and supported by the IBM OCM team while conducting the readiness assessment prior to each Release throughout the project lifecycle so the following elements will be assessed: **[I7.2]**

- Determine if the purpose of the IE-BM Project is understood and if stakeholders and DHS Staff believe the project is necessary to achieve improvements
- Resolve key differences between current (“As is”) state, and the future (“To be”) state and perform evaluations to measure stakeholder knowledge transfer effectiveness of IE-BM system functions and business processes
- Conduct training and training evaluations to determine if DHS Staff have acquired requisite knowledge and skills to realize the benefits of the IE-BM project release

SUCCESS IN SOUTH CAROLINA

In the State of South Carolina, the OCM team provided a forum for a two-way, in-person discussion with a representation of workforce members. In this discussion members shared insights and feedback on previous Cúram changes and communications activities.

Benefits: *The discussions aided in providing the qualitative data required to assess how the workforce felt about the current system and communications, and support continuous improvement recommendations to the State.*

7.2.2. Measuring the effectiveness of Knowledge Transfer

Capturing, documenting, and sharing critical knowledge and expertise will occur continuously by the DHS-IBM OCM team. Change management readiness assessments will also serve as a mechanism to: **[I7.2, I7.21]**

- Provide reusable documentation of the knowledge required for certain positions and roles
- Increase the impact of employee engagement and satisfaction
- Integrate staffing, training, job and organization redesign, and process improvements

- Prevent the loss of knowledge held only in employees' heads when the systems integrator support is no longer supported

7.3 End-User Training

Instructions: Describe what the Vendor believes to be an effective approach to training all end-users who will use the System including end-users and executives. Include different classifications of users, the proposed method of training for each of these classifications of individuals, estimated duration of each component of the training program, and the method to be used to ensure that the training was successful. Include the tools and techniques the Vendor plans to use in training.

IBM has extensive experience delivering successful Cúram training to end-users with resources who understand the complexity of the business rules, how that relates to software, business processes and policy and have a track record of developing training strategies and materials that resulted in better service to clients. This is a foundation we have used to successfully deliver Cúram training for other clients. IBM offers a cross-project training collaboration model, leveraging best-practice processes and procedures for the optimal solution.

7.3.1 Approach to Training

Supporting a variety of development and delivery formats, IBM utilizes a combination of industry and customized methodologies to provide a best-practice approach to training. Methodologies leveraged by IBM include:

- The ADDIE (Analyze, Design, Develop, Implement, and Evaluation) Instructional Systems Design (ISD) Methodology
- Kirkpatrick's Four Levels of Training Evaluation

These integrated training methodologies and IBM's professional training developers will deliver a solution that empowers State user groups with the skills to realize the solution's value with speed and confidence. This is a foundation we have used to successfully deliver Cúram training to other clients, like the County of San Diego and the State of Missouri, and are prepared to deliver a successful training solution to the State of Arkansas.

Recognizing that training solutions increasingly include significant technological components (such as instructional software and learning management systems), IBM's Training approach for IE-BM uses an adaptation of the research-based ADDIE ISD approach in combination with deep experience in delivering Cúram training, knowledge of courseware, industry standards, and adult learning principles to create a training program that will meet the needs of the State.

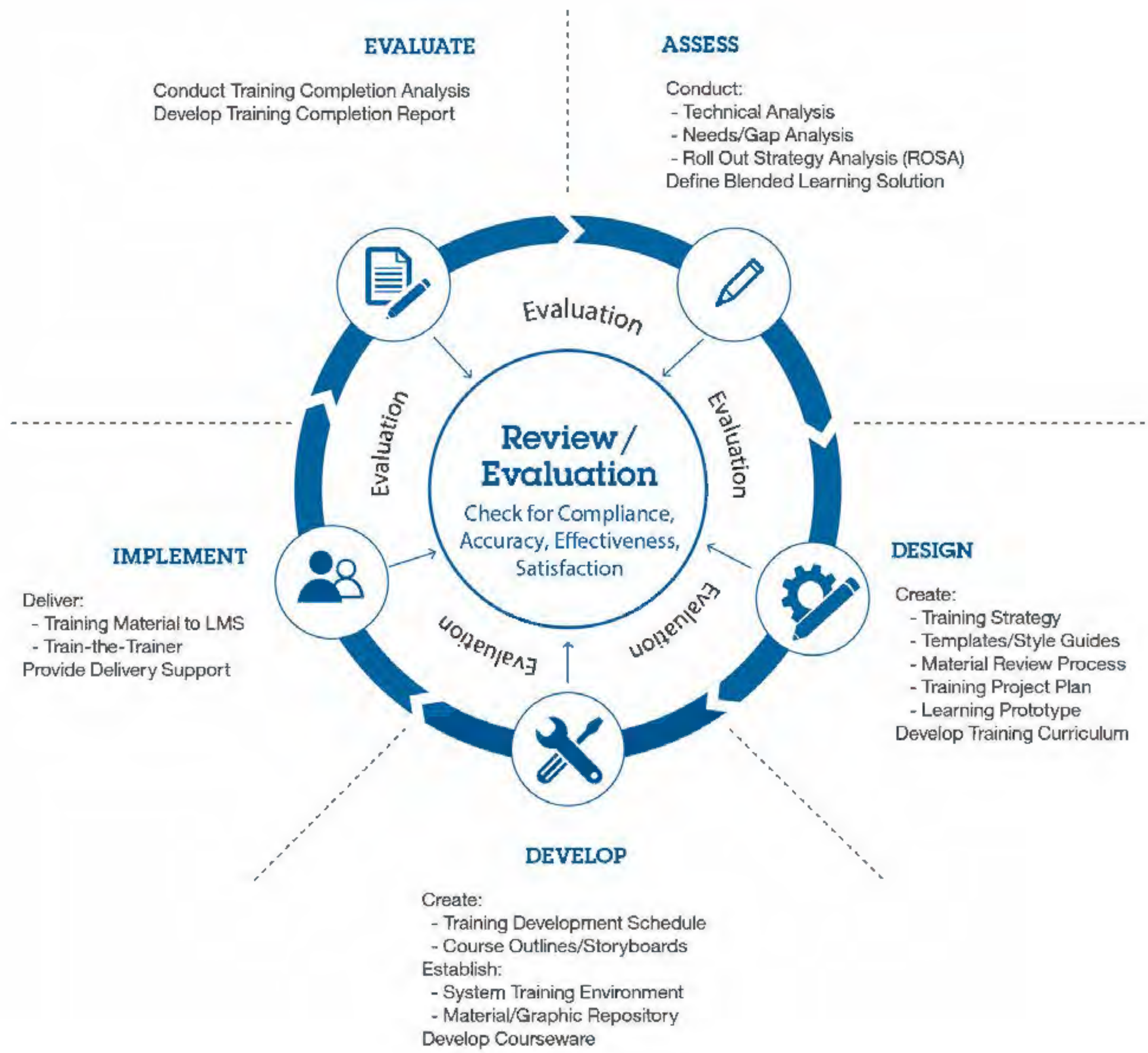


Figure 35: IBM ADDIE ISD Approach

The table below describes the ADDIE ISD methodology in further detail and its benefits to the IE-BM Training Program.

Table 24: ADDIE ISD methodology and benefits

ISD Method Phase(s)	Key Features	Benefits to the CGIS Training Program
Assess	Analyze Learning Needs/Audience and Environment	Perform learning needs analysis by systematically determining goals, identifying discrepancies between actual and desired conditions, and establishing priorities for action.

ISD Method Phase(s)	Key Features	Benefits to the CGIS Training Program
Design	Advise on Learning Solutions	Provide advice and guidance on the various learning system solutions and options appropriate for closing critical skill gaps. Apply knowledge of current learning software, systems, trends, system standards, and independent learning systems vendors and products.
	Develop Learning Objectives and Course Structure	Create clear, testable objectives that serve as the primary guide in determining what you include in the content, whether the solution produces knowledge or performance, how the effectiveness of the solution is measured, and the media selected to deliver the solution.
	Apply Adult Learning Principles and Theories	Apply adult learning principles to create the learning experience. Perform according to key elements of effective adult learning including respecting the learner's need to know why they should learn a subject or skill; need to share in directing their learning; need to bring their own experiences to the learning.
Development	Apply Learning Facilitation Techniques	Apply learning facilitation techniques for a specified curriculum area in which the facilitator has specialized subject matter knowledge and/or practical experience.
	Apply Principles of eLearning and ILT Development	Follow these principles for developing e-learning and instructor led training, as appropriate to each: (1) Apply technical writing and creative writing principles to write the events of instruction that are included in the design of the course. (2) Apply creative writing strategies to write components that motivate students. (3) Write components and sequences using and adhering to the navigation design standards of the instruction. (4) Apply creative writing and test their knowledge whenever they want a progress check.
	Apply Principles of eLearning Design	Apply creative and theoretical concepts to design the primary components of e-learning. Apply principles in the design of learner interfaces that reduces memory burden, reduces errors, reduces effort, and promotes features without interfering with learning the target skills. Design content structure and sequencing by defining what happens, how it happens, and when it happens. Design navigation that provides critical services, such as the ability to preview and personally assess what can be learned; determine how much has been accomplished and how much remains to be learned. Design interactivity that causes learners to think and tests their knowledge whenever they might like a progress check.

ISD Method Phase(s)	Key Features	Benefits to the CGIS Training Program
Implementation	Analyze Learning Delivery Operational Plans	Collect the learning delivery data; analyze tracking reports; provide client with regular updates focusing on exceptions; and provide recommendations.
Evaluation	Analyze Learning and Expertise Measurements	Work with appropriate executives to develop and analyze learning and expertise measurements procedures by determining what learning and expertise information is necessary to support business goal attainment. Periodically review measurements to assess relevance. Adjust measurements as necessary.
	Apply Learning Effectiveness Measurement (LEM)	The IBM Learning Effectiveness Measurement (LEM) methodology is a way of tying learning to business needs. Understand the LEM business strategy as it relates to engagements involving delivery of education. Understand and advise on the measurements associated with training and learning effectiveness.

The IBM Training team will provide guidance to DHS on how to manage their training program, via the train the trainer program. The State will be responsible for the following activities:

- Provide the necessary data input during the initial analysis phase
- Identify State training resources to collaborate with the IBM Training team
- Coordinate and participate in a timely review (per project plan) and approval of developed learning objectives and training/support material by appropriate program stakeholders
- Provide access to appropriate information repositories and State learning systems
- Identify system end users and manage the schedule (per project plan) and logistics of training implementation with guidance from the IBM Training team
- Deliver training to identified system end users
- Extract training completion data and information from appropriate State learning systems at the conclusion of each implementation phase

7.3.2 Training Plan

Whether it is an upgrade of an existing system or the introduction of a new system, training is at the forefront of the user experience. In support of the IE-BM implementation, the IBM Training Plan will describe the training activities necessary to facilitate the successful execution of the project vision. The Training Plan will include the following:

- Scope and purpose of the IE-BM Training Plan
- Training methodology overview
- Curricula development process
- Materials development process

- Material review process
- Approach for delivering training to system end-users

Intended to guide the planning for and implementation of the learning program necessary for the effective delivery of the IE-BM solution, the Training Plan communicates actions involved in the analysis, design, development, implementation, and evaluation of training to foster support with project stakeholders.

The Training Plan will focus on achieving the following outcomes for the learning program:

- Users can perform their function in the IE-BM environment
- Vetted training materials that can be maintained and leveraged for future use
- An infrastructure that supports the ongoing learning of system users

Developed in collaboration with the State Training Lead, the IBM Training Plan will include the timing of training deliverables and will describe the review and acceptance periods allowing two months prior to the beginning of scheduled training for the course outline and one month prior to the beginning of scheduled training for training packages. **[I7.10, I7.11]**

7.3.3 Training Analysis

During the Analyze phase of the ADDIE ISD method, IBM's will begin by elaborating the training requirements of IE-BM end-users to establish the tactical scope for development and delivery of training. The initial analysis includes a review of the current use of performance measures within the State, and continues with the Design, Development, Implementation and Evaluation steps tailored specifically to IE-BM in a scalable design for an initial system go-live or phased rollouts.

IBM will collaborate with the State Training Lead to formulate a baseline for training delivery outcomes while determining estimates for the development of task and process based learning artifacts to support the baseline. IBM focuses training and learning solutions on its knowledge of the intended users, where they work, and in what environment they operate. We will help the State determine optimal performance outcomes and provide appropriately innovative training solutions supporting the IE-BM program.

7.3.4 Training Design

During the Design phase of the ADDIE ISD method, IBM determines the applicable instructional methods and processes in close collaboration with IE-BM Subject Matter Experts (SMEs) and program stakeholders. Based on the results of the initial training analysis, IBM will help the State Training Lead to define the learning curriculum and the estimated duration of training for each identified job role, including end-users, managers, administrators, super-users, and executives. With the learning curriculum established, we can turn our focus to the activity of establishing design templates and processes in preparation for training development.

IBM will follow IE-BM design approaches and protocols while offering recommendations for improvement to be evaluated and approved by the State Training Lead to determine the look and feel of the training in a manner that is aesthetically pleasing and inviting to the learner while remaining functional and versatile. This includes the implementation of standards and practices necessary to create effective learning across the variety of delivery methods.

7.3.5 Training Development

During the Develop phase of the ADDIE ISD method, IBM will create SCORM conformant and 508 compliant learning assets per the schedule established in the IE-BM Project Plan. IBM developers will follow instructional guidance defined in the Training Plan and defined in the IE-BM templates to develop learning assets per the approved learning curriculum. Content outlines and storyboards, presentations, and additional learning and reference material will be developed with the knowledge and support of IE-BM project SMEs to adhere to the intent and design of the learning experience within the State infrastructure and delivery environment.

The IBM team will develop IE-BM training materials in a modular format for appropriate interactive learning for system users, including on-line help documents (job aids and quick reference guides) [I7.8]. The training materials will be maintained to reflect the latest version of the IE-BM solution and the changes resulting from evaluations and use during acceptance, pilot, testing, and implementation. The training materials will be subject to a rigorous training review plan agreed upon by both the State and IBM during which IBM will facilitate the review process [I7.9]. The training materials will include an overview of planned training activities as well as adult learning principles, measurable objectives for learning, agenda, instructor manual, course outlines, evaluation of the training experience and learning assessments.

The IBM Training Team will develop IE-BM training materials that cover:

- Basic overview and navigation of the IE-BM System
- In-depth review of each system function

Following the approved Training Plan, IBM will develop and deliver an effective blended learning solution to address the needs identified through the initial analysis. This information feeds directly into the creation of a training curricula which IBM will collaboratively work on with the State to develop so the interests of each end-user group are considered **[I7.7]**

As a functional component of the developed courseware, IBM will incorporate progress quizzes to validate learner understanding of the material and concepts presented in the training. In addition, upon completion of each learning session trainees will have the opportunity to provide immediate feedback about the course, the learning environment, exercises, simulations, and the instructor (if applicable). These feedback mechanisms provide input to Kirkpatrick's Four Levels of Training Evaluation, allowing insight into the effectiveness of the training material and identifies potential opportunities for improvement. Gaps identified in this manner will be addressed and implemented prior to the formal release End-User Training (EUT). **[I7.16, I7.17]**

The training environment will be populated by data sets provided by IBM for the development of system simulations as well as necessary training data for use in the live end-user training. A data refresh schedule will be established in collaboration with the State to determine appropriate data sets are available for classroom training delivery without impacting the delivery of training **[I7.18]**

At the end of the project, the IBM Training Team will deliver source files to the State and store them in the designated content repository.

7.3.7 Training Implementation

During the Implement phase of the ADDIE ISD method, the IBM training team will deliver a Train-the-Trainer (T3) program designed to deliver training to appropriate project staff (including the technical/operations team) and State trainers in preparation for the roll-out of end-user training. This approach is intended to enhance the capability of State trainers to continue to deliver training beyond the scope of the project and for remediation and staff turn-over. **[I7.19, I7.23]**

Project staff and State trainers will be identified by the State. It would be ideal if selected training resources had training delivery experience, though this is not a requirement for the trainer position. The T3 approach provides instruction for SMEs to develop the necessary skills to become an effective trainer by providing instruction on technical delivery techniques as well as a review of the material developed for the IE-BM training program.

Upon completion of the T3 program, State trainers will deliver IE-BM training to system end-users with logistical support from the IBM team to strengthen the success of the training program.

7.3.8 Training Evaluation

During the Evaluate phase of the ADDIE ISD method, the IBM Training Team will analyze the training data collected during the Implement phase. IBM uses Kirkpatrick's Four Levels of Learning Evaluation to provide the industry-standard approach to determine the effectiveness of the learning experience and identify strengths and weaknesses in the developed learning assets. The figure below describes Kirkpatrick's Four Levels of Learning Evaluation.

Figure 36: Kirkpatrick's Four Levels of Learning Evaluation

Kirkpatrick's Four Levels of Learning Evaluation provides a framework for IBM to set evaluation standards throughout the lifecycle of the IE-BM Training program.

- **Level 1:** Measures how the end-user reacted to the training. Did they feel that the training was a valuable experience? Did they feel good about the instructor, the topic, and the material? It is important to measure reaction because it will help DHS understand how well the training was received by the IE-BM end-users.
- **Level 2:** Measures what the end-users have learned. How much has their knowledge increased because of the training? It's important to measure this, because knowing what IE-BM end-users are learning and what they aren't will help improve training for future releases.
- **Level 3:** Evaluates how far the end-users have changed their behavior, based on the training they received. Specifically, this looks at how end-users are applying what they have learned.

- **Level 4:** Analyzes the results of the training. This includes outcomes that DHS have determined to be good for business and good for the end-user.

Kirkpatrick levels 1 and 2 are developed along with the training material in the ADDIE Develop phase and delivered to end-users as part of their training experience in the ADDIE Implement phase. With support from the State, the IBM Training Team will extract completion and assessment data from the State Learning Management System and survey results from the State survey tool. This data is then analyzed and compiled into a Training Completion Report. The Training Completion Report consolidates the Kirkpatrick levels 1 and 2 and describes the findings from subjective end-user feedback as well as objective empirical data. The Training Completion Report will include:

- The scope of the training, the training timeline, the participants trained, and anticipated outcomes
- The State approved criteria for evaluation and the format for summarizing evaluation results
- Evidence that planned training sessions were held, or an explanation why they were not, attendance statistics, and other summary information
- Evaluation of the readiness of the State trainers to deliver training to the end-user population
- Recommendation for closing significant knowledge gaps

In addition to the Training Completion Report, the IBM team will perform the following activities in conjunction with assigned State trainers and project staff:

- Identify and document training issues
- Collaborate with the State trainers and project staff in the update and maintenance of curriculum and materials

Kirkpatrick level 3 evaluations will be administered by the State three to five months after the training roll-out, and Level 4 will be administered by the State six to nine months after the training roll-out.

8.0 Release 3 Approach to System Pilot, Roll-out and Go-Live

APPROACH TO SYSTEM PILOT

The designated pilot period for SNAP allows IBM and the State to address and resolve issues preemptively, thereby mitigating the risk of issues carrying over during the full production roll-out and transition to M&O.

IBM understands the importance of validating that the SNAP solution has been implemented and configured correctly in the production environment through piloting the use of the application. The SNAP pilot provides IBM and the State with a valuable opportunity to introduce SNAP functionality to a portion of the end-user community before the full-scale deployment to the entire end-user community. This enables the State to familiarize themselves with new functional components and workflows and allows IBM to receive constructive feedback from the State geared towards improving the overall health of the system.

Pilot Approach for Release 3

IBM and the State should not expect a great deal of surprise during the pilot –the SNAP functionality has been reviewed and agreed upon before the pilot starts. Prior to the pilot, roll-out and go-live processes even starting, IBM and State teams have already taken thorough steps to validate what went into the deployment was thoroughly vetted by the State (validated requirements, planning and visioning, sprints, demos, document review, training, UAT).

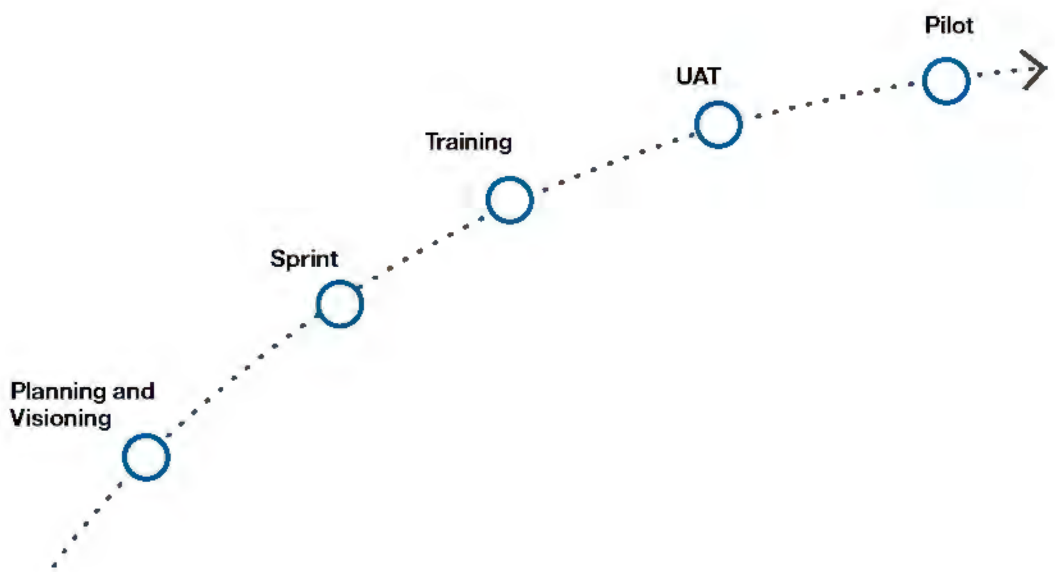


Figure 37: Pre-Pilot Activities

The approach for executing the Pilot is to provide desk-side support to end-users to assist with issues as they occur. This approach enables the users to make progress throughout the pilot phase as well as garner additional skills as the IBM support staff and end-users interact. The approach also increases the quality of the pilot phase as the end-users and vendor support staff develop a common understanding of the IE-BM proposed solution. The benefits to IBM's pilot approach include:

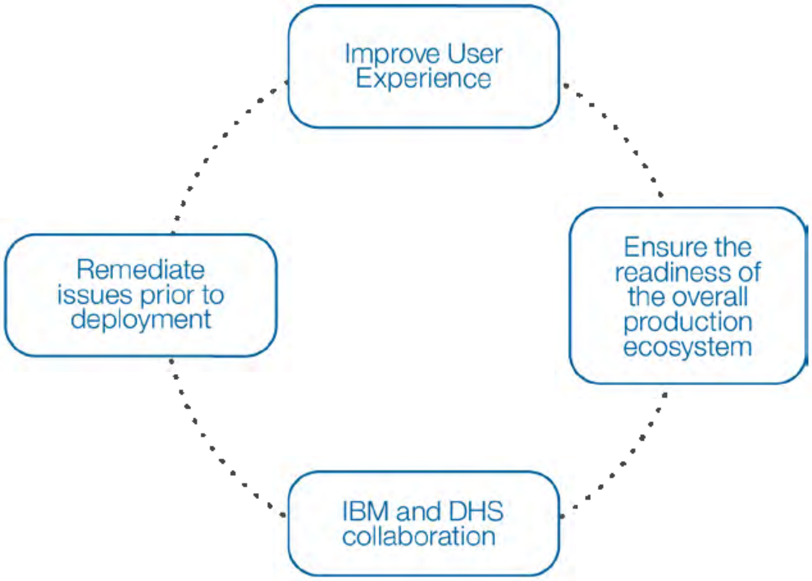


Figure 38: IBM's Pilot Benefits

Pilot Objective

The objective of the pilot activity is to obtain information to validate and improve the planned deployment strategy of SNAP functionality. The following are the key objectives for the Pilot Phase:

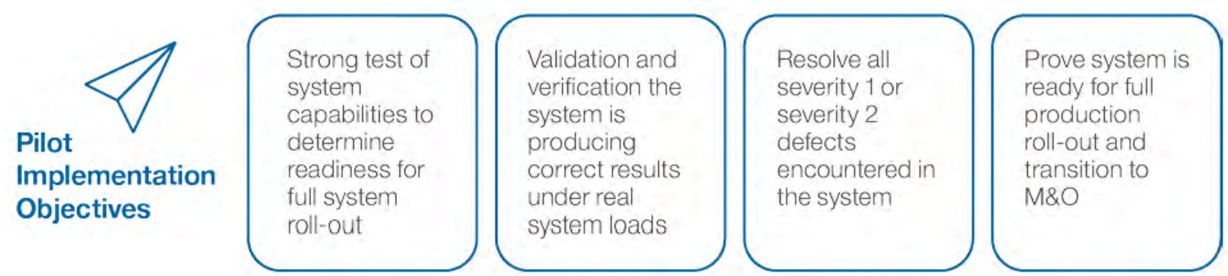


Figure 39: Pilot Implementation Objectives

The duration of the Pilot will be 3 months. Pilot activities will test changes introduced in: business process, training, production support, system documentation, internal and external interfaces, reporting, security, user feedback documentation, problem escalations, and help desk functionalities. The pilot implementation is followed by another round of sprints to remediate issues.

IBM will document issues as they arise and resolve them during the pilot if possible. IBM will provide a list of issues and resolutions to the State. If issues remain open at the completion of the pilot, they will be resolved or, they may be waived if the State and IBM determines them to be sufficiently minor or not actionable.

IBM will effectively manage the pilot program and will collaborate with FNS and the State throughout the process. IBM has designed, facilitated and managed similar pilots on production environments in the past for a variety of clients, such as the PepcoHoldingsInc (PHI). For PHI, IBM provided the end-to-end planning around pilots that cooperatively tied in elements from multiple workstreams into a single environment. The pilot, roll-out and go-live process that IBM will follow is based on our past experiences at such clients as PepcoHoldingsInc (PHI). **[I8.3]**

8.1 Release 3 Pilot and Roll-out Planning

Instructions: Describe the Vendor's methodology, tools, and techniques for piloting and rolling out the System. Describe what specific staging, readiness and deployment techniques the Vendor will use to determine the proper sequencing of deployment processes and functions required for successful implementation. Describe how the planned pilot approach will be in compliance with Title 7 for 277.18(g)(2)(ii).

RELEASE 3 PILOT AND ROLL-OUT PLANNING

IBM will collaborate with the State to plan for the SNAP pilot prior to the full deployments of SNAP functionality in Release 4. The planning will entail coordinating the integration of functionality and data, and determining the support structures that will be in place throughout the pilot.

IBM and the State will determine the location and audience for the pilot so that the pilot is representative of staff from each agency/department/category of work reflected and the diversity in work volume across the various locations. IBM and the State will also determine the method of collecting data, metrics of success, tools, formats, entrance and exit criteria, documentation and training.

IBM will work with the State to determine the composition of the pilot user group and physical sites. It's important that some of the users have some level of understanding of the software before the pilot. Pilot user selection will be a critical part of pilot planning and will consist of:

- Up to 5 counties representing 10% of the overall state population
- Up to 50 individual users

IBM assumes State will provide an appropriately skilled committee to support this initiative. The State personnel should also be skilled at interpreting legislation and defining departmental policy. The following will be required in order to execute the pilot and roll-out:

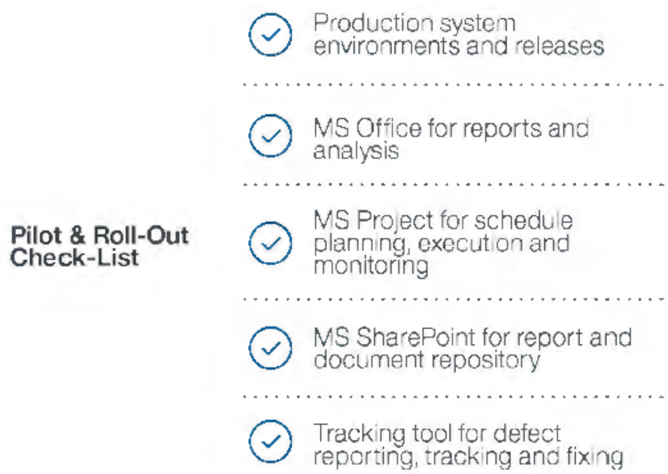


Figure 40: Pilot & Roll-Out Checklist

Start Criteria

Below is an outline of the Pilot Start Criteria:

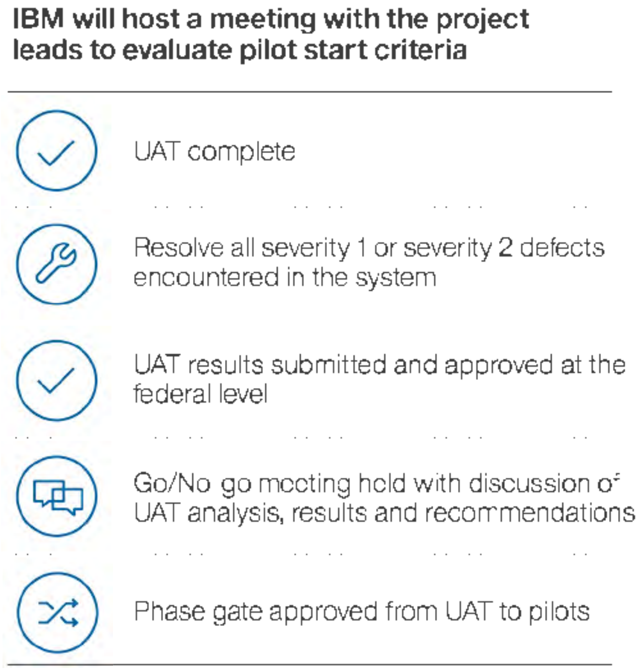


Figure 41: Pilot Start Criteria

Roll-Out Plan

Once the State and IBM concur that pilot start criteria is met, the IBM team will conduct reviews with the State to determine contents of the roll-out plan and the requirements for exiting the pilot phase. The processes, tools, and resources required to develop the roll-out plan include business process definition, data management capabilities, and sufficient staff to make decisions concerning the final version of the roll-out plan. The roll-out plan will be compliant with Federal Title 7 for 277.18 (g)(2)(ii)). **[I8.7]**

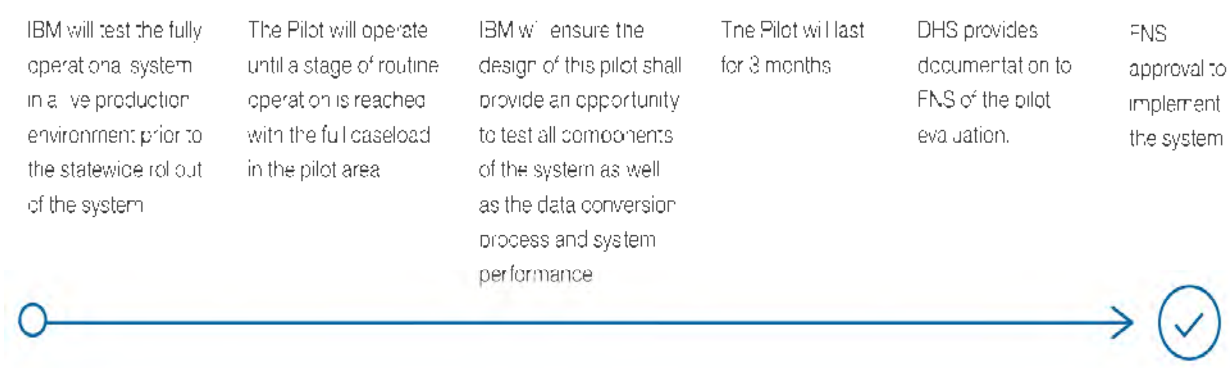


Figure 42: IBM Roll-Out Plan

The Roll-Out Plan will be submitted for approval no more than 60 calendar days prior to the start of Task I.8 (Pilot and Roll-Out Tasks). The Roll-Out plan will include:

- Plan for rolling out the Solution to the organization

- Plan for the Solution pilot to establish objectives, metrics, success criteria and other key planning information
- Schedule for deploying the IE-BM Proposed Solution, training of end-users, and activating of users
- Go/no-go decision points
- Contingency Plans

[I8.9, I8.4, I8.5 and I8.6]

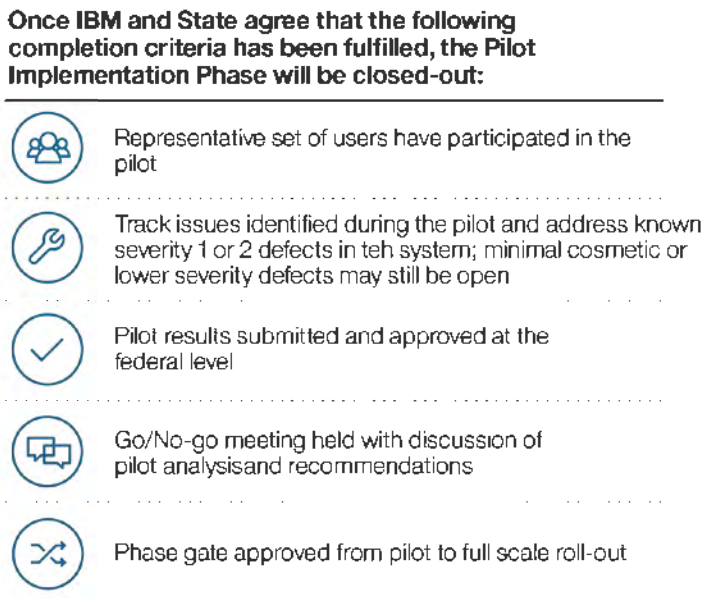


Figure 43: Pilot Close-Out Criteria

Lessons Learned

IBM will provide a report on pilot test activities to be reviewed, communicating lessons learned and whether there is need for modification of the IE-BM proposed solution or client processes. Potential impact to service and operations will be evaluated before deployment based on outcomes from the pilot.

8.2 Roll-Out Approach and Timeline

Instructions: Describe what the Vendor believes to be the most effective roll-out and deployment strategy, including any recommendations regarding implementing/deploying functionality in separate releases and a phased roll-out and a high-level timeline. If proposing a multi-release strategy (i.e., some of the required functionality is not part of the System in the first release), include a description of the proposed phases and the approach to providing all required functionality in the interim (e.g. interfaces to the legacy system). Provide references to the Vendor’s proposed Work Plan and WBS in the required Microsoft Project® Work Plan submission. Describe the vendor’s approach to ensuring a successful incremental deployment strategy, considering geographically remote locations that may require an extended period of time for roll-out preparation.

ROLL-OUT APPROACH AND TIMELINE

IBM's proposed roll-out approach and timeline is focused on speed to value, "quick wins," business impact and efficiency. The IBM Team recommends a deployment strategy in accordance with this approach that includes 5 releases centered around three main program areas: Integrated Application, SNAP and TANF, and Medicaid.

Roll-out can impose a great deal of change and stress on end-users. Therefore, providing a smooth Roll-out is a key factor in gaining acceptance and high satisfaction of the overall solution to the State of Arkansas. To determine Roll-out readiness, the IBM team will assess the pre-implementation readiness of each part of the organization and document the status in a pre-implementation readiness assessment. **[18.8]**

To accomplish one of your goals of getting off the mainframe as quickly as possible, the IBM team designed a roll-out approach and timeline that allows the initial release to be implemented within the first eight months. Although the subsequent releases require more time due to the overall complexity of the functionality, the timeline is staggered and overlaps in a way that helps State and IBM teams collaborate effectively and work efficiently towards delivering the remaining functionality synchronously. Refer to WBS in section 1.0 under Schedule Management and IE-BM Work Breakdown Structure for more information regarding the proposed Work Plan. Below is the Project Delivery Timeline outlining our proposed deployment strategy:

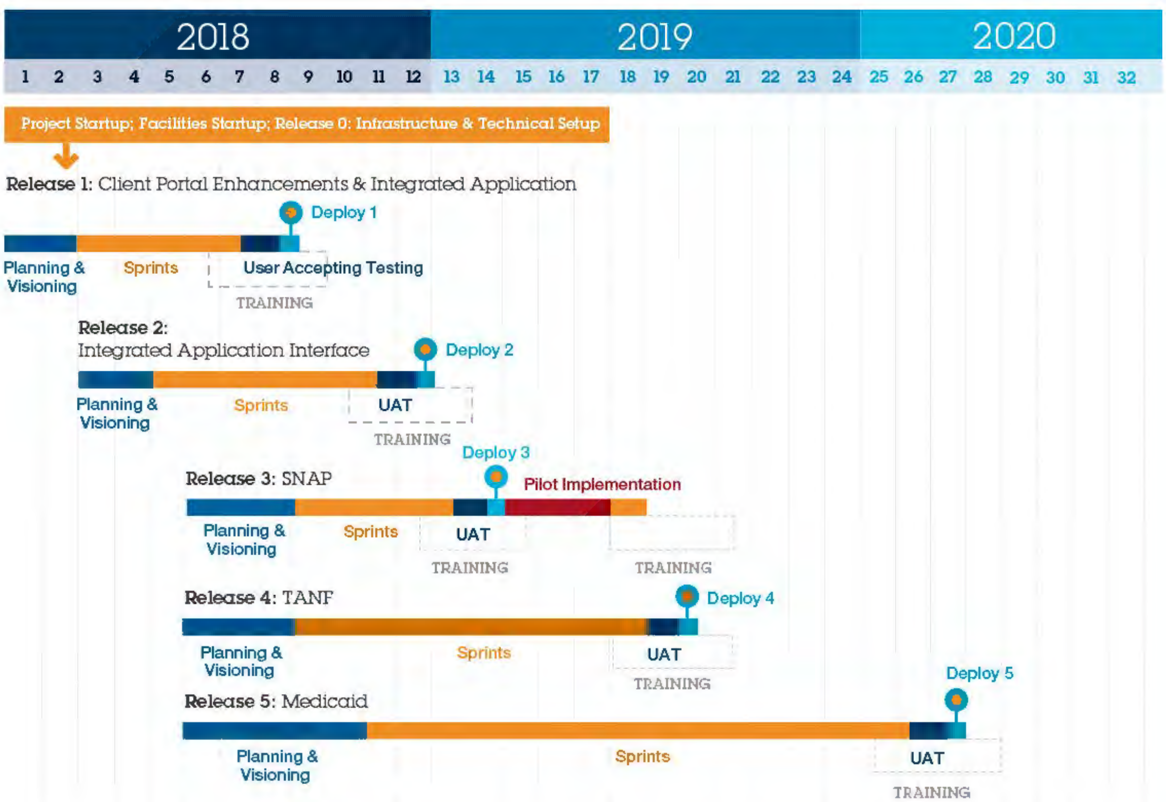


Figure 44: Proposed Deployment Strategy

The first major release (Release 1) is the Client Portal Enhancements & Integrated Application. The following release (Release 2) is the Integrated Application Interfaces. Next, the IBM team will deliver the bulk of functionality in the final three releases (Release 3, 4 and 5). **[I8.2]**

Figure 45: Release 3, 4 and 5

Release 3 consist of SNAP functionality. Release 3 is the initial deployment of SNAP functionality for the Pilot. After the Pilot period ends and the completion criteria is met, we will undergo another sprint followed by Release 3.1 which is the full-scale deployment of SNAP.

Deployment Plan

IBM strives to minimize the impact of the roll-out on the State of Arkansas' staff, production system and overall business routine by approaching the deployment plan holistically. IBM will manage the roll-out including additional support to new user groups and enabling security access. **[I8.10]**

Creating a comprehensive deployment plan helps identify the critical issues. The time spent trying to prevent such problems is time well spent and will be appreciated when the deployment team is in the middle of roll-out with very limited support. Deployment plans document activities that need to be accomplished to successfully migrate systems from the testing environment to the production environment.

IBM's Deployment Plan for the State of Arkansas involves assessing deployment complexity, scope, strategy and organization. The Deployment Plan encompasses critical activities related to testing, training, communications, and site readiness. It will also include deployment Bill of Materials relating to each Phase, critical resources, communications to be documented, contingency plans, and recovery processes in the event of production failure. The State of Arkansas will continue normal operations during the deployments, so IBM's deployment plan will focus on minimizing the impact to business operations and remaining flexible to accommodate emerging needs.

IBM will submit a Deployment Plan for approval no more than 90 days prior to the start of Task I.8 (Pilot and Roll-Out Tasks). The Deployment Plan will be submitted once for the initial release and the updated for subsequent releases. The Deployment Plan will include: **[I.2.10] [18.9]**

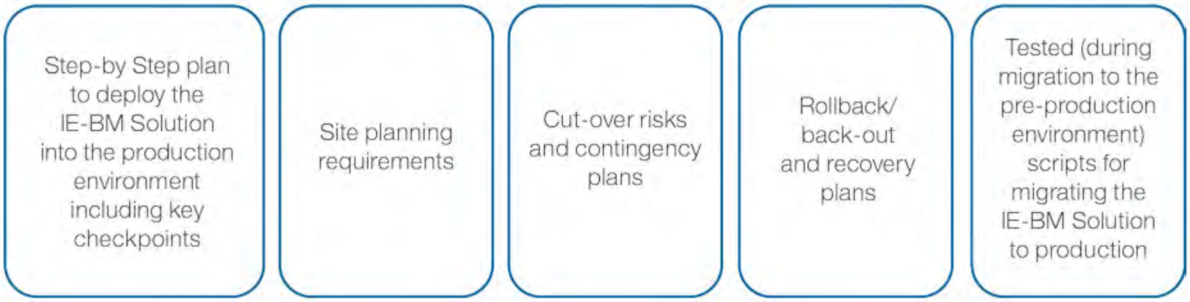


Figure 46: Deployment Plan

IBM will develop the Deployment / Roll-Out Deliverables outlined in section 13. IBM understands these deliverables will be formally approved by State staff. IBM will complete these deliverables in compliance with the Project Schedule and complete the deliverable approval process in a timely manner as agreed upon in the final contract. **[I8.1]**

IBM has relied on deployment plans for its clients in the past. IBM successfully primed two of California's largest complex Health and Human Services Contracts – Child Welfare (CWS/CMS) and Child Support Enforcement (CCSAS/CSE). Similarly, IBM recently completed the largest technology transition project for DHCS on the Medicaid Project as the subcontractor responsible for, and successful in, transitioning the State's Medicaid automation systems from HP to IBM Data Centers with no disruption of service. IBM was successful on these engagements by creating and strategically executing comprehensive deployment plans that were in alignment with client expectations and system needs.

Activities Needed Prior to Roll-Out

Shortly before roll-out, IBM will set up a Deployment Control Room where the deployment team is available to the State of Arkansas for collaboration, coordination, and problem resolution. The Deployment Plan will identify the specific number, type, skill level, and roles of the deployment team.

IBM will also establish an issue management process for issue resolution. Issues are documented, actions are defined with responsible parties identified, and solutions are tracked to completion. Unresolved issues are automatically escalated through technical and management chains until tough issues are resolved.

IBM will identify and define the key tasks, milestones, and dependencies as necessary. This will be integrated into the work breakdown structure while aligning to the Project Management Plan. Operations and administration procedures related to deployment will be included at this stage. Below are additional activities that are needed prior to an effective roll-out:

Table 25: Additional Pre-Roll-Out Activities

Activities Needed Prior To Roll-Out	Description
Provide the Configured Hardware Environments and Documentation	IBM will work with the State to lay out production and disaster recovery environments, along with related specification of hardware and other required infrastructure.
Data Cleansing is Complete and MDM in Place	We anticipate data cleansing to be complete before the beginning of deployment. The data conversion at the beginning of the Pilots demonstrates clean data has been

Activities Needed Prior To Roll-Out	Description
	maintained by our MDM solution. MDM minimizes or eliminates manual corrections to data after future conversion.
Data Conversion Tools and Scripts are Validated and Fully Operational	The data conversion will validate the operational readiness of our data conversion tools and procedures. IBM can perform a subsequent data conversion prior to re-enforce the ability to convert data successfully. Insomuch as end users continue modifying databases up to and throughout the Go-Live event, data will need to be converted one last time after which the legacy database is retired.
State Review and Acceptance of Required Deliverables	IBM anticipates timely, complete, and quality deliverables resulting in minimal rework, if even required. We also anticipate timely review and acceptance or feedback of deliverables from the State. By setting expectations and success criteria for deliverables early in the lifecycle, we increase the likelihood of acceptance on first delivery.
Help Desk is Ready and Staffed for Deployment	Help Desk is ready before the beginning of the pilot. Staff augmentation required for Deployment is in place.
The Comparison of Test Results Against the Performance Standards	IBM's comparison of test results against performance standards is completed and issues are resolved prior to the beginning of Deployment.
Readiness of Locations	We do not anticipate changes to equipment or facilities at State offices. This assumes end users, even if they are remote, have standard PC applications such as MS Office, Adobe Reader, and Internet Explorer. We recommend the State communicate the requirements for operational facilities and equipment provided. This allows them to make software upgrades if required. IBM will follow up with the State to identify preparation that has not been completed and work with the State to resolve them.
System Users and Security Profiles Have Been Identified and Set Up in the Integrated Eligibility System	We review the existing user profiles using the same data conversion methods as for other databases. Information is used to initialize the user and security profiles. We communicate the results to the State offices for additions, removals, and corrections.
Determine Release Readiness	IBM will take inputs from the above activities to closeout or disposition open items during the pilot implementation. If an item requires correction, but does not delay Go-Live, the item resolution may be delayed until resources are available to address the issue. This methodology will utilize resources over the course of the pilot implementation and improves the quality of the solution at Go-Live.

Support During Roll-Out

IBM has support expertise through facilitating many production and deployment projects globally. Our objective is to create an initial project support strategy to plan the deployment of staffing, skills, facilities, tools, communications and procedures requirements to provide that the production support organization is in place for go-live and beyond. As an example, IBM provided 24/7 operations support for a highly complex environment, consistently meeting or exceeding SLAs for the HIGLAS project. IBM has tailored the general process for its system implementation projects for the State of Arkansas.

This will require regular communication with the State of Arkansas and IBM to define and assign roles, responsibilities, and estimated level of effort to answer and track production support issues during deployment. IBM will track deployment status and notifications throughout this stage and provide input into check-point meetings to pulse-check the roll-out and decide if changes are required. **[I8.11]**

Below is a summary of the activities that need to be conducted during the roll-out:

Table 26: Additional Roll-Out Activities

Activities Needed During Roll Out	Description
Address Hardware and Software Requirements	IBM will address production support requirements that are compatible with existing legacy systems. At this stage, IBM and the State of Arkansas will analyze whether additional physical materials need to be acquired
Determine the Production Support Team	IBM and the State of Arkansas will organize personnel for the support team through deployment of each Phase. This team will be comprised of the implementation project team members to maximize easier transition from development to deployment. IBM will also take initial steps to transition members of the implementation team into support roles during the first four weeks.
Launch the Help Desk	IBM will follow our standard help desk launch procedures. The launch procedures cover areas including: • Organization makeup – numbers and types of resources required • Roles and responsibilities • Telephone scripts • Guidelines for prioritizing and categorizing issues • Documentation and communication to the end users on how to use the help desk • Training material sessions for help desk staff • Level 1 and Level 2 scripts
Define the Help Desk Procedures and Facilities	IBM will provide system support by setting up the help desk, help desk personnel, and a dedicated help desk number throughout Phase 1, Phase 2, Phase 3, Phase 4, and Phase

Activities Needed During Roll Out	Description
	5. IBM will monitor the help desk through each Phase deployment and be prepared to take action to improve the help desk service. Level 1 will be centered around basic client issues, Level 2 will focus on more in-depth technical support, and Level 3 will represent an escalation to the software manufacturer for software support. IBM will utilize the issue management features in our Rational Tools to collect and track submitted issues, and then export the contents of the knowledge management system to be introduced to the State of Arkansas's knowledge management tool.
Perform Help Desk Support	IBM will provide client-facing help desk support to answer issues relating to the State of Arkansas's system performance and/or operations. IBM will align the defect management process to escalate issues that are beyond the scope of the first level of production support. IBM will record and prioritize change requests based on scope and severity.

IBM will determine deployment readiness in the form of an evaluation and report, which will provide an overall assessment of the state of the software being considered for release and whether it meets the exit and release criteria. This includes holding regular Readiness checkpoints and agreeing that the following tasks have been completed:

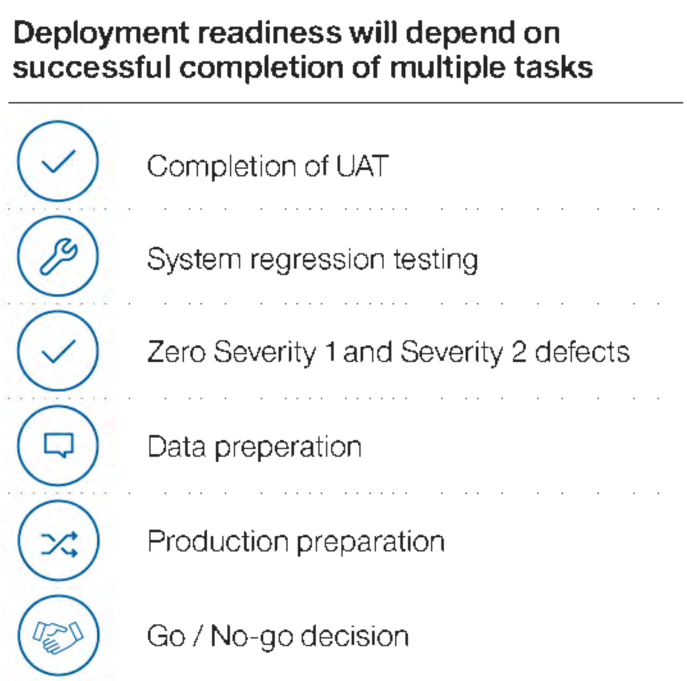


Figure 47: Deployment Readiness Criteria

Post Roll-Out and Go-Live

The IBM team will coordinate with the State of Arkansas to install the IE-BM proposed solution, migrate the data, establish the interfaces, perform release testing, and switch the user interface to the new IE-BM capabilities. IBM will provide post release support (for each release), up to the contracted time period, after the IE-BM proposed solution has been rolled out to all users, resolving go-live issues, defects and enabling a smooth transition to ongoing M&O support processes.

As part of Project close out activities, IBM will update documentation and assist in the smooth transition to the M&O team. IBM will collaborate with the State to update the IE-BM Proposed Solution M&O documentation. IBM will assist in developing the Maintenance and Operations documentation to include the following:

- Maintenance and Operations Plan
- Staffing Requirements
- System Maintenance Procedures
- Support Plans and Processes

[I8.12, I8.13, I8.14, I8.15]

9.0 Approach to Steady State (System Warranty)

The Vendor should ensure that the responses to this section are in alignment with the requirements set forth in Template T-10 – Implementation Requirements Traceability Matrix, Section I9.

Instructions: Describe how the Vendor plans to identify, classify and manage any required warranty fixes and how this will integrate with the M&O processes.

APPROACH TO STEADY STATE

IBM will monitor the newly deployed IE-BM solution, along with the status of the implementation during the warranty period. After the warranty period expiries, the monitoring will be performed by the State.

The IBM team provides a capacity work model within and across our project work streams. Resources from within DDI and M&O teams are frequently shared, and rotated between the organizations to provide strong technical skills and acute awareness to the roles and responsibilities of each organization. Working in a capacity model allows us to quickly and seamlessly shift resources to support surge requirements in either work stream. This best of breed method helps provide equality of skill development and equality of project maturity across the organization.

In the event of a production issue (bug/defect) related to a move to code deployment, DDI and M&O work closely, hand-in-hand to perform Problem Determination (PD) and Problem Resolution (PR) to production issues. IBM will leverage the M&O plan to outline processes to resolve defects identified after go-live. These defects will be resolved by IBM at no cost to DHS during the 12-month warranty period after major releases. IBM agrees with the State that a defect is defined by “the System not conforming to the specifications documented as part of the project.” **[I9.2]**

IBM understands, acknowledges and will comply with the state’s requirements for:

- 12-month warranty to begin after major releases
- Integrate Warranty Support into M&O activities
- Provide transition support at the end of the term of the Contract
- Use of minor releases for warranty break-fixes
- Incident and defect reporting through M&O, project help desk
- Break-fix defects tracked in project defect tracking system
- Communications through OCM and training updates for major and minor releases
- Knowledge transfer to State and M&O team ongoing during transition to M&O as needed
- Transition to M&O during 3-month period at the start of warranty

[I9.1 I9.2, I9.3, I9.4]

10.0 Design, Development and Implementation (DDI) Service Levels

The Vendor should ensure that the responses to this section are in alignment with the requirements set forth in Template T-10 – Implementation Requirements Traceability Matrix, Section I10.

Instructions: Describe the Vendor's approach to meeting the various SLRs, some of which include:

- Deliverable Schedule
- Deliverable Quality

To meet the Arkansas IE-BM proposed solution delivery schedule and quality requirements, the IBM team proposes to implement using our IBM Agile Watson Methodology with our World Wide Project Management Methodology (WWPMM) to mitigate risks and quickly deliver the envisioned value to the State while maintaining deliverable schedules and quality. The IBM Agile Watson and WWPMM methodologies is a proven approach for complex system implementation derived from experience with similar projects. Unlike pure software development methodologies, IBM Agile Watson along with WWPMM is a comprehensive methodology that incorporates technical and non–technical work streams into a cohesive delivery framework. **[I10.1, I10.2, I10.3 and I10.4]**

DDI SERVICE LEVELS

IBM is a leader with over 15 years' experience managing and executing Agile SDLC methodologies on large, complex projects. Our standard IBM Agile Watson methodology has matured through client engagements and the incorporation of best practices within the Agile movement.

IBM recognizes that today's business systems are no longer monolithic applications residing on one or two platforms, but are complex ecosystems of components working in concert to enable business functions for users. For this reason, our hybrid approach differentiates itself from other methodologies.

DDI SERVICE LEVELS

Promotes system integration through holistic architecture design and end-to-end business requirements modeling.

As a leader in design, implementation, and support of our clients' critical systems, the concept of Complex Systems Integration has long been part of IBM's overall delivery methodology library.

- Project Management Overview
- Project Phases

- Project Management Tools
- Release Schedule
- Project Plan
- Deliverable Expectations Documents
- Governance and Management Communications
- Project Configuration and Change Management
- Project Quality Management Plan
- Risks and Issues Management

Using our IBM Agile Watson and WWPMM approach and methodology, we will perform the below project activities to deliver the Arkansas IE-BM Proposed Solution with speed and confidence in a successful outcome.

DDI SERVICE LEVELS

Allows individual work streams to use specialized techniques to optimize solution components.

IBM is committed to providing our clients with high quality delivery excellence by continuously analyzing and reporting against key DDI project metrics so to keep our finger on the pulse of the project, staying ahead of potential pitfalls, and using the project "health check" data on a near real time basis to determine the health of the project. In order to establish the key DDI project metrics and the creation of Arkansas IE-BM proposed solution Service Level Requirements (SLRs). The IBM team will work closely with the State to identify mutually agreed upon Service Level Requirements and Metrics that adheres with Arkansas IE-BM proposed solution deliverable expectations and federal standards.

Below are examples of some key DDI and M&O metrics that we monitor and scrutinize:

Table 27: Sample DDI Metric Definitions

Measurement Name	Measurement Definitions
Requirement (Rqmts)	Percent complete are calculated from the parent and/or subordinate tasks tied to the Requirements Affirmation Session tasks.
Design	Percent complete are calculated from the parent and/or subordinate tasks tied to FDS Updates tasks.
Development (Dev)	Percent complete are calculated from the parent and/or subordinate tasks tied to Development or Refactoring tasks.
System Integration Test (SIT)	Percent complete are calculated by total number scripts executed out of total number scripts per track, which is obtained from JIRA.
SIT Pass% / Fail%	Percent complete are calculated by total number scripts failed out of total number of scripts executed, which is obtained from JIRA.
User Acceptance Test (UAT)	Percent complete are calculated by total number scripts executed out of total number scripts per track, which is obtained from JIRA.

UAT Pass% / Fail%	Percent complete are calculated by total number scripts failed out of total number of scripts executed, which is obtained from JIRA.

Sample DDI Metrics

Table 28: Sample DDI Metrics

Release	Package Number	HCR ID	HCR Description	Rqmts %	Design %	Dev %	SIT %	SIT Pass% / Fail%	UAT %	UAT Pass% / Fail%
Release 1 12/05/16 02/27/17	Package 1	HCR 7	Updates to Manual Eligibility	100%	100%	100%	100%	100% / 0%	100%	100% / 0%
		HCR 9	PCS – Eligibility Display	100%	100%	100%	100%	100% / 0%	100%	100% / 0%
		HCR 10	PCS – Equifax Interfaces via FDSH (hub)	100%	100%	100%				
		HCR 10.1	PCS – SSA Title II	100%	100%	100%				
Release 2 12/05/16 05/02/17	Package 2	HCR 4	Authorized Representative Fixes	100%	100%	100%	Future Task	Future Task	Future Task	Future Task
		HCR 5	Change in Circumstance Script for Worker and Citizen Portal	100%	100%	100%	Future Task	Future Task	Future Task	Future Task
Release 3 12/05/17 07/26/17	Package 3	IBM 1	Cúram Upgrade	100%	100%	50%	Future Task	Future Task	Future Task	Future Task

The IBM team recommends that reviewers of this proposal refer to Section 1.4 of our proposal for more information surrounding IBM quality standards, process and procedures.

The IBM team also acknowledges and agrees to comply with the State's requirement to include deliverable review cycles built into our WBS. We acknowledge and agree to the following stipulations:

1. 10 days initial State review leading to approval or comments
2. If comments, 5 day IBM response
3. Upon IBM response, 5-day State second review and approval
4. If rejected after second review cycle create and execute deliverable correction plan to address deficiencies

[I10,1 I10.2, I10.3, I10.4]

11.0 Approach to Supporting Federal Review

Instructions: Describe how the Vendor plans to support the Federal review process to ensure the System is compliant with all Federally mandated (CMD, FNS etc.) guidance and rules. The Vendor should define its approach to completing the federal review. The approach should address, at minimum, supporting DHS with on-site Federal review visits and addressing identified gaps/deficiencies in order to meet Federal requirements.

IBM is committed to working with the State of Arkansas to comply with Federal statutes and requirements along with audits, remediation, and reviews that are necessary for the IE-BM project. We have a large public sector practice that does business with the US Federal Government and our project managers, executives, and consultants have a working knowledge and experience in meeting federal guidelines. We understand the importance of federal compliance and are fully committed to both work within those guidelines and constraints as well as to assist the State of Arkansas achieve and maintain full compliance.

We are familiar with requirements to align with the Medicaid Enterprise Certification Toolkit (MECT)/Medicaid Enterprise Certification Lifecycle (MECL) to help the System meets federal requirements and satisfy the objectives described in the State's Advance Planning Document (APD) and will work with the State as needed to meet those requirements and objectives **[I1.44, I1.46]**

We will also support DHS in preparing for federal reviews and certifications (e.g. Medicaid and FNS) by developing and preparing required documentation throughout the project, attending interviews and providing additional documentation as needed. **[I1.45, I1.47]**

Our approach to supporting these compliance processes is to:

1. Initially review the guidelines provided by the respective federal bodies along with state guidance in meeting them.
2. Assign a person in the PMO to coordinate and create compliance document packages and proof points, and track progress of audits and reviews working closely with the IBM and DHS Project Managers.
3. Submit compliance documentation as required for the audit or review being conducted.
4. Attend review meetings and interact with federal and state personnel to demonstrate compliance, receive feedback, and remediate issues.
5. Submit remediation as may be necessary to complete compliance reviews and obtain approvals or ratings as applicable.

We will also develop reports and supporting materials required to pass required or requested Federal review of the pilot results in compliance with Title 7 for 277.18(g)(2)(ii)), which states "Prior to statewide rollout of the system there will be a test of the fully operational system in a live production environment. Pilots operate until the agreed state of routine operation is reached with the full caseload in the pilot area. The design of this pilot shall provide an opportunity to test components of the system as well as the data conversion process and system performance. The duration of the pilot will be for an agreed upon period of time to thoroughly evaluate the system (usually a minimum duration of three months). The State agency will provide documentation to FNS of the pilot evaluation. FNS approval to implement the system more broadly is a condition for continued FFP"

In order to comply with this statute, we will conduct a 90-day pilot for the SNAP program functionality of the IE-BM system. Our approach to the pilot includes several steps:

1. Identify participants. We will seek out a representative cross section of statewide users of not less than 40 users and not more than10% of expected users to participate in pilot activities.
2. Plan and prepare for the pilot. We will prepare a pilot schedule for meetings and activities to be performed by users. We will prepare test scripts and test methods that will be employed by pilot users to verify the IE-BM system in an operational pilot. We will identify communications that we will produce during the pilot period.
3. Conduct the pilot. We will work with pilot users for a period of 90 days to provide training, help desk support, and live reporting sessions where there can be a two-way flow of communication about the new system and its usage.
4. Evaluate pilot results. We will gather pilot test data, perform surveys, and collect ad hoc feedback from pilot users to measure results. An ongoing weekly analysis of the results will be performed based on feedback from the pilot users.
5. Report results and recommendations. Pilot reports will be created weekly to track results and progress. A final pilot report will be generated with overall pilot results and recommendations for future system usage.
6. Following the pilot, a final four (4) week sprint will be conducted to make modifications and updates to the IE-BM system that may be necessary prior to a full statewide roll out.

The pilot will provide the opportunity to measure results from a representative cross section of statewide users, comply with federal statute Title 7 for 277.18(g)(2)(ii)), and prepare for successful roll out of the IE-BM system functionality to the broader set of statewide users. **[I8.7]**

We will also conduct review checkpoints consistent with the Centers for Medicare & Medicaid Services (CMS) Expedited Life Cycle (XLC) and documented in the “CMS XLC Guidelines for Agile Projects” as stated in Section 4.1, Requirements Validation and System Design Methodology. This includes CMS Requirement Reviews (RR), Architecture Reviews (AR) and Preliminary Design Reviews (PDR) as shown in the following diagram.

Figure 48: CMS Agile Review Checkpoints

IBM is fully committed to success with the State of Arkansas to achieve federal compliance, provide support and proof points through review and audit processes, and to remediate issues that may be encountered.

12.0 Tool Usage

DHS expects the Vendor to leverage tools during the DDI project whenever they will increase project performance. **Instructions:** Describe the Vendor's approach to leveraging tools to increase the project team's performance. The response should include a discussion regarding how the tools will help the project team efficiency, improve the quality of the solution and help produce the materials required to efficiently provide M&O (e.g. documentation, automated test scripts). Please also discuss the benefits and costs/risks of taking this approach

IBM's approach will maximize industry standard tools wherever possible which will provide reusability, minimize tool training and the ability to focus on quality deliverables. IBM's strategy includes empowering team members with best practices, delivery expectations, standard processes to produce quality deliverables.

IBM's framework for using the right tools and effectively integrating tools within the IBM Agile Watson Method incorporates rigorous standards while supporting adaptability and flexibility as changes arise. The approach of effectively leveraging the right tools at each transition point will mitigate risk early thus reducing associated costs. Utilizing the right tools will enhance the performance and collaboration within and between project teams. IBM will work collaboratively with the DHS to identify and employ best practices, leveraging existing and new industry standards as well as IBM proprietary tools on this engagement.

IBM will deploy a set of industry standard and proprietary tools to be included in the following areas Project Management, Design Development, Implementation (DDI), and Training. Reference sections 1.0 Project Management, 4.0 Design, Development and Implementation, and 7.0 Training for more details of how the tools will be used to support document deliverables from those areas.

IBM has deep skills and experience using IBM Rational Suite, Microsoft Office which includes MS Project and SharePoint, IBM Integrated Project Planning & Forecasting, IBM Program Work Center, Web-Based Training Curriculum, Combinatorial Test Design, and JIRA. These tools will maximize deliverable efficiency and improve the quality of deliverable outputs. Additionally, the transition to M&O will be seamless and is made possible by using the right tools effectively and will provide document traceability. By using this approach full transparency across the M&O transition points is made available.

Figure 49: IBM Recommended Tools

13.0 Statement of Work

13.1 Implementation Deliverables

The Vendor should provide a Statement of Work that details the work to be performed consistent with the requested SOW and requirements detailed in the RFP for the System. The narrative for the Statement of Work should include a detailed description of each Project deliverable. The Statement of Work should also clearly define the scope of the Project and provide assumptions on which the Work Plan and Statement of Work were developed. The Vendor must NOT include any pricing or pricing assumptions in this section.

For each Deliverable, the Vendor should provide the following information:

- **Deliverable Description** – Provide an overview of the Deliverable
- **Vendor Responsibilities** – Provide a clear and concise narrative of Vendor responsibilities to perform the work for this Deliverable
- **DHS Responsibilities** – Provide a clear and concise narrative of what the Vendor expects from DHS to perform the work for this Deliverable
- **Deliverable Timeline** – Please include start and end dates
- **Deliverable Duration** – Total duration of the Deliverable in working days
- **WBS ID Number** – Provide the reference to the Project WBS ID number related to this Deliverable
- **Reference** – Indicate the section, page and paragraph where referenced

Instructions: Provide a Statement of Work including each of the Deliverables in the following Table, and any additional Vendor-proposed deliverables. Each Deliverable should include at least the template in the Deliverable Response Template Table. Replicate the template for each Deliverable. Change only the cells containing “<Insert>”. Do not change any of the completed cells. Any changes to the completed cells could lead to the disqualification of the Proposal.

Table 29: List of Deliverables

Task	Deliverable Number	Deliverable/Work Product Name	Frequency	Constraints/ Dependencies
I.1- Project Management and Monitoring	I.1.1	Completed Project Establishment Checklist	Once	Within 1 Month of contract signing
	I.1.2	Integrated Project Management Plan	Once for Initial Release and Updated for subsequent Releases	Within 1 Month of Task I.1.1

Task	Deliverable Number	Deliverable/Work Product Name	Frequency	Constraints/ Dependencies
	I.1.3	Project Schedule	Once for Initial Release and Updated for subsequent Releases	30 days prior to starting work on a release
	I.1.4	Project Reporting Artifacts (Weekly, Monthly Reports, Risk, Issue and Decision Making Logs)	Weekly and Monthly from Project Initiation to Project Close	Within 3 days of reporting period
	I.1.5	Release/ Project Closeout Check-List	Once for Every Release and Final Project Close-Out	1 Month prior to each Release/Project Closeout
I.2- Planning	I.2.1	Overall SDLC approach plan	Once (with updates only if required during subsequent releases)	Within 1 Month after Task I.1.1
	I.2.2	System Architecture	Once (with updates only if required during subsequent releases)	Within 1 Month after Task I.2.1
	I.2.3	System Security Plan	Once for Initial Release and Updated for subsequent Releases	Within 1 Month after Task I.2.2
	I.2.4	Technology Environment Specifications and Infrastructure plan	Once for Initial Release and Updated for subsequent Releases	Within 1 Month after Task I.2.2
	I.2.5	Organizational Change Management Plan	Once for Initial Release and Updated for subsequent Releases	Within 3 Months after Task I.2.1
	I.2.6	Data Conversion Plan	Once for Initial Release and Updated for subsequent Releases	2 Months before start of Task I.5 (Data Conversion Tasks)

Task	Deliverable Number	Deliverable/Work Product Name	Frequency	Constraints/ Dependencies
	I.2.7	Master Test Plan	Once for Initial Release and Updated for subsequent Releases	2 Months before start of Task I.6 (Testing Tasks)
	I.2.8	Training and Knowledge Transfer Plan	Once for Initial Release and Updated for subsequent Releases	2 Months before start of Task I.7 (Training Tasks)
	I.2.9	Roll-Out Plan (Pilot and Full Roll-Out)	Once for Initial Release and Updated for subsequent Releases	2 Months before start of Task I.8 (Pilot and Deployment Tasks)
	I.2.10	Deployment Plan (Pilot and Full Deployment)	Once for Initial Release and Updated for subsequent Releases	3 Months before start of Task I.8 (Pilot and Deployment Tasks)
I.3- Technical Environment Specification	I.3.1	Technical Environment Specifications Plan	Once (updated on as-needed basis)	Within 30 days after Task I.2.1
I.4 - Design, Development and Implementation (DDI)	I.4.1	Requirements Validation and updates to RTM, BPA and Use Cases	Once for Initial Release and Updated for subsequent Releases	Cannot Start before Task I.2.1
	I.4.2	Functional Design Document (FDD)	Once for Initial Release and Updated for subsequent Releases	Cannot Start before Task I.4.1
	I.4.3	Technical Design Document (TDD)	Once for Initial Release and Updated for subsequent Releases	Cannot Start before Task I.4.2
	I.4.4	Data Integration and Interface Control Documents (ICD)	Once for the initial release and updated for subsequent releases	Cannot Start before Task I.4.3

Task	Deliverable Number	Deliverable/Work Product Name	Frequency	Constraints/ Dependencies
	I.4.5	Updated and Completed Functional and Technical Requirements Traceability Matrix	Once for the initial release and updated for subsequent releases	Cannot Start before Task I.4.3
I.5 Data Conversion	I.5.1	Data Conversion Testing Report and Results	Once for Every Release	Cannot Start before Task I.2.6
I.6 – Testing	I.6.1	Completed SIT Readiness Checklist	Once for Every Release	Cannot Start before Task I.2.7
	I.6.2	SIT Testing Report and Results	Once for Every Release	Cannot Start before Task I.6.1
	I.6.3	Completed UAT Readiness Checklist	Once for Every Release	Cannot Start before Task I.6.2
	I.6.4	UAT Testing Report and Results	Once for Every Release	Cannot Start before Task I.6.3
I.7- OCM (Organizational Change Management), T (Training) and KT (Knowledge Transfer)	I.7.1	Training and Knowledge Transfer Materials	Once for Every Release	Cannot Start before Task I.2.8
	I.7.2	Training and Knowledge Transfer Completion report	Once for Every Release	Cannot Start before Task I.2.9
	I.7.3	Executive Briefing	Quarterly and as requested	Within 2 weeks of completion of OCM
I.8- Pilot, Roll-Out and Go-Live	I.8.1	Pilot Deployment report and signoff	Once for Every Release	Cannot Start before Task I.6.4 for Each Release
	I.8.2	Formal System Acceptance and Final Go-Live report	Once for Every Release	Cannot Start before Task I.8.1 for Each Release
I.9- Warranty Support	I.9.1	Completion of Warranty Activities Report	Once for Every Release	Cannot Start before Task I.8.2 for Each Release

Table 1. Deliverable Response Template

ID - 2	Project Status Report	
Deliverable Description	<Insert>	
Vendor Responsibilities	<Insert>	
Expectations for DHS' Responsibilities	<Insert>	
	Start	End
Timeline	<Insert>	<Insert>
Duration	<Insert>	
WBS ID#(s)	<Insert>	
Reference (Section, Page Paragraph)	<Insert>	

The intent of this Section is to provide clear definition of the scope of the Arkansas IE-BM Project work, as well as the required project outcomes to be achieved. To accomplish Arkansas IE-BM Project objectives the Contractor shall address the following.

Description of System and Services

Working under the direction of the Department of Human Services (DHS), the prime Contractor shall lead the Arkansas IE-BM development effort and provide the full range of services needed to complete contract activities including IE-BM configuration, test, implementation and maintenance. Contractor services shall include the provision of multiple deliverables detailed within this Section, and within Section 10, Design, Development and Implementation (DDI) Service Levels. Contractor deliverables shall be reviewed and approved for acceptance by the State Project Manager (State PM).

The subsections that follow detail Contractor requirements for Arkansas IE-BM development methodology, design, configuration and system architecture, define IE-BM users, and describe IE-BM testing, implementation and maintenance.

ID I.1.1	Completed Project Establishment Checklist
Deliverable Description	Key project start up activities have occurred, including the following: 1) Project facilities identified, acquired, and fully outfitted for staff 2) IBM DDI Key Staff have been provided State credentials and "Welcome Package" 3) Connectivity to required legacy and Project systems for IBM and State staff has been established 4) IBM staff directory, containing contact information and Project title, has been provided to the State Project Manager 5) The Project Kick-Off has occurred, which is a presentation to the entire Project team and key stakeholders to familiarize them with the Project and includes: a) Project Overview b) Project Schedule (high level) c) Objectives and Definitions

ID I.1.1	Completed Project Establishment Checklist	
	d) Process (including change management, change control, and issue/risk management) e) Roles and Responsibilities f) Keys to Success	
Vendor Responsibilities	The IBM team will be responsible to: 1) perform activities identified in Completed Project Establishment Checklist deliverable, and 2) schedule and conduct start up planning and coordination meetings with DHS as may be needed. This activity is completed when IBM delivers I.1.1, Completed Project Establishment Checklist is delivered to DHS.	
Expectations for DHS' Responsibilities	DHS will be responsible to: 1) meet with the IBM team for one or more start up coordination and review meetings as may be needed, 2) Perform deliverable review as contractually agreed, and 3) Provide IBM a deliverable acceptance certificate as contractually agreed.	
	Start	End
Timeline	Calendar Day 1	Calendar Day 30
Duration	30 Calendar Days	
WBS ID#(s)	1.1.1.1.1.1.2	
Reference (Section, Page Paragraph)	Section 1.1, Page 14, Paragraph 4	

ID I.1.2	Integrated Project Management Plan
Deliverable Description	The Integrated Project Management Plan (PMP) will capture the Projects' project management processes, roles and responsibilities and templates which will be executed throughout the Project to effectively manage and control the Project. The approach shall be consistent with the PMI Project Management Methodologies stated in the PMBOK as implement1ed in IBM's Worldwide Project Management Method (WWPMM). This plan will encompass the entire Project lifecycle from Project initiation to handoff to M&O. The PMP shall consist of the following sub-plans: 1) **Scope Management Plan** — Outlines the processes required to determine the IE-BM Proposed Solution and the Project meets the requirements outlined in the RFP and how deviations will be tracked and managed 2) **Schedule Management Plan** — Captures how the Project Schedule will be monitored for variances, what types of corrective actions will be taken to address schedule variances during the life of the Project and the process, roles, and

ID I.1.2	Integrated Project Management Plan
	responsibilities involved in making changes to the Project Schedule 3) **Project Change Management Plan** — How changes to the Project scope, schedule and budget are tracked, reviewed and approved 4) **Risk and Issues Management Plan** — Development of a Risk and Issue Management Plan and a baseline Risk Assessment to DHS' Project Manager 5) **Performance Management Plan** —Project approach to monitor, track and report on baseline metrics for each performance area identified in the Template T-10 – Implementation Requirements Traceability Matrix – I.8 Implementation SLRs 6) **Document Management Plan** — Project approach to develop and maintain a Project Information Library (PIL) that will be overseen by the Project Management Team in a single repository used to store, organize, track, control and disseminate information and items produced by, and delivered to, the Project. The Document Management Plan will include a description of the PIL file structure with defined access and permissions. 7) **Data Management Plan** — Project approach to managing data to determine adequate data is provided for testing and confidential data is managed effectively 8) **Quality Management Plan** —Project approach to define, build and measure deliverable quality throughout the entire Project lifecycle 9) **Human Resource Management Plan** — Captures the projected resources required and the processes for identifying, qualifying and onboarding new team members, and removing a team member 10) **Acceptance/Contract Management** — Captures the processes, template, and roles and responsibilities for accepting deliverables 11) **Project Communication Management Plan** — Defines varying levels and needs of the Project's stakeholders for information regarding the project, status, accomplishments, impact on stakeholders, and communications vehicles 12) **Procurement Management Plan** — Details how IBM will manage its subcontractors and other suppliers 13) **Closure Approach** — Captures the activities IBM will perform to formally close a release and the entire Project
Vendor Responsibilities	The IBM team will be responsible to: 1) Schedule and conduct a series of project management Method Adoption Workshops to discuss each PMP section with the DHS

ID I.1.2	Integrated Project Management Plan	
	Project Manager, capture and organize project decisions, and identify constraints and assumptions 2) Create the PMP, Deliverable Expectation Document (DED) 3) Customize WWPMM templates to meet DHS standards and procedures for each section of the Integrated PMP deliverable 4) Deliver the PMP deliverable for DHS review and approval This activity is completed when IBM delivers I.1.2, Project Management Plan is delivered to DHS.	
Expectations for DHS' Responsibilities	DHS will be responsible to: 1) provide Integrated Project Management Plan input from the DHS Project Manager 2) meet with the IBM team for one or more Method Adoption Workshops and review meetings as may be needed, 3) Perform deliverable review as contractually agreed, and 4) Provide IBM a deliverable acceptance certificate as contractually agreed.	
	Start	End
Timeline	Calendar Day 1	Calendar Day 60
Duration	60 Calendar Days	
WBS ID#(s)	1.1.1.1.1.1.3	
Reference (Section, Page Paragraph)	Section 1.1, Page 14, Paragraph 4	

ID – I.1.3	Project Schedule
Deliverable Description	This deliverable will include a resource loaded Baseline Project Work Plan and Schedule for every release, including a Work Breakdown Structure, Gantt chart(s), and a Project calendar in Microsoft Project. The Project Schedule shall breakdown the Project into discrete increments documenting the planned effort and will include major milestones, checkpoints and CMS agile review and go/no-go decision points.
Vendor Responsibilities	The IBM team will be responsible to: 1) Schedule and conduct Method Adoption Workshops for Project Schedule planning and decision making with DHS as may be needed 2) Document changes from the schedule submitted with IBM's original Proposal 3) Perform necessary activities identified in the Schedule Management Plan to create the Project Schedule deliverable 4) Deliver the Project Schedule deliverable for DHS review and approval

ID – I.1.3	Project Schedule	
	This activity is completed when IBM delivers I.1.3, Project Schedule is delivered to DHS.	
Expectations for DHS' Responsibilities	DHS will be responsible to: 1) meet with the IBM team for multiple coordination and review meetings as may be needed, 2) Provide input for DHS activities to be included in the integrated project schedule, 3) Provide DHS staff assignments for resource loading, 4) Perform deliverable review as contractually agreed, and 5) Provide IBM a deliverable acceptance certificate as contractually agreed.	
	Start	End
Timeline	Calendar Day 1	Calendar Day 60
Duration	60 Calendar Days	
WBS ID#(s)	1.1.1.1.1.1.4	
Reference (Section, Page Paragraph)	Section 1.1, Page 15, Paragraph 1	

ID – I.1.4	Project Reporting Artifacts
Deliverable Description	Project Reporting Artifacts include weekly Status Reports containing the contents outlined below: 1) Graphical statuses of scope, schedule, and budget (red, yellow, or green) 2) Accomplishments of the last reporting period and objectives for the next reporting period 3) DHS responsibilities for the next reporting period 4) Actual or projected Project Schedule milestone dates versus baselined milestone dates 5) Projected key completion dates compared to approved key baseline dates 6) Recovery plan for work activities not tracking to the approved schedule 7) Disposition of logged issues and risks 8) Status of high risks and mitigation plans 9) Status of issues that impact or may impact the project critical path and resolution plans 10) Key dependencies with other DHS Enterprise efforts and activities 11) Organizational Change Management (OCM) status and activities 12) Important decisions made and/or upcoming decisions 13) Team member changes

<table>
<tr><th>ID – I.1.4</th><th colspan="2">Project Reporting Artifacts</th></tr>
<tr><td></td><td colspan="2">14) Pending scope change requests
15) One-page graphical summary of the Project Work Plan status of major tasks and subtasks for each active Phase or Sprint in the Project Work Plan
Project Reporting Artifacts include monthly Executive Status Reports containing an Executive Summary using graphical status (red, yellow, green) wherever possible and items from the Weekly Status Reports mutually agreed upon by the DHS and IBM Program Executives
[I1.11]</td></tr>
<tr><td>Vendor Responsibilities</td><td colspan="2">The IBM team will be responsible to:
1) Schedule and conduct a Method Adoption Workshops to discuss project reporting with the DHS Project Manager, capture and organize project decisions, and identify constraints and assumptions
2) Create the Project Reporting Artifacts, Deliverable Expectation Document (DED)
3) Customize WWPMM templates to meet DHS standards and procedures as specified for each report configuration item in the overall deliverable
4) Deliver the Project Reporting Artifacts at agreed upon intervals for DHS review and approval
This activity is completed when IBM delivers I.1.4, Project Reporting Artifacts are delivered to DHS per the agreed reporting periods.</td></tr>
<tr><td>Expectations for DHS’ Responsibilities</td><td colspan="2">DHS will be responsible to:
1) Meet with the IBM team for multiple coordination and review meetings as may be needed,
2) Provide DHS standards for weekly Status Report and month Executive Status Report formats or provide input and review of IBM provided formats,
3) Provide DHS staff assignments for resource loading,
4) Perform deliverable review as contractually agreed, and
5) Provide IBM a deliverable acceptance certificates for incremental report delivery as contractually agreed.</td></tr>
<tr><td></td><td>Start</td><td>End</td></tr>
<tr><td>Timeline</td><td>Calendar Day 7</td><td>Project End Date</td></tr>
<tr><td>Duration</td><td colspan="2">Ongoing weekly and monthly throughout the project</td></tr>
<tr><td>WBS ID#(s)</td><td colspan="2">1.1.1.1.1.3</td></tr>
<tr><td>Reference (Section, Page Paragraph)</td><td colspan="2">Section 1.1, Page 14, Paragraph 6</td></tr>
</table>

ID – I.1.5	Release/ Project Closeout Check-List
Deliverable Description	The purpose of this deliverable is to validate Project activities and the migration to M&O are complete and that functionality has been implemented and the appropriate legacy application(s) have been retired. This deliverable will be the completed check-list and include: 1) Proof that deliverables are up-to-date and approved for each major release and Project closeout including: a. Functional Specifications and Design Documentation including Sprints b. System Architecture c. Technical Design Documentation including Sprints d. Data Management and Synchronization Plan e. Test Cases and Test Scripts including Sprints f. Training Manuals, End-User Guides, and Materials g. Final versions of the System software files 2) Control of System and training documentation has been transferred to the M&O team 3) Lessons learned are documented 4) Tactical activities are complete (e.g., off boarding project personnel) 5) Providing hand-off of source code and State ownership of source code and configurations as identified in Template T10, Implementation RTM, Requirements I4.31 through I4.33 6) Regression test scripts have been completed and are ready to support future regression testing
Vendor Responsibilities	The IBM team will be responsible to: 1) Schedule and conduct a Method Adoption Workshops to discuss project closeout with the DHS Project Manager, capture and organize project decisions, and identify constraints and assumptions 2) Create the Release/Project Closeout Checklist, Deliverable Expectation Document (DED) 3) Deliver the Release and Project Closeout Checklist at scheduled milestones for DHS review and approval This activity is completed in increments for each of the five (5) releases and when IBM delivers I.1.5, Release/Project Closeout Checklist as specified in the project work plan to DHS.
Expectations for DHS' Responsibilities	DHS will be responsible to: 1) Meet with the IBM team for multiple coordination and review meetings as may be needed, 2) Meet IBM for phase gate and go/no-go meetings as may be needed, 3) Perform deliverable review as contractually agreed, and

ID – I.1.5	Release/ Project Closeout Check-List	
	4) Provide IBM a deliverable acceptance certificates for Release and Project Closeout Checklist delivery as contractually agreed.	
	Start	End
Timeline	Calendar Day 1	Project End Date
Duration	At the end of each Sprint and Release	
WBS ID#(s)	1.1.1.1.1.4.1, 1.1.1.1.1.4.2, 1.1.1.1.1.4.3, 1.1.1.1.1.4.4, 1.1.1.1.1.4.5	
Reference (Section, Page Paragraph)	Section 1.1, Page 15, Paragraph 1; Section 8.2, Page 73, Paragraph 2.	

ID – I.2.1	Overall SDLC approach plan
Deliverable Description	The purpose of the overall SDLC approach plan deliverable is to demonstrate that the Vendor has a strong understanding of DHS, integrated eligibility and benefits management, and a well-defined vision for how the IE-BM Proposed Solution will be developed, in alignment with the requirements outlined in Template T-11 — Implementation Approach Response. The plan provides a comprehensive SDLC approach elaborating on how the Vendor intends to implement the various phases of the project lifecycle and how it aligns with CMS XLC framework. This includes an overview of the different SDLC phases and how this Project will approach the different phases. To develop this deliverable, the below items will be considered: 1) Gain a deep understanding of the business processes and the functionality that the IE-BM Proposed Solution will provide 2) Establish the guiding principles for the Project (e.g., minimize custom development) 3) Assess the end-user needs and DHS culture and finalize the methodology and tools that will be used to analyze and validate requirements (including interviews, workflow analysis, Joint Application Development (JAD) sessions, mock-ups, Usability Studies, etc.) 4) Establish a requirements traceability plan to determine requirements are met including a process for tracking, updating and managing changes to the requirements traceability matrix throughout the lifecycle of the Project (including mapping requirements to design documents and test cases) 5) Establish the mechanisms for managing the configurations and custom code through development 6) Work with DHS to define how technical decisions will be made to facilitate the IE-BM Proposed Solution aligns with the DHS Standards 7) Establish the Vendor’s internal processes to the design is an integrated coherent IE-BM Solution (e.g., internal design reviews)

ID – I.2.1	Overall SDLC approach plan	
	8) Establish the approach to developing technical standards and determining conformance to the standards 9) Establish the strategy to validate requirements are met, while maximizing the use of COTS software to support the requirements and approval processes required to make changes (e.g., changes to business processes or migrating the Solution from COTS to custom) 10) Work with DHS to define how DHS staff will work with the Vendor's team for the duration of the Project 11) Define the scope of the Project Releases and how overlap between releases (from a technical and project perspective) will be managed 12) Establish which technical components will be deployed and source systems will be integrated with by release 13) Identify major technical challenges the Vendor will overcome to implement the IE-BM Proposed Solution 14) Define the tools to be used to manage the DDI process (e.g. requirements repository, document repository)	
Vendor Responsibilities	The IBM team will be responsible to: 1) Schedule and conduct a series of Method Adoption Workshops to discuss overall SDLC approach with the DHS Project Team, capture and organize project decisions, and identify constraints and assumptions 2) Provide Agile training to the DHS personnel that will participate in Agile Sprints 3) Create the Overall SDLC Approach Plan, Deliverable Expectation Document (DED) 4) Deliver the Overall SDLC Approach Plan for DHS review and approval This activity is completed when IBM delivers I.2.1, Overall SDLC Approach Plan as specified in the project work plan to DHS.	
Expectations for DHS' Responsibilities	DHS will be responsible to: 1) Meet with the IBM team for multiple Method Adoption Workshops to coordinate and review the SDLC approach as may be needed for items in the deliverable description 2) Provide DHS personnel to attend Agile training performed by IBM for participation in Agile Sprints as may be needed, 3) Perform deliverable review as contractually agreed, and 4) Provide IBM a deliverable acceptance certificates for the Overall SDLC Approach Plan as contractually agreed.	
	Start	End
Timeline	Calendar Day 1	Calendar Day 60
Duration	60 Calendar Days	

ID – I.2.1	Overall SDLC approach plan
WBS ID#(s)	1.1.2.1
Reference (Section, Page Paragraph)	Section 2.0, Page 16, Paragraph 2

ID – I.2.2	System Architecture
Deliverable Description	The purpose of this deliverable is to capture the System Architecture, which details the SOA model-driven framework being used that enables the development of service-oriented models to facilitate the interaction and communication of technologies. This document shall describe the set of technologies that support the Solution, detail the COTS software components, design patterns, technology infrastructure and the conceptual, logical and physical architectures for the IE-BM Proposed Solution. This System Architecture shall define and document: 1) A conceptual architecture that will produce a design to fulfill stakeholder's functional expectations 2) A logical architecture that identifies the SOA layers, Vendor, Service customers, service broker(s), and object dependencies. To complete the logical design model, the Vendor shall define the interfaces for each service, and include data field definitions and their validation rules. 3) A physical architecture that defines the various services of the IE-BM Proposed Solution and how they shall be implemented. This shall also include details around the integration layers, potentially using Web Services, and various other integration technologies. 4) A list of COTS software to be implemented and how they will be integrated to produce a seamless user experience 5) A detailed list of the proposed production environment platforms, including Hardware, OS, Networking, and COTS and third party systems/tools/ utilities, etc. 6) How the architecture design features determine that the IE-BM Proposed Solution can scale as needed for future transaction volumes, storage requirements, and Solution usage expansion over the next 10 years 7) How the IE-BM Proposed Solution will determine performance based on expected data and user loading/traffic, during peak transaction volumes and key critical business activities 8) How the IE-BM Proposed Solution will meet current capacity requirements and determine the ability to scale 9) Availability and resilience controls such as redundancy, clustering, load balancing, failover capabilities, and fault tolerance 10) Mapping of Technical Requirements to the solution and design

ID – I.2.2	System Architecture	
	11) Identification of components/objects that will be shared services 12) Architecture conforms to established standards 13) Data integration architecture to determine duplicate records are not created	
Vendor Responsibilities	The IBM team will be responsible to: 1) Schedule and conduct a series of Technical Workshops to discuss System Architecture with the DHS Project Team, capture and organize project decisions, and identify constraints and assumptions as outlined in the deliverable description 2) Create the System Architecture, Deliverable Expectation Document (DED) 3) Deliver the System Architecture document for DHS review and approval This activity is completed when IBM delivers I.2.2, System Architecture document as specified in the project work plan to DHS.	
Expectations for DHS' Responsibilities	DHS will be responsible to: 1) Meet with the IBM team for multiple Technical Workshops to coordinate and review the System Architecture as may be needed for items in the deliverable description 2) Perform deliverable review as contractually agreed, and 3) Provide IBM a deliverable acceptance certificate for System Architecture delivery as contractually agreed.	
	Start	End
Timeline	Calendar Day 7	Project End Date
Duration	At the end of each Sprint and Release	
WBS ID#(s)	1.1.2.2	
Reference (Section, Page Paragraph)	Section 4.1, Page 67, Paragraph 5	

ID – I.2.3	System Security Plan
Deliverable Description	The purpose of this deliverable is to capture and establish the approach to Solution security. It will include an overview of the risk scenarios and the approach to known risk threats and known vulnerabilities, it will provide the security architecture, processes and controls to meet State and Federal standards (including firewalls, zoning, encryptions, intrusion prevention, hardening, remote access, etc.). This deliverable shall include: 1) The technical approach to address and satisfy the following: a) Network security controls b) Perimeter security c) System security and data sensitivity classification d) Intrusion management

ID – I.2.3	System Security Plan	
	e) Monitoring and reporting f) Host hardening g) Remote access h) Encryption i) Integration with Statewide active directory services for authentication and CA IAM j) Interface security k) Security test procedures l) Managing network security devices m) Security patch management n) Secure communications over the Internet 2) Detailed diagrams depicting security-related devices and subsystems and their relationships with other systems for which they provide controls 3) Security controls 4) The details of Security, Privacy and Consent Management 5) Approach to maximizing sharing of data (provided from external source) while complying to appropriate rules, regulations and policies 6) Approach to administering access, particularly administration access 7) User roles and security permissions 8) Security Plan aligns with established standards (e.g. MARS-E 2.0, IRS 1075, NIST 800-53, FISMA)	
Vendor Responsibilities	The IBM team will be responsible to: 1) Schedule and conduct a series of Technical Workshops to discuss the System Security Plan with the DHS Project Team, capture and organize project decisions, and identify constraints and assumptions as outlined in the deliverable description 2) Deliver the System Security Plan document for DHS review and approval This activity is completed when IBM delivers I.2.3, System Security Plan document as specified in the project work plan to DHS.	
Expectations for DHS' Responsibilities	DHS will be responsible to: 1) Meet with the IBM team for multiple Technical Workshops to coordinate and review the System Security Plan as may be needed for items in the deliverable description 2) Perform deliverable review as contractually agreed, and 3) Provide IBM a deliverable acceptance certificate for System Architecture as contractually agreed.	
	Start	End
Timeline	Calendar Day 7	Project End Date

ID – I.2.3	System Security Plan
Duration	At the end of each Sprint and Release
WBS ID#(s)	1.1.2.3
Reference (Section, Page Paragraph)	Section 2.0, Page 49; Section 3.4, Page 65, Paragraph 1

ID – I.2.4	Technology Environment Specifications and Infrastructure plan	
Deliverable Description	The purpose of this deliverable is to define the infrastructure the Vendor will provision to support the Project including hardware, operating system, networking, and COTS software. This will include specifications for each of the environments the Project will require, which will likely be provided independently throughout the Project.	
Vendor Responsibilities	The IBM team will be responsible to: 1) Schedule and conduct a series of Technical Workshops to discuss the Technology Environment Specifications and Infrastructure Plan with the DHS Project Team, capture and organize project decisions, and identify constraints and assumptions as outlined in the deliverable description 2) Deliver the Technology Environment Specifications and Infrastructure Plan document for DHS review and approval This activity is completed when IBM delivers I.2.4, Technology Environment Specifications and Infrastructure Plan document as specified in the project work plan to DHS.	
Expectations for DHS' Responsibilities	DHS will be responsible to: 1) Meet with the IBM team for multiple Technical Workshops to coordinate and review the Technology Environment Specifications and Infrastructure Plan as may be needed for items in the deliverable description 2) Perform deliverable review as contractually agreed, and 3) Provide IBM a deliverable acceptance certificate for Technology Environment Specifications and Infrastructure Plan delivery as contractually agreed.	
	Start	End
Timeline	Calendar Day 7	Project End Date
Duration	At the end of each Sprint and Release	
WBS ID#(s)	1.1.2.4	
Reference (Section, Page Paragraph)	Section 2.0, Page 49;	

ID – I.2.5	Organizational Change Management Plan	
Deliverable Description	To produce this deliverable the Vendor will perform an analysis of the stakeholders (Stakeholder Needs Assessment) to identify the organization's Organizational Change Management (OCM), training and knowledge transfer needs. The understanding gained from performing this assessment will provide the information required to produce this deliverable. The purpose of this deliverable is to outline OCM activities that will be performed throughout the Project. This includes: 1) The OCM methodology that the Vendor will employ 2) A current state assessment, identifying strengths and challenges of key stakeholder groups 3) A definition of communications outside of the Project team 4) Surveys and other mechanisms to capture the level of change acceptance with each stakeholder group 5) Milestones when the OCM approach effectiveness will be re-assessed and modified	
Vendor Responsibilities	The IBM team will be responsible to: 1) Schedule and conduct a series of Method Adoption Workshops to discuss the Organizational Change Management Plan with the DHS Project Team, capture and organize project decisions, and identify constraints and assumptions as outlined in the deliverable description 2) Deliver the Organizational Change Management Plan document for DHS review and approval This activity is completed when IBM delivers I.2.5, Organizational Change Management Plan document as specified in the project work plan to DHS.	
Expectations for DHS' Responsibilities	DHS will be responsible to: 1) Meet with the IBM team for multiple Method Adoption Workshops to coordinate and review the Organizational Change Management Plan as may be needed for items in the deliverable description 2) Perform deliverable review as contractually agreed, and 3) Provide IBM a deliverable acceptance certificate for Organizational Change Management Plan delivery as contractually agreed.	
	Start	End
Timeline	Calendar Day 1	Project End Date
Duration	At the end of each Release	
WBS ID#(s)	1.1.2.5	
Reference (Section, Page Paragraph)	Section 2.0, Page 50; Section 7.1, Page 94, Paragraph 2	

ID – I.2.6	Data Conversion Plan
Deliverable Description	The Vendor will be responsible for understanding the data requirements during detailed design and gaining an understanding of the data available in legacy systems that may need to be converted. The Vendor will understand how much historical data needs to be converted based on program policy and by case status. The Vendor will lead data conversion activities including building a data conversion schedule, tracking each data element being converted, validating that records/images converted equals number of records/images written to the new database, reporting progress against these stages and providing adequate staff is assigned to the effort. The Vendor will collaborate with DHS to define a specification for the data to be extracted from the legacy systems (e.g. ANSWER, ACES, AccessAR, FACTS and, depending on the Vendor's proposal, possibly EEF). The Vendor will implement and develop tools required to convert the data into a format to be imported into the IE-BM Proposed Solution, cleansing and de-duplicating the data as it is integrated into the Solution. Additionally, images currently stored in the legacy systems need to be migrated to the IE-BM Proposed Solution. The Vendor will perform a trial conversion(s) prior to performing UAT, will collaborate with DHS to resolve data issues identified, and will provide tools for DHS to validate the data. The purpose of this document is to define the approach and plan for converting data from legacy systems into the new IE-BM Proposed Solution. This includes: 1) Identifying the data elements that need to be converted and the source systems 2) The amount of historical data that will need to be converted 3) The relationships between the data that needs to be converted 4) Identifying the approach to conversion (e.g. automated) 5) Defining the approach to validating the converted data against legacy data and addressing data discrepancies 6) Interim deliverables 7) Roles and Responsibilities 8) Tools used to perform the transformation 9) Tools/approach to track status/progress 10) If required due to the release strategy, the approach and details regarding integrating with legacy systems and data synchronization
Vendor Responsibilities	The IBM team will be responsible to: 1) Schedule and conduct a series of Technical Workshops to discuss the data conversion activities and the Data Conversion Plan with the DHS Project Team, capture and organize project

ID – I.2.6	Data Conversion Plan	
	decisions, and identify constraints and assumptions as outlined in the deliverable description 2) Create the Data Conversion Plan, Deliverable Expectation Document (DED) 3) Deliver the Data Conversion Plan document for DHS review and approval This activity is completed when IBM delivers I.2.6, Data Conversion Plan document as specified in the project work plan to DHS.	
Expectations for DHS' Responsibilities	DHS will be responsible to: 1) Meet with the IBM team for multiple Technical Workshops to coordinate and review the data conversion activities and Data Conversion Plan as may be needed for items in the deliverable description 2) Perform deliverable review as contractually agreed, and 3) Provide IBM a deliverable acceptance certificate for Data Conversion Plan delivery as contractually agreed.	
	Start	End
Timeline	Calendar Day 1	Project End Date
Duration	At the end of each Sprint and Release	
WBS ID#(s)	1.1.2.6, 1.1.2.6.1, 1.1.2.6.2, 1.1.2.6.3, 1.1.2.6.4, 1.1.2.6.5	
Reference (Section, Page Paragraph)	Section 2.0, Page 50; Section 5.1, Page 84, Paragraph 1	

ID – I.2.7	Master Test Plan
Deliverable Description	The purpose of this deliverable is to define the detailed testing plan for each release. This plan shall include: 1) Types of testing to be performed 2) Test database generation 3) Test case development 4) Documentation of test results 5) Acceptance testing 6) The evaluation should include a summary of outstanding issues/defects with the system and other pertinent readiness issues 7) A contingency plan component which identifies alternative strategies that may be used if specific risk events occur, such as a failure of test results to support a decision to proceed to the next phase of the project 8) A list of test scripts to be run by testing cycle 9) The testing schedule and how the testing schedule will be managed

ID – I.2.7	Master Test Plan	
	10) Specifics regarding the processes leveraged to track testing progress and defect resolution including items such as the definition of different test script status and, defect status 11) The organization of the test team and associated responsibilities (definition of roles and named resources who will perform each role) 12) Criteria for passing scripts (the decision criteria should be specific and measurable.) 13) Testing progress status reporting and interim testing milestones and associated reports 14) Definition of the Platform Readiness Test (this test is passed prior to promotion to the pre-production environment) 15) Entrance and Exit criteria for each testing cycle (the decision criteria shall be specific and measurable.) 16) Testing approach to performance and stress testing 17) Approach to regression testing 18) A description of the SIT Readiness Checklist 19) A description of the UAT Readiness Checklist	
Vendor Responsibilities	The IBM team will be responsible to: 1) Schedule and conduct a series of Method Adoption Workshops to discuss the test plan strategy and Master Test Plan with the DHS Project Team, capture and organize project decisions, and identify constraints and assumptions as outlined in the deliverable description 2) Create the Master Test Plan, Deliverable Expectation Document (DED) 3) Deliver the Master Test Plan document for DHS review and approval This activity is completed when IBM delivers I.2.7, Master Test Plan document as specified in the project work plan to DHS.	
Expectations for DHS' Responsibilities	DHS will be responsible to: 1) Meet with the IBM team for multiple Technical Workshops to coordinate and review the test plan strategy and Master Test Plan as may be needed for items in the deliverable description 2) Perform deliverable review as contractually agreed, and 3) Provide IBM a deliverable acceptance certificate for Master Test Plan delivery as contractually agreed.	
	Start	End
Timeline	Calendar Day 1	Project End Date
Duration	At the end of each Sprint and Release	
WBS ID#(s)	1.1.2.7	
Reference (Section, Page Paragraph)	Section 2.0, Page 50; Section 6.1, Page 91, Paragraph 1	

ID – I.2.8	Training and Knowledge Transfer Plan
Deliverable Description	Based on the findings captured in the Stakeholder Needs Assessment (see Deliverable I.2.5), the Vendor will produce an OCM Plan and a Training and Knowledge Transfer Plan. This will be developed collaboratively with DHS to facilitate the materials are aligned with DHS' culture. In these documents, the Vendor will provide interim milestones to track progress (e.g., Knowledge Transfer Checkpoints). The Vendor will lead and work collaboratively with State staff to build out the resources to prepare the organization for the new System. DHS has established baseline guiding principles for this effort, including: 1) Use a task-based training approach founded on a thorough user-centered task analysis 2) Use a variety of integrated training methods to address diverse learning styles and provide experiential, performance-based training 3) Integrate training methods and strategies throughout the Project life cycle, to include pre-training support, classroom training, and post-training support 4) The primary medium for System training will be hands-on interaction with a working version of the System 5) Just-in-Time Approach to training — Field office users will receive hands-on training on the System immediately prior to the System being implemented 6) Training is designed in a way that conveys the value and benefits of the System, alignment to the user's model of practice, and its integration into their day-to-day work 7) Trainees demonstrate the capability to use the System effectively at the completion of the training to perform his/her responsibilities 8) User friendly training materials will be provided to trainees that can be referenced at a later date without additional context required 9) A methodical approach to planning training activities is required. A detailed Training Plan will be developed. 10) The purpose of the Training and Knowledge Transfer Plan is to identify the activities and define the curricula DHS needs to train the organization on the Solution. 11) The Training Plan includes the following: 12) Overview stating the purpose and scope of the Training Plan that meets the requirements of this RFP 13) A process to conduct a needs and skills analysis, identifying specific roles and staff titles to be trained 14) Planned evaluation of the training content and delivery

ID – I.2.8	Training and Knowledge Transfer Plan
	15) Training resources required, including facilities and staff 16) Course Administration, including communication to participants of available training and registration/completion by staff 17) Training schedules, identifying when specific staff roles will be provided training prior to a release 18) Details of the Vendor's planned Instructional Methods including: a) Individual one-on-one training sessions b) Solution Demonstrations c) Instructor-Led Classroom Teaching d) Instructor-Led Virtual Training e) Computer and Web-based training f) On-the-Job Training g) User Guides h) Informal training with super users 19) Knowledge Transfer approach for identified personnel who require additional Solution knowledge than end-users (e.g. super users, support staff, trainers) 20) Approach to determine training goes beyond Solution navigation to training that supports end users in integrating the Solution as a decision support tool 21) Approach to prototyping and testing training materials with end-users 22) Training roles and responsibilities 23) Approach to Vendor and DHS maintenance of training materials to address Solution changes during the Project and after 24) Plan for managing the training environment 25) Plans for providing the training equipment, facilities and training data
Vendor Responsibilities	The IBM team will be responsible to: 1) Schedule and conduct a series of Method Adoption Workshops to discuss the OCM, training and knowledge transfer strategy and Training and Knowledge Transfer Plan with the DHS Project Team, capture and organize project decisions, and identify constraints and assumptions as outlined in the deliverable description 2) Create the Training and Knowledge Transfer Plan, Deliverable Expectation Document (DED) 3) Deliver the Training and Knowledge Transfer Plan document for DHS review and approval This activity is completed when IBM delivers I.2.8, Training and Knowledge Transfer Plan document as specified in the project work plan to DHS.

ID – I.2.8	Training and Knowledge Transfer Plan	
Expectations for DHS' Responsibilities	DHS will be responsible to: 1) Meet with the IBM team for multiple Method Adoption Workshops to coordinate and review the OCM, training and knowledge transfer strategy and Training and Knowledge Transfer Plan as may be needed for items in the deliverable description 2) Perform deliverable review as contractually agreed, and 3) Provide IBM a deliverable acceptance certificate for Training and Knowledge Transfer Plan delivery as contractually agreed.	
	Start	End
Timeline	Calendar Day 1	Project End Date
Duration	At the end of each Sprint and Release	
WBS ID#(s)	1.1.2.8	
Reference (Section, Page Paragraph)	Section 7.2, Page 104, Paragraph 1	

ID – I.2.9	Roll-Out Plan (Pilot and Full Roll-Out)
Deliverable Description	The purpose of this deliverable is to validate the Vendor has a plan to smoothly migrate users onto the new IE-BM Proposed Solution and the plan complies with the Federal Title 7 for 277.18 (g)(2)(ii)) (Prior to statewide rollout of the system there will be a test of the fully operational system in a live production environment. Pilots will operate until the agreed state of routine operation is reached with the full caseload in the pilot area. The design of this pilot shall provide an opportunity to test components of the system as well as the data conversion process and system performance. The duration of the pilot will be for a sufficient period of time to thoroughly evaluate the system (usually a minimum duration of three months). The State agency will provide documentation to FNS of the pilot evaluation. FNS approval to implement the system more broadly is a condition for continued FFP.). This plan shall include: 1) Plan for rolling out the Proposed Solution to the organization 2) Plan for the Proposed Solution pilot to establish objectives, metrics, success criteria and other key planning information 3) Schedule for deploying the IE-BM Proposed Solution, training of end-users, and activating of users 4) Go/no-go decision points 5) Contingency Plans
Vendor Responsibilities	The IBM team will be responsible to: 1) Schedule and conduct a series of Method Adoption Workshops to discuss the Pilot and Full Roll-Out Plan with the DHS Project

ID – I.2.9	**Roll-Out Plan (Pilot and Full Roll-Out)**	
	Team, capture and organize project decisions, and identify constraints and assumptions as outlined in the deliverable description 2) Create the Pilot and Full Roll-Out Plan, Deliverable Expectation Document (DED) 3) Deliver the Pilot and Full Roll-Out Plan document for DHS review and approval This activity is completed when IBM delivers I.2.9, Roll-Out Plan document as specified in the project work plan to DHS.	
Expectations for DHS' Responsibilities	DHS will be responsible to: 1) Meet with the IBM team for multiple Method Adoption Workshops to coordinate and review the Pilot and Full Roll-Out Plan as may be needed for items in the deliverable description 2) Perform deliverable review as contractually agreed, and 3) Provide IBM a deliverable acceptance certificate for Roll-Out Plan delivery as contractually agreed.	
	Start	End
Timeline	Calendar Day 1	Project End Date
Duration	At the end of each Sprint and Release	
WBS ID#(s)	1.1.2.9	
Reference (Section, Page Paragraph)	Section 8.2, Page 124, Paragraph 1	

ID – I.2.10	**Deployment Plan (Pilot and Full Deployment)**
Deliverable Description	The purpose of this deliverable is to validate the Vendor has a plan to smoothly migrate the Proposed Solution from testing to production. This plan shall include: 1) Detailed, step-by-step plan to deploy the Proposed Solution into the production environment including key checkpoints 2) Site planning requirements 3) Cut-over risks and contingency plans 4) Rollback/back-out and recovery plans 5) Tested (during migration to the pre-production environment) scripts for migrating the Proposed Solution to production
Vendor Responsibilities	The IBM team will be responsible to: 1) Schedule and conduct a series of Planning Workshops or meetings to discuss the Pilot and Full Deployment Plan with the DHS Project Team, capture and organize project decisions, and identify constraints and assumptions as outlined in the deliverable description

ID – I.2.10	Deployment Plan (Pilot and Full Deployment)	
	2) Deliver the Pilot and Full Deployment Plan document for DHS review and approval This activity is completed when IBM delivers I.2.10, Deployment Plan document as specified in the project work plan to DHS.	
Expectations for DHS' Responsibilities	DHS will be responsible to: 1) Meet with the IBM team for multiple Planning Workshops or meetings to coordinate and review the Pilot and Full Deployment Plan as may be needed for items in the deliverable description 2) Perform deliverable review as contractually agreed, and 3) Provide IBM a deliverable acceptance certificate for Deployment Plan delivery as contractually agreed.	
	Start	End
Timeline	Calendar Day 1	Project End Date
Duration	At the end of each Sprint and Release	
WBS ID#(s)	1.1.2.10	
Reference (Section, Page Paragraph)	Section 2.0, Page 49, Paragraph 1; Section 8.2, Page 126, Paragraph 1	

ID – I.2.11	System Operations, Support and Transition Plan
Deliverable Description	The purpose of this deliverable is to validate the Vendor has a plan to smoothly migrate the Proposed Solution to M&O (from the point of release which has been validated and approved by DHS to go into production). The plan will detail how the Vendor will leverage the M&O processes to manage the issues/defects and fixes and will report progress as part of the M&O reports.
Vendor Responsibilities	The IBM team will be responsible to: 1) Schedule and conduct a series of Method Adoption Workshops to discuss the System Operations, Support and Transition Plan with the DHS Project Team, capture and organize project decisions, and identify constraints and assumptions as outlined in the deliverable description 2) Deliver the System Operations, Support and Transition Plan document for DHS review and approval This activity is completed when IBM delivers I.2.11, System Operations, Support and Transition Plan document as specified in the project work plan to DHS.
Expectations for DHS' Responsibilities	DHS will be responsible to: 1) Meet with the IBM team for multiple Method Adoption to coordinate and review the System Operations, Support and

ID – I.2.11	System Operations, Support and Transition Plan	
	Transition Plan as may be needed for items in the deliverable description 2) Perform deliverable review as contractually agreed, and 3) Provide IBM a deliverable acceptance certificate for System Operations, Support and Transition Plan delivery as contractually agreed.	
	Start	End
Timeline	Calendar Day 1	Project End Date
Duration	At the end of each Sprint and Release	
WBS ID#(s)	1.1.2.11	
Reference (Section, Page Paragraph)	Section 1.1, Page 17, Paragraph 1	

ID – I.3.1	Technical Environment Specifications Plan	
Deliverable Description	The purpose of this deliverable is to define the infrastructure the Vendor will provision to support the Project including hardware, operating system, networking, and COTS software. This will include specifications for each of the environments the Project will require, which will likely be provided independently throughout the Project.	
Vendor Responsibilities	The IBM team will be responsible to: 1) Schedule and conduct a series of technical meetings to discuss the Technical Environment Specifications Plan with the DHS Project Team, capture and organize project decisions, and identify constraints and assumptions as outlined in the deliverable description 2) Deliver the Technical Environment Specifications Plan document for DHS review and approval This activity is completed when IBM delivers I.3.1, Technical Environment Specifications Plan document as specified in the project work plan to DHS.	
Expectations for DHS' Responsibilities	DHS will be responsible to: 1) Meet with the IBM team for multiple technical meetings to coordinate and review the Technical Environment Specifications Plan as may be needed for items in the deliverable description 2) Perform deliverable review as contractually agreed, and 3) Provide IBM a deliverable acceptance certificate for Technical Environment Specifications Plan delivery as contractually agreed.	
	Start	End
Timeline	Calendar Day 1	Project End Date
Duration	At the end of each Sprint and Release	

ID – I.3.1	Technical Environment Specifications Plan
WBS ID#(s)	1.1.3
Reference (Section, Page Paragraph)	Section 3.1, Page 56, Paragraph 1

<table>
<tr><th>ID – I.4.1</th><th colspan="2">Requirements Validation and updates to RTM, BPA and Use Cases</th></tr>
<tr><td>Deliverable Description</td><td colspan="2">The purpose of this deliverable is to validate the design will capture the functional scope required. The Use Cases will be updated (to capture the agreed upon changes) and the Requirements will be updated (based on agreed upon changes) to clarify the scope and will be mapped to releases, technical components or equivalent.</td></tr>
<tr><td>Vendor Responsibilities</td><td colspan="2">The IBM team will be responsible to:
1) Perform activities as outlined in the deliverable description to validate requirements and create and update the Requirements Traceability Matrix, Business Process Analysis, and Use Cases based upon requirements as stated in the RFP and mutually agreed upon changes between IBM and DHS
2) Deliver the RTM, BPA and Use Case document(s) for DHS review and approval
This activity is completed when IBM delivers I.4.1, RTM, BPA, and Use Case document(s) as specified in the project work plan to DHS.</td></tr>
<tr><td>Expectations for DHS' Responsibilities</td><td colspan="2">DHS will be responsible to:
1) Meet with the IBM team for multiple technical meetings to coordinate and review the requirements, validation results, business processes and use cases as may be needed for items in the deliverable description
2) Perform deliverable review as contractually agreed, and
3) Provide IBM a deliverable acceptance certificate for RTM, BPA, and Use Case document delivery as contractually agreed.</td></tr>
<tr><td></td><td>Start</td><td>End</td></tr>
<tr><td>Timeline</td><td>Calendar Day 1</td><td>Project End Date</td></tr>
<tr><td>Duration</td><td colspan="2">At the end of each Sprint and Release</td></tr>
<tr><td>WBS ID#(s)</td><td colspan="2">1.1.4.1, 1.1.4.2, 1.1.4.3, 1.1.4.4, 1.1.4.5</td></tr>
<tr><td>Reference (Section, Page Paragraph)</td><td colspan="2">Section 4.1, Page 67</td></tr>
</table>

ID – I.4.2	Functional Design Document (FDD)
Deliverable Description	The purpose of this deliverable is to provide a detailed design of the functionality in scope for the release prior to commencing development. This document shall include:

ID – I.4.2	Functional Design Document (FDD)	
	1) System overview diagrams illustrating which Solution components provide what functionality, linking back to the functional capabilities 2) Design Use Cases (or equivalent) to map requirements to technical components 3) Functional specifications (or equivalent) for custom development required 4) Recommendations on how to close specific gaps that require changes to DHS' business processes 5) Business rules definition 6) Reporting capabilities and prebuilt reports 7) User profiles mapped to functionality 8) User Interface screens for the Proposed Solution including results of usability studies 9) Time studies capturing the anticipated efficiency savings with the new user interface design 10) Identification of functions or user roles that initiate workflow, receives the workflow, and processes that occur as a result of the workflow 11) Identify functionality which will be developed as a shared service 12) List of assumptions made during the design as well as recommended next steps and required actions that shall be provided to DHS before development.	
Vendor Responsibilities	The IBM team will be responsible to: 1) Perform functional design activities and create the Functional Design Document as specified in the deliverable description 2) Create the Functional Design Document, Deliverable Expectation Document (DED) 3) Deliver the Functional Design Document for DHS review and approval This activity is completed when IBM delivers I.4.2 Functional Design Document as specified in the project work plan to DHS.	
Expectations for DHS' Responsibilities	DHS will be responsible to: 1) Meet with the IBM team for multiple technical meetings to coordinate and review the functional design and Functional Design Document as may be needed for items in the deliverable description 2) Perform deliverable review as contractually agreed, and 3) Provide IBM a deliverable acceptance certificate for Functional Design Document delivery as contractually agreed.	
	Start	End
Timeline	Calendar Day 1	Project End Date
Duration	At the end of each Sprint and Release	

ID – I.4.2	Functional Design Document (FDD)
WBS ID#(s)	1.1.4.1, 1.1.4.2, 1.1.4.3, 1.1.4.4, 1.1.4.5
Reference (Section, Page Paragraph)	Section 2.0, Page 54, Paragraph 5; Section 4.2, Page 72, Paragraph 1

ID – I.4.3	Technical Design Document (FDD)	
Deliverable Description	The purpose of this deliverable is to provide the detailed technical design that addresses how the functional design will be implemented. This includes the COTS software being leveraged, the configuration of these components, the data integration and interfaces, and the design of custom development required. The Technical Design Document will include the following components: 1) A mapping of the functional design to the solution components 2) The configuration of COTS software 3) The detailed design of required custom development 4) Processes to manage Solution installation and configuration 5) Technical design aligns with the established standards	
Vendor Responsibilities	The IBM team will be responsible to: 1) Perform technical design activities and create the Technical Design Document as specified in the deliverable description 2) Create the Technical Design Document, Deliverable Expectation Document (DED) 3) Deliver the Technical Design Document for DHS review and approval This activity is completed when IBM delivers I.4.3 Technical Design Document as specified in the project work plan to DHS.	
Expectations for DHS' Responsibilities	DHS will be responsible to: 1) Meet with the IBM team for multiple technical meetings to coordinate and review the technical design and Technical Design Document as may be needed for items in the deliverable description 2) Perform deliverable review as contractually agreed, and 3) Provide IBM a deliverable acceptance certificate for Technical Design Document delivery as contractually agreed.	
	Start	End
Timeline	Calendar Day 1	Project End Date
Duration	At the end of each Sprint and Release	
WBS ID#(s)	1.1.4.1, 1.1.4.2, 1.1.4.3, 1.1.4.4, 1.1.4.5	
Reference (Section, Page Paragraph)	Section 2.0, Page 54, Paragraph 5; Section 4.2, Page 72, Paragraph 1	

ID – I.4.4	Data Integration and Interface Control Documents (ICD)
Deliverable Description	The purpose of this deliverable is to capture the integration approach and data design for the Proposed Solution, focused on the interfaces to external systems. The Data Integration and Interface Control Document (ICD) will include the following components: 1) Interface definitions and design 2) Data Flow Diagrams 3) Integration interface protocol and interaction diagrams 4) Failure modes and recovery approach 5) Data Dictionary 6) Data Transformation and Loading 7) Processing controls 8) Processes to manage Solution installation and configuration and ongoing monitoring and incident management including items such as: a) Agreements with the third-party application owner for how to resolve problems b) SLRs/contracts with partner c) Documenting roles and responsibilities d) Assumptions 6) Privacy requirements for different data elements 7) Security Controls The data dictionary and integration/interface approach will conform to data standards established by DHS.
Vendor Responsibilities	The IBM team will be responsible to: 1) Perform technical design activities and create the Data Integration and Interface Control Documents as specified in the deliverable description 2) Create the Data Integration and Interface Control Documents, Deliverable Expectation Document (DED) 3) Deliver the Data Integration and Interface Control Documents for DHS review and approval This activity is completed when IBM delivers I.4.4 Data Integration and Interface Control Documents as specified in the project work plan to DHS.
Expectations for DHS' Responsibilities	DHS will be responsible to: 1) Meet with the IBM team for multiple technical meetings to coordinate and review the technical design and Data Integration and Interface Control Documents as may be needed for items in the deliverable description 2) Perform deliverable review as contractually agreed, and

ID – I.4.4	Data Integration and Interface Control Documents (ICD)	
	3) Provide IBM a deliverable acceptance certificate for Data Integration and Interface Control Documents delivery as contractually agreed.	
	Start	End
Timeline	Calendar Day 1	Project End Date
Duration	At the end of each Sprint and Release	
WBS ID#(s)	1.1.4.1, 1.1.4.2, 1.1.4.3, 1.1.4.4, 1.1.4.5	
Reference (Section, Page Paragraph)	Section 4.2, Page 72, Paragraph 1	

ID – I.4.5	Updated and Completed Functional and Technical Requirements Traceability Matrix	
Deliverable Description	The purpose of this deliverable is to determine requirements will be tested as part of the System. This deliverable maps the functional and technical requirements to the Test Cases and Test Scripts.	
Vendor Responsibilities	The IBM team will be responsible to: 1) Perform requirements management activities and create the Requirements Traceability Matrix (RTM) documents as specified in the deliverable description 2) Deliver the RTM for DHS review and approval This activity is completed when IBM delivers I.4.5 Updated and Completed Functional and Technical Requirements Traceability Matrix as specified in the project work plan to DHS.	
Expectations for DHS' Responsibilities	DHS will be responsible to: 1) Meet with the IBM team for multiple technical meetings to coordinate and review requirements and the RTM as may be needed for items in the deliverable description 2) Perform deliverable review as contractually agreed, and 3) Provide IBM a deliverable acceptance certificate for Updated and Completed Functional and Technical Requirements Traceability Matrix delivery as contractually agreed.	
	Start	End
Timeline	Calendar Day 1	Project End Date
Duration	At the end of each Sprint and Release	
WBS ID#(s)	1.1.4.1, 1.1.4.2, 1.1.4.3, 1.1.4.4, 1.1.4.5	
Reference (Section, Page Paragraph)	Section 2.0, Page 54, Paragraph 2; Section 4.2, Page 72, Paragraph 1	

ID – I.5.1	Data Conversion Testing Report and Results	
Deliverable Description	The purpose of this deliverable is to verify the converted data has been tested and is ready for production prior to performing UAT. This deliverable will include data that needs to be converted for the release to go-live has been reconciled to the legacy system and verified by DHS.	
Vendor Responsibilities	The IBM team will be responsible to: 1) Perform activities as specified in the deliverable description to verify the converted data is ready for production prior to performing UAT 2) Deliver the Data Integration and Interface Control Documents for DHS review and approval This activity is completed when IBM delivers I.5.1 Data Conversion Testing Report and Results as specified in the project work plan to DHS.	
Expectations for DHS' Responsibilities	DHS will be responsible to: 1) Verify that data that needs to be converted for each release has been reconciled to the legacy system. 2) Perform deliverable review as contractually agreed, and 3) Provide IBM a deliverable acceptance certificate for Data Conversion Testing Report and Results deliverable as contractually agreed.	
	Start	End
Timeline	Calendar Day 1	Project End Date
Duration	At the end of each Sprint and Release	
WBS ID#(s)	1.1.5, 1.1.5.1.1, 1.1.5.1.2, 1.1.5.1.3, 1.1.5.1.4, 1.1.5.1.5	
Reference (Section, Page Paragraph)	Section 5.1, Page 81, Paragraph 3	

ID – I.6.1	Completed SIT Readiness Checklist
Deliverable Description	This deliverable determines that the key System Test activities and artifacts are ready. The checklist will be established as part of the Master Test Plan and includes: 1) Test scripts and scenarios have been prepared 2) The test data set has been defined and created 3) Test scenarios have been mapped to functional and technical requirements 4) Test environment has been configured 5) Defect management tool and process has been established 6) Progress tracking has been established (scripts pass, fail, pending etc.)
Vendor Responsibilities	The IBM team will be responsible to:

ID – I.6.1	Completed SIT Readiness Checklist	
	1) Perform activities to create the Completed SIT Readiness Checklist as specified in the deliverable description and update for each sprint as may be needed 2) Deliver the Completed SIT Readiness Checklist for DHS review and approval This activity is completed when IBM delivers I.6.1 Completed SIT Readiness Checklist as specified in the project work plan to DHS.	
Expectations for DHS' Responsibilities	DHS will be responsible to: 1) Perform deliverable review as contractually agreed, and 2) Provide IBM a deliverable acceptance certificate for Completed SIT Readiness Checklist delivery as contractually agreed.	
	Start	End
Timeline	Calendar Day 1	Project End Date
Duration	At the end of each Sprint and Release	
WBS ID#(s)	1.1.6.1, 1.1.6.1.1, 1.1.6.1.2, 1.1.6.1.3, 1.1.6.1.4, 1.1.6.1.5	
Reference (Section, Page Paragraph)	Section 4.2, Page 72	

ID – I.6.2	SIT Testing Report and Results
Deliverable Description	The purpose of this deliverable is to determine the entire System has been tested, and rounds of testing are successful, prior to promoting the System to UAT. The Vendor shall provide a formal Testing Report that should be aligned to Federal testing approval guidelines (CMS, FNS etc.). The Testing Report will include: 1) Completed Test Scenarios, Test Cases and Test Scripts 2) Testing Milestone Reports and other status reports 3) Test Phase Final Results Report and Corrective Action(s) Plan 4) Platform readiness test outcome report 5) Requirements having passed SIT (e.g. requirements are mapped to test cases and test cases have passed)
Vendor Responsibilities	The IBM team will be responsible to: 1) Perform activities to perform SIT testing and create the SIT Testing Report and Results as specified in the deliverable description, updated for each sprint as may be needed 2) Deliver SIT Testing Report and Results for DHS review and approval This activity is completed when IBM delivers I.6.2 SIT Testing Report and Results as specified in the project work plan to DHS.
Expectations for DHS' Responsibilities	DHS will be responsible to: 1) Perform deliverable review as contractually agreed, and

ID – I.6.2	SIT Testing Report and Results	
	2) Provide IBM a deliverable acceptance certificate SIT Testing Report and Results delivery as contractually agreed.	
	Start	End
Timeline	Calendar Day 1	Project End Date
Duration	At the end of each Sprint and Release	
WBS ID#(s)	1.1.6.2, 1.1.6.2.1, 1.1.6.2.2, 1.1.6.2.3, 1.1.6.2.4, 1.1.6.2.5	
Reference (Section, Page Paragraph)	Section 4.2, Page 72	

ID – I.6.3	Completed UAT Readiness Checklist	
Deliverable Description	The purpose of this deliverable is to determine the entire Solution has passed SIT and activities and artifacts necessary to begin UAT have been completed. The checklist will be established as part of the Master Test Plan and serve as documentation that: 1) The test data set has been defined and created 2) Test scenarios have been mapped to functional and technical requirements 3) UAT state participants have been fully trained in the functionality for their role 4) Error tracking and reporting tools and methodology have been established and State users have been trained 5) A testing tool/test harness/automated test framework has been implemented which will support automated regression testing	
Vendor Responsibilities	The IBM team will be responsible to: 1) Perform activities to create the Completed UAT Readiness Checklist as specified in the deliverable description and update for each release as may be needed 2) Create the Completed UAT Readiness Checklist, Deliverable Expectation Document (DED) 3) Deliver the Completed UAT Readiness Checklist for DHS review and approval This activity is completed when IBM delivers I.6.3 Completed UAT Readiness Checklist as specified in the project work plan to DHS.	
Expectations for DHS' Responsibilities	DHS will be responsible to: 1) Perform deliverable review as contractually agreed, and 2) Provide IBM a deliverable acceptance certificate for Completed UAT Readiness Checklist delivery as contractually agreed.	
	Start	End
Timeline	Calendar Day 1	Project End Date
Duration	At the end of each Release	

ID – I.6.3	Completed UAT Readiness Checklist
WBS ID#(s)	1.1.6.3, 1.1.6.3.1, 1.1.6.3.2, 1.1.6.3.3, 1.1.6.3.4, 1.1.6.3.5
Reference (Section, Page Paragraph)	Section 6.0, Page 90

ID – I.6.4	UAT Testing Report and Results	
Deliverable Description	The purpose of this deliverable is to determine the entire System has been tested, and rounds of testing are successful, prior to promoting the System to Pilot and Rollout. The Vendor shall provide a formal Testing Report that should be aligned to Federal testing approval guidelines (CMS, FNS etc.). The deliverable approval will be contingent on Federal approval (FNS and/or CMS). The Testing Report will include: 1) Completed Test Scenarios, Test Cases and Test Scripts 2) Testing Milestone Reports and other status reports 3) Test Phase Final Results Report and Corrective Action(s) Plan 4) Platform readiness test outcome report 5) Regression testing has passed 6) Performance/stress testing has been completed and passed Each of the above are successful, and approved by DHS and/or CMS, FNS.	
Vendor Responsibilities	The IBM team will be responsible to: 1) Perform activities to manage and coordinate UAT testing and create the UAT Testing Report and Results as specified in the deliverable description, updated for each sprint as may be needed 2) Perform the specified CMS reviews for UAT testing as indicated in the project work plan 3) Submit the UAT Testing Report and Results to the appropriate FNS authorities for review and approval 4) Deliver UAT Testing Report and Results for DHS review and approval This activity is completed when IBM delivers I.6.4 UAT Testing Report and Results as specified in the project work plan to DHS.	
Expectations for DHS' Responsibilities	DHS will be responsible to: 1) Work with IBM to obtain FNS review and approval for the UAT Testing Report and Results 2) Perform deliverable review as contractually agreed, and 3) Provide IBM a deliverable acceptance certificate UAT Testing Report and Results delivery as contractually agreed.	
	Start	End
Timeline	Calendar Day 1	Project End Date
Duration	At the end of each Release	

ID – I.6.4	UAT Testing Report and Results
WBS ID#(s)	1.1.6.9
Reference (Section, Page Paragraph)	Section 6.0, Page 90

ID – I.7.1	Training and Knowledge Transfer Materials	
Deliverable Description	The purpose of this deliverable is to determine training materials have been reviewed and approved by DHS prior to commencing UAT (as these materials will be tested during UAT). This deliverable will include DHS approvals on training materials outlined in the Training Course Catalog. Requested updates from the previous release will be addressed and approved prior to deliverable submission.	
Vendor Responsibilities	The IBM Training Team will develop IE-BM Training and Knowledge Transfer Materials that cover: 1) Basic overview and navigation of the IE-BM System 2) In-depth review of each system function This activity is completed when IBM delivers I.7.1 Training and Knowledge Transfer Materials as specified in the project work plan to DHS.	
Expectations for DHS' Responsibilities	DHS will be responsible to: 1) Attend and approve training plan as planned in the project work plan 2) Provide training feedback sufficient to capture and define required updates from previous releases with current release as directed by IBM 3) Perform deliverable review as contractually agreed, and Provide IBM a deliverable acceptance certificate for Training and Knowledge Transfer Materials as contractually agreed.	
	Start	End
Timeline	Calendar Day 1	Project End Date
Duration	At the end of each Sprint and Release	
WBS ID#(s)	1.1.7	
Reference (Section, Page Paragraph)	Section 7.3.6, Page 114, Paragraph 2	

ID – I.7.2	Training and Knowledge Transfer Completion report
Deliverable Description	The purpose of this deliverable is to validate the Vendor's training efforts have resulted in end-user learning. This will be measured through the surveys provided after the training sessions have been completed, will determine attendance (based on the Training curriculum by DHS user type outlined in the Training Course

ID – I.7.2	Training and Knowledge Transfer Completion report	
	Catalog Deliverable) and determine the audience developed an understanding of the System required to perform their role. Should the survey results result in less than adequate knowledge of the training material by participants, the Vendor demonstrates that it has provided additional or remedial education to bring attendee knowledge to an acceptable level.	
Vendor Responsibilities	The IBM team will be responsible to: 1) Perform training and end-user learning measurement activities as specified in Section 7.3, End User Training 2) Create the Training and Knowledge Transfer Completion Report as specified in the deliverable description 3) Deliver the Training and Knowledge Transfer Completion Report for DHS review and approval This activity is completed when IBM delivers I.7.2 Training and Knowledge Transfer Completion Report as specified in the project work plan to DHS.	
Expectations for DHS' Responsibilities	DHS will be responsible to: 1) Attend training as planned in the project work plan 2) Provide training feedback sufficient to measure end-user learning as directed by IBM 3) Perform deliverable review as contractually agreed, and 4) Provide IBM a deliverable acceptance certificate for Training and Knowledge Transfer Completion Report delivery as contractually agreed.	
	Start	End
Timeline	Calendar Day 1	Project End Date
Duration	At the end of each Sprint and Release	
WBS ID#(s)	1.1.7.1, 1.1.7.2, 1.1.7.3, 1.1.7.4, 1.1.7.5	
Reference (Section, Page Paragraph)	Section 7.3.6, Page 116	

ID – I.7.3	Executive Briefing
Deliverable Description	The purpose of this deliverable is to provide DHS executives and DCO Directors a full report on OCM activities that were performed, progress, risks/challenges facing the project from an OCM perspective and the upcoming activities to help provide efficient and effective State staff interaction with the IE-BM Solution. This includes: 1) Results from Surveys and other mechanisms to capture the progress on the level of change acceptance with each stakeholder group. 2) Reporting on OCM Milestones as identified in the OCM Plan.

ID – I.7.3	Executive Briefing	
Vendor Responsibilities	The IBM team will be responsible to: 1. Work with DHS to identify reports and formats desired for Executive Briefings 2. Customize WWPMM templates to meet DHS standards and procedures as specified for each briefing configuration item in the overall deliverable 3. Deliver the Executive Briefings at agreed upon intervals for DHS review and approval This activity is completed when IBM delivers I.7.3, Executive Briefing as specified in the project work plan to DHS.	
Expectations for DHS' Responsibilities	DHS will be responsible to: 1. Meet with the IBM team for Executive Briefing as may be needed, 2. Provide DHS standards for Executive Briefing formats or provide input and review of IBM provided formats, 3. Perform deliverable review as contractually agreed, and 4. Provide IBM a deliverable acceptance certificates for incremental Executive Briefings as contractually agreed.	
	Start	End
Timeline	Calendar Day 1	Project End Date
Duration	At the end of each Release	
WBS ID#(s)	1.1.4.1, 1.1.4.2, 1.1.4.3, 1.1.4.4, 1.1.4.5	
Reference (Section, Page Paragraph)	Section 1.1, Page 18, Paragraph 1	

ID – I.8.1	Pilot Deployment report and signoff
Deliverable Description	The purpose of this deliverable is to determine that the System Pilot successfully demonstrated the improved usability and end-user efficiency and stability to both internal and external end-users in the field prior to going live. The pilot will be performed after UAT and will include identifying and resolving issues identified during the System pilot. The deliverable will be considered complete once DHS determines the System will allow users to perform the end-to-end business processes without issues, improve efficiency/usability. The results will be included in the Documented Successful Completion of System Pilot in accordance with Federal (FNS, CMS etc.) requirements.
Vendor Responsibilities	The IBM team will be responsible to: 1. Perform activities to manage and coordinate Pilot Deployment and create the Pilot Deployment Report and Signoff as specified in the deliverable description, updated for each sprint as may be needed

ID – I.8.1	Pilot Deployment report and signoff	
	2. Deliver Pilot Deployment Report and Signoff for DHS review and approval This activity is completed when IBM delivers I.8.1 Pilot Deployment Report and Signoff as specified in the project work plan to DHS.	
Expectations for DHS' Responsibilities	DHS will be responsible to: 1. Provide users and participate in the 90-day Pilot Deployment as specified in the deliverable description 2. Perform deliverable review as contractually agreed, and 3. Provide IBM a deliverable acceptance certificate Pilot Deployment Report and Signoff delivery as contractually agreed.	
	Start	End
Timeline	Calendar Day 1	Project End Date
Duration	At the end of each Release	
WBS ID#(s)	1.1.8.4	
Reference (Section, Page Paragraph)	Section 1.1, Page 17, Paragraph 2	

ID – I.8.2	Formal System Acceptance and Final Go-Live Report
Deliverable Description	The purpose of this deliverable is to determine the System is functioning effectively in production. Once the System has been migrated to production and rolled out to the entire organization, the System will be stabilized to allow support to be migrated from the cut-over support team to the M&O team. The deliverable will be considered complete once DHS determines the System will allow users to perform the end-to-end business processes without issues, improve efficiency/usability, and on the contingency that FNS and/or CMS has approved the results.
Vendor Responsibilities	The IBM team will be responsible to: 1. Perform activities to manage and coordinate full system roll-out in production as specified in the deliverable description 2. Create the Formal System Acceptance and Final Go-Live Report, Deliverable Expectation Document (DED) 3. Deliver Pilot Deployment Report and Signoff for DHS review and approval This activity is completed when IBM delivers I.8.2 Formal System Acceptance and Final Go-Live Report as specified in the project work plan to DHS.
Expectations for DHS' Responsibilities	DHS will be responsible to: 1. Provide users and participate in the full system roll-out in production as specified in the deliverable description

ID – I.8.2	Formal System Acceptance and Final Go-Live Report	
	2. Verify the production system roll-out as specified in the deliverable description 3. Perform deliverable review as contractually agreed, and 4. Provide IBM a deliverable acceptance certificate Formal System Acceptance and Final Go-Live Report delivery as contractually agreed.	
	Start	End
Timeline	Calendar Day 1	Calendar Day 1
Duration	At the end of each Release	
WBS ID#(s)	1.1.6.9	
Reference (Section, Page Paragraph)	Section 1.1, Page 17, Paragraph 2	

ID – I.9.1	Completion of All Warranty Activities Report	
Deliverable Description	The purpose of this deliverable will be to summarize warranty fixes. This report will include a summary of defects fixed under warranty, the defect priority and the time between the defect being reported and a fix deployed into production.	
Vendor Responsibilities	The IBM team will be responsible to: 1. Perform warranty activities following full system roll-out in production 2. Deliver Completion of Warranty Activities Report for DHS review and approval This activity is completed when IBM delivers I.9.1 Completion of Warranty Activities Report as specified in the project work plan to DHS.	
Expectations for DHS' Responsibilities	DHS will be responsible to: 1. Perform deliverable review as contractually agreed, and 2. Provide IBM a deliverable acceptance certificate Completion of Warranty Activities Report delivery as contractually agreed.	
	Start	End
Timeline	Calendar Day 1	Project End Date
Duration	At the end of each Sprint and Release	
WBS ID#(s)	1.1.9, 1.1.9.1, 1.1.9.2, 1.1.9.3, 1.1.9.4, 1.1.9.5	
Reference (Section, Page Paragraph)	Section 9.0, Page 131, Paragraph 1	

13.2 Deliverables Expectations Document

The awarded Vendor will be required to prepare all deliverables based on a DED that will be written by the Vendor and approved by DHS with guidance from at least the IV&V vendor prior to the Vendor starting any work on the Deliverable. Once approved by DHS, the DED will be a tool used to monitor the Vendor's work on the deliverable and to discuss the Vendor's successful delivery of the Deliverable as defined by the deliverable acceptance criteria.

No work may be performed on any deliverable until the associated DED has been approved in writing by DHS. As each Project Deliverable is submitted, the Vendor must include a copy of the DED as the cover sheet.

Submission of DEDs for these deliverables will be evaluated as part of the Vendor's Proposal but submission with a Proposal, or issuance of a Contract does not constitute acceptance of the DED.

Instructions: Provide DEDs for the following deliverables (see the RFP document for additional details), using the template in the DED Template Table below. Replicate the template for each DED submitted. Change only the cells containing "<Insert>". Do not change any of the completed cells. Any changes to the completed cells could lead to the disqualification of the Proposal.

Table 30: Deliverables for which the vendor should complete a DED within the proposal

Deliverable #	Name of Deliverable
I.1.2	Integrated Project Management Plan
I.1.4	Project Status Reporting Artifacts
I.1.5	Release/ Project Closeout Check-List
I.2.1	Overall SDLC approach Plan
I.2.2	System Architecture
I.2.6	Data Conversion Plan
I.2.7	Master Test Plan
I.2.8	Training and Knowledge Transfer plan
I.2.9	Roll-Out Plan (Pilot and Full Roll-Out)
I.4.2	Functional Design Document
I.4.3	Technical Design Document
I.4.4	Data Integration and Interface Design Document
I.6.3	Completed UAT Readiness Checklist
I.7.1	Training and Knowledge Transfer Materials
I.8.2	Formal System Acceptance and Final Go-Live report

Table 31: DED Template

Project Deliverable Expectations Document	
Project Deliverable Number:	**Title of Deliverable:**
<Insert>	<Insert>
Proposal Reference:	**Contract Reference:**
<Insert>	<Leave Blank>

Frequency:	**Draft Submission Due:**
<Insert>	<Leave Blank>
State's Draft Review and Comment Period:	**Final Submission Due:**
<Leave Blank>	<Leave Blank>
Approval Required:	**Distribution:**
<Leave Blank>	<Leave Blank>
Vendor	
Prepared by:	**Date Submitted (version 1):**
<Leave Blank>	<Leave Blank>
Date Submitted (version 2):	**Date Submitted (version 3):**
<Leave Bank>	<Leave Blank>
Phone Number:	**FAX:**
<Leave Blank>	<Leave Blank>
Email:	
<Leave Blank>	
Deliverable Acceptance Criteria – To be reviewed by QA Provider and DHS and Approved by the Project Director	
<Insert Proposed Format and Content Description for Each Required DED>	
Department of Public Health Approval/Comments	
Approved by:	**Date:**
<Leave Blank>	<Leave Blank>
Signature: <Leave Blank>	
Comments: <Leave Blank>	

<Insert Proposed Format and Content Description for Each Required DED>

Project Deliverable Expectations Document	
Project Deliverable Number:	Title of Deliverable:
I.1.2	Integrated Project Management Plan
Proposal Reference:	Contract Reference:
Section 1.1, Page 14, Paragraph 4	<Leave Blank>
Frequency:	Draft Submission Due:
Initially and updated with each major release	<Leave Blank>

State's Draft Review and Comment Period:	Final Submission Due:
<Leave Blank>	<Leave Blank>
Approval Required:	Distribution:
<Leave Blank>	<Leave Blank>
Vendor	
Prepared by:	Date Submitted (version 1):
<Leave Blank>	<Leave Blank>
Date Submitted (version 2):	Date Submitted (version 3):
<Leave Bank>	<Leave Blank>
Phone Number:	FAX:
<Leave Blank>	<Leave Blank>
Email:	
<Leave Blank>	
Deliverable Acceptance Criteria – To be reviewed by QA Provider and DHS and Approved by the Project Director	

The DED document will contain the following:

1) Title Page containing document title, current version, and delivery date
2) Version History containing version author, version date, and version description
3) Distribution list for document review and approval
4) Document Location in the project SharePoint document repository
5) Deliverable Description
   a) Scope of the Integrated Project Management Plan deliverable
   b) Description of the Project Management Plan including:
      i) **Scope Management Plan** — Outlines the processes required to determine the IE-BM Proposed Solution and the Project meet the requirements outlined in the RFP and how deviations will be tracked and managed
      ii) **Schedule Management Plan** — Captures how the Project Schedule will be monitored for variances, what types of corrective actions will be taken to address schedule variances during the life of the Project and the process, roles, and responsibilities involved in making changes to the Project Schedule
      iii) **Project Change Management Plan** — How changes to the Project scope, schedule and budget are tracked, reviewed and approved
      iv) **Risk and Issues Management Plan** — Development of a Risk and Issue Management Plan and a baseline Risk Assessment to DHS' Project Manager
      v) **Performance Management Plan —**Project approach to monitor, track and report on baseline metrics for each performance area identified in the Template T-10 – Implementation Requirements Traceability Matrix – I.8 Implementation SLRs
      vi) **Document Management Plan** — Project approach to develop and maintain a Project Information Library (PIL) that will be overseen by the Project Management Team in a single repository used to store, organize, track, control and disseminate information and items produced by, and delivered to, the Project. The Document

Management Plan will include a description of the PIL file structure with defined access and permissions.

vii) **Data Management Plan** — Project approach to managing data to determine adequate data is provided for testing and confidential data is managed effectively

viii) **Quality Management Plan** —Project approach to define, build and measure deliverable quality throughout the entire Project lifecycle

ix) **Human Resource Management Plan** — Captures the projected resources required and the processes for identifying, qualifying and onboarding new team members, and removing a team member

x) **Acceptance/Contract Management** — Captures the processes, template, and roles and responsibilities for accepting deliverables

xi) **Project Communication Management Plan** — Defines varying levels and needs of the Project's stakeholders for information regarding the project, status, accomplishments, impact on stakeholders, and communications vehicles

xii) **Procurement Management Plan** — Details how IBM will manage its subcontractors and other suppliers

xiii) **Closure Approach** — Captures the activities IBM will perform to formally close a release and the entire Project

6) Deliverable Assumptions and Constraints
   a) Participation of DHS as specified in section 1.2 Implementation Deliverables, Deliverable I.1.2
   b) Method Adoption Workshops with the DHS Project Manager scheduled within 10 working days of the deliverable start date
   c) IBM deliverable submission on or before the accepted project work plan date
   d) DHS deliverable comment returned to IBM on or before the accepted project work plan date
   e) IBM deliverable submission for second DHS review on or before the accepted project work plan date
   f) DHS deliverable acceptance provided on or before the accepted project work plan date
7) Deliverable Acceptance Criteria
   a) Submitted PMP with sub-plans as outlined in the Deliverable Description
   b) Comments from first DHS review incorporated in the PMP deliverable
8) DHS Review Comments
9) DHS Acceptance Comments

Department of Public Health Approval/Comments	
Approved by:	Date:
<Leave Blank>	<Leave Blank>
Signature: <Leave Blank>	
Comments: <Leave Blank>	

Project Deliverable Expectations Document	
Project Deliverable Number:	Title of Deliverable:
I.1.4	Project Status Reporting Artifacts
Proposal Reference:	Contract Reference:
Section 1.1, Page 14, Paragraph 6	<Leave Blank>
Frequency:	Draft Submission Due:
Ongoing weekly and monthly throughout the project	<Leave Blank>
State's Draft Review and Comment Period:	Final Submission Due:
<Leave Blank>	<Leave Blank>
Approval Required:	Distribution:
<Leave Blank>	<Leave Blank>
Vendor	
Prepared by:	Date Submitted (version 1):
<Leave Blank>	<Leave Blank>
Date Submitted (version 2):	Date Submitted (version 3):
<Leave Bank>	<Leave Blank>
Phone Number:	FAX:
<Leave Blank>	<Leave Blank>
Email:	
<Leave Blank>	
Deliverable Acceptance Criteria – To be reviewed by QA Provider and DHS and Approved by the Project Director	
Project Reporting Artifacts include weekly Status Reports containing the contents outlined below: 1) Graphical statuses of scope, schedule, and budget (red, yellow, or green) 2) Accomplishments of the last reporting period and objectives for the next reporting period 3) DHS responsibilities for the next reporting period 4) Actual or projected Project Schedule milestone dates versus baselined milestone dates 5) Projected key completion dates compared to approved key baseline dates 6) Recovery plan for work activities not tracking to the approved schedule 7) Disposition of logged issues and risks 8) Status of high risks and mitigation plans 9) Status of issues that impact or may impact the project critical path and resolution plans 10) Key dependencies with other DHS Enterprise efforts and activities 11) Organizational Change Management (OCM) status and activities 12) Important decisions made and/or upcoming decisions 13) Team member changes 14) Pending scope change requests	

15) One-page graphical summary of the Project Work Plan status of major tasks and subtasks for each active Phase or Sprint in the Project Work Plan Project Reporting Artifacts include monthly Executive Status Reports containing an Executive Summary using graphical status (red, yellow, green) wherever possible and items from the Weekly Status Reports mutually agreed upon by the DHS and IBM Program Executives **[I1.11]**	
Department of Public Health Approval/Comments	
Approved by:	Date:
<Leave Blank>	<Leave Blank>
Signature: <Leave Blank>	
Comments: <Leave Blank>	

Project Deliverable Expectations Document	
Project Deliverable Number:	Title of Deliverable:
I.1.5	Release/Project Closeout Check-List
Proposal Reference:	Contract Reference:
Section 1.1, Page 15, Paragraph 1; Section 8.2, Page 73, Paragraph 2.	<Leave Blank>
Frequency:	Draft Submission Due:
At the end of each Sprint and Release	<Leave Blank>
State's Draft Review and Comment Period:	Final Submission Due:
<Leave Blank>	<Leave Blank>
Approval Required:	Distribution:
<Leave Blank>	<Leave Blank>
Vendor	
Prepared by:	Date Submitted (version 1):
<Leave Blank>	<Leave Blank>
Date Submitted (version 2):	Date Submitted (version 3):
<Leave Bank>	<Leave Blank>
Phone Number:	FAX:
<Leave Blank>	<Leave Blank>
Email:	
<Leave Blank>	

Deliverable Acceptance Criteria – To be reviewed by QA Provider and DHS and Approved by the Project Director
The purpose of this deliverable is to determine Project activities and the migration to M&O are complete and that functionality has been implemented and the appropriate legacy application(s) have been retired. This deliverable will be the completed check-list and include: 1) Proof that deliverables are up-to-date and approved for each major release and Project closeout including: a. Functional Specifications and Design Documentation including Sprints b. System Architecture c. Technical Design Documentation including Sprints d. Data Management and Synchronization Plan e. Test Cases and Test Scripts including Sprints f. Training Manuals, End-User Guides, and Materials g. Final versions of the System software files 2) Control of System and training documentation has been transferred to the M&O team 3) Lessons learned are documented 4) Tactical activities are complete (e.g., off boarding project personnel) 5) Providing hand-off of source code and State ownership of source code and configurations as identified in Template T10, Implementation RTM, Requirements I4.31 through I4.33 6) Regression test scripts have been completed and are ready to support future regression testing

Department of Public Health Approval/Comments	
Approved by:	Date:
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Signature: <Leave Blank>	
Comments: <Leave Blank>	

Project Deliverable Expectations Document	
Project Deliverable Number:	Title of Deliverable:
I.2.1	Overall SDLC approach Plan
Proposal Reference:	Contract Reference:
Section 2.0, Page 16, Paragraph 2	<Leave Blank>
Frequency:	Draft Submission Due:
60 Calendar Days	<Leave Blank>
State's Draft Review and Comment Period:	Final Submission Due:
<Leave Blank>	<Leave Blank>

Approval Required:	Distribution:
<Leave Blank>	<Leave Blank>
Vendor	
Prepared by:	Date Submitted (version 1):
<Leave Blank>	<Leave Blank>
Date Submitted (version 2):	Date Submitted (version 3):
<Leave Bank>	<Leave Blank>
Phone Number:	FAX:
<Leave Blank>	<Leave Blank>
Email:	
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Deliverable Acceptance Criteria – To be reviewed by QA Provider and DHS and Approved by the Project Director	

The purpose of the overall SDLC approach plan deliverable is to demonstrate that the Vendor has a strong understanding of DHS, integrated eligibility and benefits management, and a well-defined vision for how the IE-BM Proposed Solution will be developed, in alignment with the requirements outlined in Template T-11 — Implementation Approach Response.

The plan provides a comprehensive SDLC approach elaborating on how the Vendor intends to implement the various phases of the project lifecycle and how it aligns with CMS XLC framework. This includes an overview of the different SDLC phases and how this Project will approach the different phases.

To develop this deliverable, the below items will be considered:

1) Gain a deep understanding of the business processes and the functionality that the IE-BM Proposed Solution will provide
2) Establish the guiding principles for the Project (e.g., minimize custom development)
3) Assess the end-user needs and DHS culture and finalize the methodology and tools that will be used to analyze and validate requirements (including interviews, workflow analysis, Joint Application Development (JAD) sessions, mock-ups, Usability Studies, etc.)
4) Establish a requirements traceability plan to see that requirements are met including a process for tracking, updating and managing changes to the requirements traceability matrix throughout the lifecycle of the Project (including mapping requirements to design documents and test cases)
5) Establish the mechanisms for managing the configurations and custom code through development
6) Work with DHS to define how technical decisions will be made to determine the IE-BM Proposed Solution aligns with the DHS Standards
7) Establish the Vendor's internal processes to determine the design is an integrated coherent IE-BM Solution (e.g., internal design reviews)
8) Establish the approach to developing technical standards and facilitating conformance to the standards
9) Establish the strategy to see that requirements are met, while maximizing the use of COTS software to support the requirements and approval processes required to make changes (e.g., changes to business processes or migrating the Solution from COTS to custom)

10) Work with DHS to define how DHS staff will work with the Vendor's team for the duration of the Project
11) Define the scope of the Project Releases and how overlap between releases (from a technical and project perspective) will be managed
12) Establish which technical components will be deployed and source systems will be integrated with by release
13) Identify major technical challenges the Vendor will overcome to implement the IE-BM Proposed Solution

Define the tools to be used to manage the DDI process (e.g. requirements repository, document repository)

Department of Public Health Approval/Comments	
Approved by:	Date:
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Signature: <Leave Blank>	
Comments: <Leave Blank>	

Project Deliverable Expectations Document	
Project Deliverable Number:	Title of Deliverable:
I.2.2	System Architecture
Proposal Reference:	Contract Reference:
Section 4.1, Page 67, Paragraph 5	<Leave Blank>
Frequency:	Draft Submission Due:
At the end of each Sprint and Release	<Leave Blank>
State's Draft Review and Comment Period:	Final Submission Due:
<Leave Blank>	<Leave Blank>
Approval Required:	Distribution:
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Deliverable Acceptance Criteria – To be reviewed by QA Provider and DHS and Approved by the Project Director
The purpose of this deliverable is to capture the System Architecture, which details the SOA model-driven framework being used that enables the development of service-oriented models to facilitate the interaction and communication of technologies. This document shall describe the set of technologies that support the Solution, detail the COTS software components, design patterns, technology infrastructure and the conceptual, logical and physical architectures for the IE-BM Proposed Solution. This System Architecture shall define and document: 1) A conceptual architecture that will produce a design to fulfill stakeholder's functional expectations 2) A logical architecture that identifies the SOA layers, Vendor, Service customers, service broker(s), and object dependencies. To complete the logical design model, the Vendor shall define the interfaces for each service, and include data field definitions and their validation rules. 3) A physical architecture that defines the various services of the IE-BM Proposed Solution and how they shall be implemented. This shall also include details around the integration layers, potentially using Web Services, and various other integration technologies. 4) A list of COTS software to be implemented and how they will be integrated to produce a seamless user experience 5) A detailed list of the proposed production environment platforms, including Hardware, OS, Networking, and COTS and third party systems/tools/ utilities, etc. 6) How the architecture design features determine that the IE-BM Proposed Solution can scale as needed for future transaction volumes, storage requirements, and Solution usage expansion over the next 10 years 7) How the IE-BM Proposed Solution will determine performance based on expected data and user loading/traffic, during peak transaction volumes and key critical business activities 8) How the IE-BM Proposed Solution will meet current capacity requirements and determine the ability to scale 9) Availability and resilience controls such as redundancy, clustering, load balancing, failover capabilities, and fault tolerance 10) Mapping of Technical Requirements to the solution and design 11) Identification of components/objects that will be shared services 12) Determine that the architecture conforms to established standards 13) Data integration architecture to determine duplicate records are not created

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Project Deliverable Expectations Document	
Project Deliverable Number:	Title of Deliverable:
I.2.6	Data Conversion Plan
Proposal Reference:	Contract Reference:
Section 2.0, Page 50; Section 5.1, Page 84, Paragraph 1	<Leave Blank>
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Deliverable Acceptance Criteria – To be reviewed by QA Provider and DHS and Approved by the Project Director	

The Data Conversion Plan is a Microsoft Word document containing the information required by the Statement of Work. The table of contents of the document is presented below.

Executive Summary

This section contains a summary of the content of the Data Conversion Plan including a high-level description of requirements, design, implementation and test and reporting methodology.

1 Introduction

1.1. Overview

Contains a description of the document.

1.2. Purpose

Describes the purpose of the document.

1.3. Scope

Defines the scope of the Data Conversion Plan in general and, for a specific release, the scope unique to that release.

1.4. Roles and Responsibilities

Describes the roles and responsibilities of stakeholders including the IBM team and State

1.5. Plan updates

This section, in conjunction with Section 1.6, Related Documents, contains the specification of interim deliverables.

1.6. Related Documents

Describes documents and reports produced during the data conversion design, implementation and test process. Also specifies dependencies on documents not within the direct scope of data conversion, such as application design documents.

2 Conversion Approach

2.1. Introduction

Description of the approach to conversion (e.g. automated).

2.2. Assumptions and Constraints

Describes assumptions made and constraints applied in developing the data conversion plan.

3 Requirements

3.1. Design Constraints

Describes constraints applied specifically to the design of data conversion.

3.2. Data to be Converted

- Identification of the data elements that need to be converted and the source systems.
- Description of the relationships between the data that needs to be converted.

3.3. Historical Data

Specification of the amount of historical data that will need to be converted

3.4. Reconciliation of Converted/Existing Data in Cúram

Describes possible issues and resolution related to converting data from the legacy systems into a system that already contains data for the same clients for other programs in the target system.

3.5. Data Quality

Describes how data conversion contends with data quality issues in both the legacy source and target systems.

3.6. Conversion Timing

Discusses the constraints that need to be taken into account in specification of conversion timing. This includes best conversion windows for specific programs as well as for specific clients and cases.

3.7. Schedule

Specifies the data conversion schedule for the overall project a

3.8. Intersystem Requirements

Includes approach and details regarding integrating with legacy systems and data synchronization

3.9. Test Requirements

Definition of the approach to validating the converted data against legacy data and addressing data discrepancies.

3.10. Additional Reports

4 Design

4.1. Legacy Source to Staging Tables Design

Specification of staging table structure and load design.

4.2. Staging Tables to Cúram Target Design

Specification of staging table to Cúram load.

5 Implementation

5.1. Tools

Specifies tools used to perform the transformation and track status/progress.

5.2. Implementation Sequence

Describes the sequence of activities performed during data conversion. Includes the order of data types (client, case, etc.) converted and the interim backups taken throughout the process.

6 Quality Assurance and Testing

6.1. Development Quality Assurance

Describes internal quality assurance goals and methods.

6.2. Application Test

Description of data conversion testing via Cúram execution.

7 Business Risks/Issues

Listing of business risks and issues with mitigation or resolution strategies.

8 Acronyms and Definitions

List of acronyms, terms and their definitions.

A. Appendix, Decision Documents

Copies of documentation of business decisions made that affect data conversion.

- Tools used to perform the transformation
- Tools/approach to track status/progress

If required due to the release strategy, the approach and details regarding integrating with legacy systems and data synchronization

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Project Deliverable Expectations Document	
Project Deliverable Number:	Title of Deliverable:
I.2.7	Master Test Plan
Proposal Reference:	Contract Reference:
Section 2.0, Page 50; Section 6.1, Page 91, Paragraph 1	<Leave Blank>

Frequency:	Draft Submission Due:
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Deliverable Acceptance Criteria – To be reviewed by QA Provider and DHS and Approved by the Project Director	
The purpose of this deliverable is to define the detailed testing plan for each release. This plan shall include: 1) Types of testing to be performed 2) Test database generation 3) Test case development 4) Documentation of test results 5) Acceptance testing 6) The evaluation should include a summary of outstanding issues/defects with the system and other pertinent readiness issues 7) A contingency plan component which identifies alternative strategies that may be used if specific risk events occur, such as a failure of test results to support a decision to proceed to the next phase of the project 8) A list of test scripts to be run by testing cycle 9) The testing schedule and how the testing schedule will be managed 10) Specifics regarding the processes leveraged to track testing progress and defect resolution including items such as the definition of different test script status and, defect status 11) The organization of the test team and associated responsibilities (definition of roles and named resources who will perform each role) 12) Criteria for passing scripts (the decision criteria should be specific and measurable.) 13) Testing progress status reporting and interim testing milestones and associated reports 14) Definition of the Platform Readiness Test (this test is passed prior to promotion to the pre-production environment)	

15) Entrance and Exit criteria for each testing cycle (the decision criteria shall be specific and measurable.)
16) Testing approach to performance and stress testing
17) Approach to regression testing
18) A description of the SIT Readiness Checklist
19) A description of the UAT Readiness Checklist

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Project Deliverable Expectations Document	
Project Deliverable Number:	Title of Deliverable:
I.2.8	Training and Knowledge Transfer plan
Proposal Reference:	Contract Reference:
Section 7.2, Page 104, Paragraph 1	<Leave Blank>
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Deliverable Acceptance Criteria – To be reviewed by QA Provider and DHS and Approved by the Project Director
Based on the findings captured in the Stakeholder Needs Assessment (see Deliverable I.2.5), the Vendor will produce an OCM Plan and a Training and Knowledge Transfer Plan. This will be developed collaboratively with DHS to see that the materials are aligned with DHS' culture. In these documents, the Vendor will provide interim milestones to track progress (e.g., Knowledge Transfer Checkpoints). The Vendor will lead and work collaboratively with State staff to build out the resources to prepare the organization for the new System. DHS has established baseline guiding principles for this effort, including: 1) Use a task-based training approach founded on a thorough user-centered task analysis 2) Use a variety of integrated training methods to address diverse learning styles and provide experiential, performance-based training 3) Integrate training methods and strategies throughout the Project life cycle, to include pre-training support, classroom training, and post-training support 4) The primary medium for System training will be hands-on interaction with a working version of the System 5) Just-in-Time Approach to training — Field office users will receive hands-on training on the System immediately prior to the System being implemented 6) Training will be designed in a way that conveys the value and benefits of the System, alignment to the user's model of practice, and its integration into their day-to-day work 7) Trainees demonstrate the capability to use the System effectively at the completion of the training to perform his/her responsibilities 8) User friendly training materials will be provided to trainees that can be referenced at a later date without additional context required 9) A methodical approach to planning training activities is required. A detailed Training Plan will be developed. 10) The purpose of the Training and Knowledge Transfer Plan is to identify the activities and define the curricula DHS needs to train the organization on the Solution. 11) The Training Plan includes the following: 12) Overview stating the purpose and scope of the Training Plan that meets the requirements of this RFP 13) A process to conduct a needs and skills analysis, identifying specific roles and staff titles to be trained 14) Planned evaluation of the training content and delivery 15) Training resources required, including facilities and staff 16) Course Administration, including communication to participants of available training and registration/completion by staff 17) Training schedules, identifying when specific staff roles will be provided training prior to a release 18) Details of the Vendor's planned Instructional Methods including: a) Individual one-on-one training sessions b) Solution Demonstrations c) Instructor-Led Classroom Teaching d) Instructor-Led Virtual Training

e) Computer and Web-based training f) On-the-Job Training g) User Guides h) Informal training with super users 19) Knowledge Transfer approach for identified personnel who require additional Solution knowledge than end-users (e.g. super users, support staff, trainers) 20) Approach to facilitate training goes beyond Solution navigation to training that supports end users in integrating the Solution as a decision support tool 21) Approach to prototyping and testing training materials with end-users 22) Training roles and responsibilities 23) Approach to Vendor and DHS maintenance of training materials to address Solution changes during the Project and after 24) Plan for managing the training environment 25) Plans for providing the training equipment, facilities and training data

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Project Deliverable Expectations Document	
Project Deliverable Number:	Title of Deliverable:
I.2.9	Roll-Out Plan (Pilot and Full Roll-Out)
Proposal Reference:	Contract Reference:
Section 8.2, Page 124, Paragraph 1	<Leave Blank>
Frequency:	Draft Submission Due:
At the end of each Sprint and Release	<Leave Blank>
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Deliverable Acceptance Criteria – To be reviewed by QA Provider and DHS and Approved by the Project Director	
The purpose of this deliverable is to determine the Vendor has a plan to smoothly migrate users onto the new IE-BM Proposed Solution and the plan complies with the Federal Title 7 for 277.18 (g)(2)(ii)) (Prior to statewide rollout of the system there will be a test of the fully operational system in a live production environment. Pilots operate until the agreed state of routine operation is reached with the full caseload in the pilot area. The design of this pilot shall provide an opportunity to test components of the system as well as the data conversion process and system performance. The duration of the pilot will be for a sufficient period of time to thoroughly evaluate the system (usually a minimum duration of three months). The State agency will provide documentation to FNS of the pilot evaluation. FNS approval to implement the system more broadly is a condition for continued FFP.). This plan shall include: 1) Plan for rolling out the Proposed Solution to the organization 2) Plan for the Proposed Solution pilot to establish objectives, metrics, success criteria and other key planning information 3) Schedule for deploying the IE-BM Proposed Solution, training of end-users, and activating of users 4) Go/no-go decision points 5) Contingency Plans	
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Project Deliverable Expectations Document	
Project Deliverable Number:	Title of Deliverable:
I.4.2	Functional Design Document
Proposal Reference:	Contract Reference:
Section 2.0, Page 54, Paragraph 5;	<Leave Blank>

Section 4.2, Page 72, Paragraph 1	
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Deliverable Acceptance Criteria – To be reviewed by QA Provider and DHS and Approved by the Project Director	
The purpose of this deliverable is to provide a detailed design of the functionality in scope for the release prior to commencing development. This document shall include: 1) System overview diagrams illustrating which Solution components provide what functionality, linking back to the functional capabilities 2) Design Use Cases (or equivalent) to map requirements to technical components 3) Functional specifications (or equivalent) for custom development required 4) Recommendations on how to close specific gaps that require changes to DHS' business processes 5) Business rules definition 6) Reporting capabilities and prebuilt reports 7) User profiles mapped to functionality 8) User Interface screens for the Proposed Solution including results of usability studies 9) Time studies capturing the anticipated efficiency savings with the new user interface design 10) Identification of functions or user roles that initiate workflow, receives the workflow, and processes that occur as a result of the workflow 11) Identify functionality which will be developed as a shared service 12) List of assumptions made during the design as well as recommended next steps and required actions that shall be determined by DHS before the development	
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Project Deliverable Expectations Document	
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I.4.3	Technical Design Document
Proposal Reference:	Contract Reference:
Section 2.0, Page 54, Paragraph 5; Section 4.2, Page 72, Paragraph 1	<Leave Blank>
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Deliverable Acceptance Criteria – To be reviewed by QA Provider and DHS and Approved by the Project Director	
The purpose of this deliverable is to provide the detailed technical design that addresses how the functional design will be implemented. This includes the COTS software being leveraged, the configuration of these components, the data integration and interfaces, and the design of custom development required. The Technical Design Document will include the following components: 1) A mapping of the functional design to the solution components 2) The configuration of COTS software 3) The detailed design of required custom development 4) Processes to manage Solution installation and configuration	

5) Determine the technical design aligns with the established standards	
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Project Deliverable Expectations Document	
Project Deliverable Number:	Title of Deliverable:
I.4.4	Data Integration and Interface Design Document
Proposal Reference:	Contract Reference:
Section 4.2, Page 72, Paragraph 1	<Leave Blank>
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Deliverable Acceptance Criteria – To be reviewed by QA Provider and DHS and Approved by the Project Director	
The purpose of this deliverable is to capture the integration approach and data design for the Proposed Solution, focused on the interfaces to external systems. The Data Integration and Interface Control Document (ICD) will be include the following components: 1) Interface definitions and design	

2) Data Flow Diagrams
3) Integration interface protocol and interaction diagrams
4) Failure modes and recovery approach
5) Data Dictionary
6) Data Transformation and Loading
7) Processing controls
8) Processes to manage Solution installation and configuration and ongoing monitoring and incident management including items such as:
   a) Agreements with the third-party application owner for how to resolve problems
   b) SLRs/contracts with partner
   c) Documenting roles and responsibilities
   d) Assumptions
6) Privacy requirements for different data elements
7) Security Controls

The data dictionary and integration/interface approach will conform to data standards established by DHS

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Project Deliverable Expectations Document	
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I.6.3	Completed UAT Readiness Checklist
Proposal Reference:	Contract Reference:
Section 6.0, Page 90	<Leave Blank>
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Deliverable Acceptance Criteria – To be reviewed by QA Provider and DHS and Approved by the Project Director	
The purpose of this deliverable is to determine the entire Solution has passed SIT and activities and artifacts necessary to begin UAT have been completed. The checklist will be established as part of the Master Test Plan and serve as documentation that: 1) The test data set has been defined and created 2) Test scenarios have been mapped to functional and technical requirements 3) UAT state participants have been fully trained in the functionality for their role 4) Error tracking and reporting tools and methodology have been established and State users have been trained 5) A testing tool/test harness/automated test framework has been implemented which will support automated regression testing	
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Project Deliverable Expectations Document	
Project Deliverable Number:	Title of Deliverable:
I.7.1	Training and Knowledge Transfer Materials
Proposal Reference:	Contract Reference:
Section 7.3.6, Page 114, Paragraph 2	<Leave Blank>
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Deliverable Acceptance Criteria – To be reviewed by QA Provider and DHS and Approved by the Project Director	
The purpose of this deliverable is to determine training materials have been reviewed and approved by DHS prior to commencing UAT (as these materials will be tested during UAT). This deliverable will include DHS approvals on training materials outlined in the Training Course Catalog. Requested updates from the previous release will be addressed and approved prior to deliverable submission.	
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Project Deliverable Expectations Document	
Project Deliverable Number:	Title of Deliverable:
I.8.2	Formal System Acceptance and Final Go-Live Report
Proposal Reference:	Contract Reference:
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Deliverable Acceptance Criteria – To be reviewed by QA Provider and DHS and Approved by the Project Director	
The purpose of this deliverable is to determine the System is functioning effectively in production. Once the System has been migrated to production and rolled out to the entire organization, the System will be stabilized to allow support to be migrated from the cut-over support team to the M&O team. The deliverable will be considered complete once DHS determines the System will allow users to perform the end-to-end business processes without issues, improve efficiency/usability, and on the contingency that FNS and/or CMS has approved the results.	
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14.0 Value Added Services and Benefits

The Vendor may describe any services or deliverables that are not required by the RFP, and thus at no additional cost to DHS, but that the Vendor proposes to provide that will add value to the Project and further differentiate the Vendor from other bidders. The Vendor is not required to propose value-added benefits, but inclusion of such services may impact the Vendor's overall evaluation.

Instructions: Please describe any value-added services or deliverables the Vendor is including as part of its Proposal that is at no additional cost to DHS.

Recognizing the value of Cúram-specific experience, the IBM team is led by experienced Cúram consultants with a record of implementing Cúram-based systems successfully

Our team for Arkansas brings the best of IBM's Cúram-trained and experienced consultants together to bring the product expertise and project management rigor and experience required to deliver Cúram projects successfully.

In addition to the skilled consultants we bring to this engagement, only IBM has the ability to draw on both the largest pool of Cúram-trained and certified consultants in the world, and IBM's global Human Services Center of Competence. Because Cúram Software is part of IBM's software portfolio, IBM is home to the largest number of Cúram-trained resources, and has been a part of every successful Cúram implementation. In the event the IE-BM Proposed Solution requires a specific skill, or poses a challenge unfamiliar to our project team, we can call on our pool of Cúram resources to draw on their experience.

Of course, not every challenge on a project is a technology challenge. Some project challenges reflect business or policy issues. Our IBM team can also draw on our global Human Services Center of Competence, which includes human services subject matter experts from throughout IBM, to help SCDHHS think through business issues.

Because skilled consultants alone are not enough for a successful project, the IBM team brings a proven Cúram-specific implementation method, drawing on the lessons learned from scores of successful Cúram implementations

While it is absolutely necessary to bring Cúram-trained and skilled consultants to the IE-BM Proposed Solution, that alone is not sufficient for success. To deliver the IE-BM Proposed Solution successfully, those resources will also apply a proven methodology to deliver Cúram projects. In our experience, one reason some Cúram implementations have struggled is because the project team lacks a full understanding of how to implement Cúram. Often project teams will apply approaches with which they are more familiar, such as custom development or package implementation, which may not be appropriate for the unique requirements of a Cúram engagement. Invariably, those projects struggle. To deliver the IE-BM Proposed Solution successfully, we will use the IBM Cúram Social Program Management Method (CSPMM), which every member of the team will apply consistently. Our CSPMM includes specific work products, artifacts and techniques developed specifically for Cúram engagements, and has been refined and validated over almost two decades of implementing Cúram. The below figure illustrates the IBM CSPMM details.

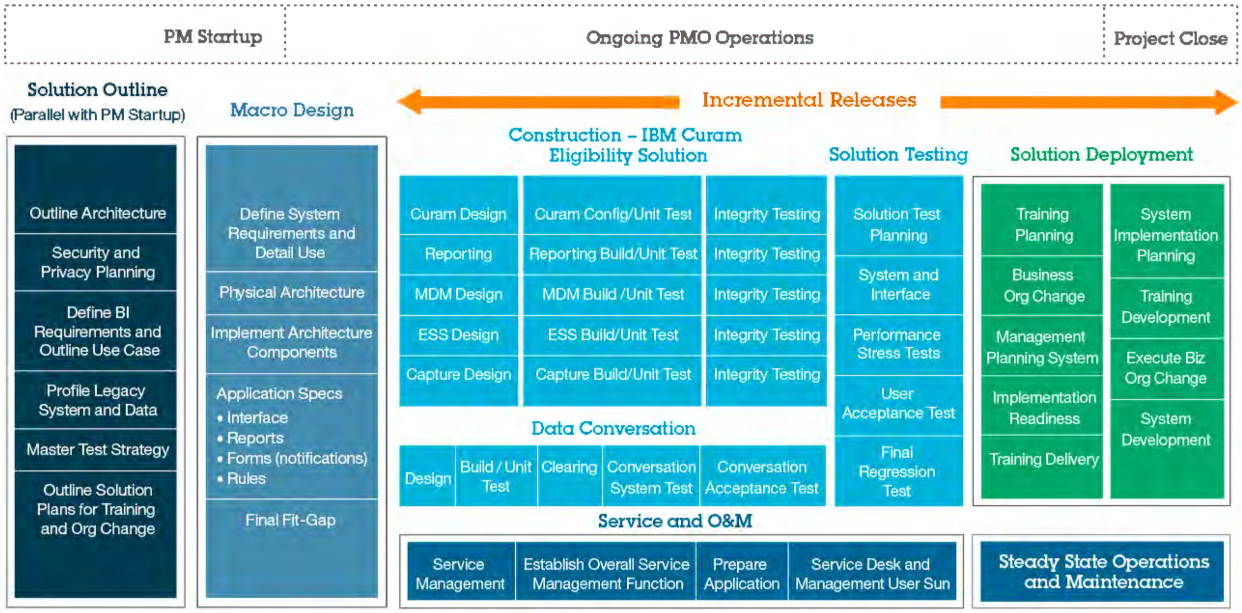

Figure 50: IBM's Cúram Social Program Management Method

IBM's Cúram Social Program Management Method builds on the lessons learned from dozens of successful Cúram implementations worldwide to deliver the Cúram CGIS project efficiently and effectively.

IBM will use the CSPMM, derived and refined from the lessons learned from scores of Cúram implementations, to deliver the CGIS project efficiently, on time and on schedule.

One final example of bringing lessons learned to our implementation method is our Cúram estimation tool. We use this tool, which we developed and validated across multiple Cúram projects, to estimate the level of effort required for tasks and activities in our work plans. Our estimation tool provides confidence that our level of effort estimates are accurate, allowing higher confidence for both schedule and budget.

Understanding how critical good project management is to success, the IBM team brings the project management tools, discipline and organizational commitment to manage the IE-BM Proposed Solution effectively

Every project requires project management, and effective project management can be the difference between a project's success or failure. Effective project management is more than just having an experience project manager (PM) at the helm or merely following the precepts of the PMBOK—as important as both the PM and PMBOK are. To deliver this project successfully, IBM will use its Worldwide Project Management Method (WWPM), which builds on the principles of PMBOK and brings consistency and clarity across the project. Beyond an experienced project manager and a proven project management method, effective management requires:

- Transparency, so stakeholders understand the project's status across many dimensions at all times.
- Partnership, recognizing that Arkansas DHS will have challenges that will be worked through cooperatively to be successful.

- Courage, sometimes to deliver uncomfortable truths to our clients and ourselves about project risks and issues.
- Commitment, throughout the project team and in IBM activities, to follow good project management practice without taking shortcuts or cutting corners.
- Awareness of the client's needs including putting the client first and embracing change.
- A desire to be successful for the client as well as those behind the client (i.e. the citizens served by Arkansas DHS).
- The IBM team will have industry experts (SMEs) working alongside Arkansas DHS SMEs skilled at interpreting legislation and defining departmental policy.
- who understand the impact IE-BM solution will play in the lives of the consumers
- IBM will establish partnerships with Arkansas DHS between lead roles. From start to finish, top to bottom, leadership roles to BAs and Testers, professional relationships were quickly established and maintained
- It is important for the entire team, both IBM and Arkansas DHS to fully appreciate how IE-BM can and will improve the lives of the surrounding communities. IBM cares not only about the successful outcome of the IE-BM, but also improving outcomes for clients accessing programs and services through the IE-BM.

Recognizing that too many defects can undermine staff and client confidence in the IE-BM Proposed Solution, IBM brings a comprehensive and rigorous quality assurance approach to identify and resolve potential defects long before they go into production

Applications have defects, but applications with too many defects have a corrosive effect on end user and management support of application. Worse, for mission-critical applications like the IE-BM Proposed Solution, defects can prevent children and families from receiving the health insurance they need. Even fixing defects after the fact does not restore the users' or the public's confidence in the application. To help gain user confidence in the IE-BM Proposed Solution, IBM brings a proven and rigorous quality assurance approach, supported by IBM's Testing Center of Excellence, to identify and fix potential bugs before they become major problems for Arkansas DHS clients and workers.

Because IBM has a broad portfolio of successful Cúram implementations, IBM brings a growing catalog of artifacts and assets that may help Arkansas DHS develop needed functionality faster and/or at lower risk

Under the model prescribed in the RFP, AR DHS will provide the IE-BM implementation vendor with requirements based on fit/gap analysis, work group sessions, and use cases. In assessing how best to implement each requirement, IBM will search its catalog for proven assets or artifacts that may speed that process. Artifacts could be as complex as code or design artifacts to provide additional functionality the State requires, or as simple as a business rules catalog or a workflow model that can be used as a strawman for AR DHS. While the applicability of specific asset will depend on factors like functional fit and software version, this catalog is another unique value of IBM.

14.1 Lessons Learned

DHS learns from the experiences of others. The Vendor should describe what it sees as the success factors and primary challenges in the implementation of similar systems.

Instructions: Please describe any "lessons learned" from the Vendor's relevant experience and how those lessons learned will impact the Vendor's approach to this Project.

IBM Team has gained valuable experience and expertise from a number of successful large scale Cúram project implementations in the last few years. Based on this project experience, IBM enhanced the out-of-box product features; improved processes to implement custom features and functionalities, and improved project and resource management. This experience has positioned IBM to deliver a successful Cúram implementation for the State of Arkansas. Some of the significant lessons learned are shared below:

County of San Diego

Start Date: April 2015 End Date: On Going Leadership Name: Kenneth Woolsey Role: IBM Delivery Executive

Success Story: The Health and Human Services Agency (HHSA) from the County of San Diego contracted IBM in 2015 to create ConnectWellSD. ConnectWellSD aims to provide technologies and create an integrated system that enables and promotes person-centered service delivery instead of program centric service delivery. It does this by giving County workers access to client data and information across systems that are currently inaccessible outside the department that owns the system, and allowing them to form multi-discipline teams to holistically fulfill client needs that cross traditional departmental boundaries.

Cúram v6.0 has been used to streamline a very loosely integrated ConnectWeIISD product. Beneath the hood ConnectWellSD uses MDM for person searches, Cognos for analytics and reporting, Oracle databases, and Informatica for ETL. Client data is drawn from 9 legacy systems in departments within HHSA. The project has 25 use cases and 60 agile stories that represent 5 major areas of functionality, including probabilistic search for data about clients in legacy County systems, referral management, collaboration between multi-discipline teams of County workers, alerts and notifications, and population-based shared analytics. ConnectWellSD had its initial release in April 2016. The County and IBM have fostered a very collaborative relationship to create the statement of work, organize and execute the schedule, design the enterprise architecture, install the technical infrastructure, configure Cúram and other products, test the system and create training materials. Carrie Hoff, ConnectWellSD Program Manager from the County of San Diego, expressed the following to the integrated IBM and County Team, "I am thankful that you are a team who is willing to think through challenges and problems that haven't been tackled before to get to a vision that will benefit the people we serve and our region. I want you to know that working with all of you keeps me encouraged and excited – even when there are tough problems or issues at hand."

The ConnectWellSD requirements demanded a change to the project management methodology. IBMs ability to quickly move from a Waterfall project approach to Agile was a key takeaway and lesson learned. This change was in part due to the excellent collaboration and transparency between the IBM project team and the County of San Diego Staff. The shift in project methodology allowed the client time to better understand how Cúram would successfully meet the needs of the community. An important lesson learned from this partnership with the client is the importance of effective and consistent communication. It was this open dialog with the client that allowed both IBM and The County of San Diego too successfully meet the project timelines.

State of Missouri

Start Date: May 2015 End Date: On-Going Project Leader Name: Pad Padmanabhan Role: Delivery Project Executive

Success Story: In 2013 IBM competed, and lost an RFP for the implementation of Cúram at the State of Missouri. A competitor, EngagePoint. was the winning bidder. In 2014, EngagePoint was failing to meet its obligations and the State contracted IBM to perform an assessment of the Cúram architecture being deployed by this integrator. IBM completed the assessment and provided a report to the State. In May of 2015 the State Commissioner's office contacted IBM and informed us that a decision had been made to terminate EngagePoint's contract. We were awarded an initial 30-day transition contract, followed by a 120-day contract to do an assessment for Project-1, MEDES Implementation. This led to a subsequent award of a fixed priced $23M contract and a T&M Maintenance and Operations (M&O) contract, to which IBM is currently performing on both. IBM has turned the failed implementation around and is succeeding on all fronts with the State of Missouri at this time. IBM recently conducted an Assessment to enable additional Cúram functionality for the state. Several new contract mods are in flight with releases for new functionality underway. Additionally, we have designed an SSO solution to be implemented in 2016 and are in the midst of a project to upgrade to the Out of the Box (OOTB) Cúram version-6.2 at this time. The State of Missouri is an example of IBM's ability to take over a troubled integration project and turn around into a success. IBM provided strong leadership throughout the project and achieved high degree of customer satisfaction.

State of South Carolina

Start Date: October 2016 End Date: On-Going Project Leader Name: Nelson Smither Role: Delivery Project Executive

Success Story: IBM was engaged by State of South Carolina in October 2016 to work on the SC HCR Tracks Implementation project. During the 4-week assessment period IBM identified some key issues that lead to no release of DDI implementation for over 18 months by the prior vendor.

As part of the assessment process, IBM conducted extensive interviews with the State stake holders and then also heard from the vendor resources. Information was analyzed by the IBM implementation analysts and identified the following inefficiencies:

- There had been lack of clarity in communication, absence of proper documentation, lack of change control processes and lack of overall project management. After the assessment, IBM improved collaboration between the State and IBM resources, revamped requirement validations, incorporated design sessions, and changed control processes to implement future releases. IBM was able to make improvements in the processes in the departments and successfully implemented the first release within two months of the start of the project.

Summary of Lessons Learned and subsequent improvements by IBM

1. Engage DHS staff from the start and throughout the development and implementation phases.
2. Collaboration between the State and IBM. Collaboration throughout the SDLC is key to a successful implementation.
    a. Importance of State product owners to participate, have vision, provide process, operational and policy guidance, and make decisions.
    b. Importance of COA and governance structure to facilitate timely and good decision making.

   c. Importance of both State and IBM to keep up with the schedule and use the schedule to push progress appropriately.

3. Importance of zero defect policy to create and maintain quality system at each stage. No defect build up allowed.
4. Use of Agile to gain schedule flexibility
5. Use of Agile to provide more emphasis on a working system and fewer review and re-write cycles to produce documentation deliverables more accurately and more efficiently
6. Use of Agile to break up review of documentation deliverables into just-in-time manageable chunks and maintain overall understanding of document with a central initial delivery
7. Use of document versioning on a deliverable and document basis to facilitate interactions between many parties
8. Readiness of interfaces to support scheduled releases to fully deploy and transition to M&O
9. Give external parties time to participate and support testing, data conversion, and full loads. Importance of data sources to provide cleansed data to avoid unnecessary iterations.
10. Importance of completing training activities along with the release timeframe so people are ready to use the system and support staff both pre- and post implementation.
11. For non-MAGI data conversion, just convert the person and demographic data and not the case data. Case data is better to be recreated or left behind. New cases should be generated within the new system.
12. In operations, it is better for end users to only work in one system at a time and not in legacy and new systems simultaneously.
13. Existing systems the State will continue to use (i.e. Legacy Systems) should be integrated with new systems whenever possible.
14. Bring UAT resources onto the project early and train them before UAT begins.
15. Have a clear and practical change management policy and train people to use it from the start
16. Estimates and project work plans need buy-in between client and IBM to be able to maintain delivery schedules
17. Define operational success through use cases

14.2 Issues, Challenges and Potential Risks

DHS is interested in any information that may help to identify issues, clarify the requirements, reduce risk of the procurement, and identify issues and challenges of designing and implementing the proposed System. **Instructions:** Describe the primary concerns, risks, issues and recommendations for DHS as it proceeds with this Project.

From prior experience, IBM identifies the following as potential risks and issues:

1. If review and approval of deliverables takes longer than the agreed upon timeframe, then downstream dependent activities may be delayed or require rework. T-11 Section 4.1 outlines the plan for document review and approval.

2. If SMEs are not involved in the project until it is released in UAT or production, delay and rework may happen. Communication will occur early and often with identified Arkansas SME staff. State employees who are identified as a subject matter experts (SME)s will be skilled at interpreting legislation and defining departmental policy or there is a risk that decisions are not made timely leading to delays in implementation.
3. If coordination with system vendors is not complete, then benefit issuance may be delayed. The ET&T Vendor for SNAP as well as MMIS will be engaged from the beginning to facilitate timely benefit issuance.
4. If changing program requirements (legislative changes) are not addressed efficiently, then development, design and implementation may be delayed. These changes will be mitigated through the change management process.
5. If interfaces are not addressed properly then there can be an effect to downstream systems causing delays and rework. Interface details are available as part of pre-sprint activities.
6. Risk of mismatches in Data conversion due to mapping from one system to another which can be avoided or mitigated through collaboration between the system owners and data conversion team.
7. If there is not early testing and defect resolution, then this can result in implementation delays and rework. A detailed testing plan and approach has been provided in section 6.0 of T11 - Implementation Requirements Response.
8. If there is a delay in decisions by the State product owners during design workgroup sessions, it may result in delays to design, development, and implementation. T-11 Section 4.1 describes the requirements approval approach including expectations for work sessions.
9. If security and security certificates to support operational roll outs are not expedited, then this can result in implementation delays. The State shall identify security certificates needed during the pre-sprint phase.
10. Early requirements validation is necessary to avoid potential delays in design, development or implementation. The Requirements approach detailed in T-11 Section 4.1. allows for this.
11. Timely decisions and approvals based on agreed upon schedule are necessary for the IBM team and the State to meet the schedule milestones and keep the project on track.
12. Having overlapping resources for multiple programs would result in dependencies that may result in creating schedule risks. Mitigate the risk of overlapping resources such as between SNAP and TANF/TEA by having planned sprint and release schedules that do not coincide.
13. If there is not an integrated application, then this can result in duplicate data entry. Mitigate risks associated with Non-MAGI Medicaid rollout by having an integrated application for use for both MAGI and Non-MAGI as well as thorough development and test plans to determine evidence is brokered between HCR and CGIS.

Table 32: Sample of Risks and Issues

No.	Best Practice	Risk or Issue	Potential Impact	Mitigation
1	Timely deliverable review	Late deliverable submission or longer than scheduled review	Delayed deliverable approval, schedule	Deliverable review process and schedule. Specific acceptance criteria.

No.	Best Practice	Risk or Issue	Potential Impact	Mitigation
			slippage, and/or rework	
2	Full SME involvement	If appropriately skilled SMEs are not involved in the project until it is released in UAT or production, delay and rework may happen.	Missed functionality, poor requirements, schedule slippage, and/or rework	SME involvement with delivery team prior to UAT/prod to analyze & validate. Establish working groups
3	System vendor coordination	Miscommunication among vendors jeopardizing project goals.	Poorly defined requirements, incomplete documentation, schedule slippage, and or rework	Active communication. Monitoring contractual agreements. Approved documentation. Schedule accountability.
4	Flexibility to comply with program/legislative changes	Inability to respond to program/legislative changes within project constraints.	Scope creep, Schedule slippage, and or rework.	Close monitoring of program/legislative changes coupled with rigorous change control process.
5	Full interface vendor involvement	Interface failure.	Poor/missed requirements, schedule slippage and/or rework.	Strong DHS Leadership. Interface specifications. Active communication among vendors. Structure project plan carefully with each vendor.
6	Successful data conversion	Data integrity issues.	Missing/non-conforming data, inaccurate data reports, schedule slippage and/or rework	DHS to provide clean data. Detailed interface and conversion requirements. Documentation. Data mapping.
7	Comprehensive testing	Failure to resolve system defects.	Diminished quality; Poor functionality; data issues;	Test plan and strategy. Test schedule. Designated Test

No.	Best Practice	Risk or Issue	Potential Impact	Mitigation
			schedule slippage, and/or rework	Coordinator. Regression testing. DHS and IBM testing. Detailed Design
8	Timely decision and policy making	Delayed policy decisions	Schedule slippage, and/or rework	Policy review process and schedule
9	Expedited security support	Delayed security and security certificates to support operational roll outs	Schedule slippage, and/or rework	Vendor and DHS to develop security requirements, security controls, designated security specialist
10	Requirements validation	Invalid requirements and/or design	Poor/missed requirements, diminished quality, schedule slippage, and or rework	Adequate requirement validation and design sessions with key product owners and decision makers per the project plan, followed by check point activities.
11	Timely decisions and approvals	Delayed decisions and procedures in departments and programs.	Schedule slippage, and or rework, scope creep.	Follow the mutually agreed upon review and approval process.
12	Remove or avoid creating resource overlap	Overlapping resources create schedule dependencies resulting in delays in completing tasks and milestones.	Schedule slippage.	Assign appropriate independent resources to each work stream.
13	Remove data duplication and duplicate data entry	Implement an Integrated Application.	Duplicate data entry.	Implement an integrated application for use for both MAGI and Non-MAGI as well as thorough development and test plans to determine evidence is brokered between HCR and CGIS.

15.0 Implementation Requirements Approach Assumptions

Instructions: Document all assumptions related to this Response Template in the following Table. Add rows as necessary. Do not change any of the completed cells. Any changes to the completed cells could lead to the disqualification of the Proposal.

Table 33: List of Implementation Requirements Assumptions

ITEM #	REFERENCE (Section, Page, Paragraph)	DESCRIPTION	RATIONALE
1.	Section 1.1Project Management	The Arkansas DHS and IBM will assign roles and responsibilities prior to the start of the project.	This makes for better assignment of resources and collaboration between the IBM Team and State of Arkansas and their Third Parties.
2.	Section 1.1Project Management	Project Management methodologies will be consistent with the PMI's PMBOK Guide.	Preferred methodology of Arkansas DHS.
3.	Section 1.2 Risk and Management Approach	The IE-BM Risk and Management approach will be documented in the Project Risk and Issue Management Plan that is part of the PMP deliverable.	Required as part of PMP deliverable.
4.	Section 1.3 Document Management Plan	A document management plan will be created.	Provides clear and concise document management instructions to participants.
5.	Section 1.4 Quality Management	Team members from both IBM and the State will have clearly defined roles in the implementation of the QMP.	Sets expectations and drives a higher quality end product.
6.	Section 1.5 Approach to Managing Resources	IBM will develop an approach to managing resources based on past experience in implementation of large scale projects.	Focuses on identifying IBM key resources from day 1.
7.	Section 2.1 SDLC Approach	DDI will follow the IBM Watson Agile SDLC methodology.	Iteratively creates software and documentation deliverables required to implement large and complex systems integrations in a health and human services environment.
8.	Section 4.1 Requirements Validation and	Arkansas DHS will assign resources to support sprints. This	This makes the Product Owner (Subject Matter Expert) the decision maker

ITEM #	REFERENCE (Section, Page, Paragraph)	DESCRIPTION	RATIONALE
	System Design Methodology	will include a decision maker for approvals.	which expedites the design process.
9.	Section 4.1 Requirements Validation and System Design Methodology	IBM will provide specific criteria to Arkansas DHS to select appropriate members for sprints.	Makes efficient use of time for the interested parties.
10.	Section 4.1 Requirements Validation and System Design Methodology	IBM will provide team member skill sets required for each workgroup based on requirements – BA (Scrum master), Tester(s), Developer(s), and Trainer(s).	This provides the appropriate people are there to determine efficient use of resources and time.
11.	Section 4.1 Requirements Validation and System Design Methodology	IBM will provide Expansion of understanding for each requirement as it relates to the Integrated Eligibility and Benefit Management (IE-BM) Solution through validation sessions and the Requirements Tractability Matrix process.	This provides mutual understanding of the requirements and system.
12.	Section 4.1 Requirements Validation and System Design Methodology	IBM will provide the duration of each sprint per the work plan.	Helps determine allocation of resources.
13.	Section 4.1 Requirements Validation and System Design Methodology	Arkansas DHS will provide space for sprint sessions.	Helps maintain continuity of the implementation team with their state counterparts.
14.	Section 4.1 Requirements Validation and System Design Methodology	Arkansas DHS will participate in IBM led workshop activities to include validating requirements, visioning sessions, document review, and demos associated to each sprint.	State will review and approve documents during the Sprint per the schedule.
15.	Section 4.1 Requirements Validation and System Design Methodology	Technical and Functional Requirements will be validated by IBM and Arkansas DHS through the Requirement Validation Process (RVP).	Allows for mutual understanding and agreement.
16.	Section 4.1 Requirements	As part of the detail design specific reports required will be defined and	Allows for mutual agreement on attributes to be included in

ITEM #	REFERENCE (Section, Page, Paragraph)	DESCRIPTION	RATIONALE
	Validation and System Design Methodology	opportunities identified to consolidate reports into ad-hoc, parameter driven reports.	reports and delivery method for reports.
17.	Section 4.1 Requirements Validation and System Design Methodology	Statutory reporting requirements are included in the 120-report count included in the RFP. The number of reports will be balanced evenly between phases 3, 4, and 5. Each of these phases will contain approximately 40 reports.	Reports are delivered per the schedule.
18.	Section 4.1 Requirements Validation and System Design Methodology	Application functional changes to the cloud will be out of scope. If a need for application change is identified during validation, it will be handled through the change management process.	There are no requirements for application component changes for the cloud option in the RFP.
19.	Section 5.0 Approach to Data Conversion	Our proposed conversion solution is based on the assumption that we will not use a virtual private cloud. If a virtual cloud environment is chosen, we are making the assumption that the tool-set applicable to Data Conversion is the same as the non-cloud environment.	
20.	Section 5.0 Approach to Data Conversion	After a release, has moved into production with the associated data changes. Additional changes to the converted data set will be handled through the change management process.	
21.	Section 5.0 Approach to Data Conversion	Production data is the only data to be converted, no test data. Data to be converted will be on-line. Paper records and/or backup tapes are out of scope.	
22.	Section 5.0 Approach to Data Conversion	Production run of Data conversion is targeted for 3 days, assuming hardware is available. Actual timeline will be determined, verified during dry runs.	

ITEM #	REFERENCE (Section, Page, Paragraph)	DESCRIPTION	RATIONALE
23.	Section 5.0 Approach to Data Conversion	Informatica toolset will be used, including the following products: PowerCenter, PowerExchange Flatfile, ISM and VSAM connectors, Data Quality. Informatica adapters shall be provided for direct access to VSAM, IMS and DB2 databases on Server and Mainframe Platforms.	
24.	Section 5.0 Approach to Data Conversion	Conversion process shall be able to connect to MDM within an Informatica flow.	
25.	Section 5.0 Approach to Data Conversion	MDM shall be loaded with system ownership data and there shall not be ownership duplication. Rules shall be provided to determine system of record.	
26.	Section 5.0 Approach to Data Conversion	Data conversion is not responsible for linkages between the systems and MDM. Data Conversion will convert data from the defined extracts only.	
27.	Section 5.0 Approach to Data Conversion	DocuShare remains the document repository.	
28.	Section 5.0 Approach to Data Conversion	Cases shall be converted only if people within the case can be either matched with existing people in Cúram, or successfully converted to Cúram. If a Case cannot be converted, for reason, neither the case nor otherwise convertible people within the case shall be converted.	
29.	Section 5.0 Approach to Data Conversion	Benefit and some key eligibility evidence shall be converted from the legacy systems. Cúram shall issue the preexisting benefit amount and/or eligibility as	

ITEM #	REFERENCE (Section, Page, Paragraph)	DESCRIPTION	RATIONALE
		converted from legacy until reassessment or recertification at which time the case worker shall be required to review and enter/correct the evidence required for Cúram to determine appropriate benefits and/or eligibility.	
30.	Section 5.0 Approach to Data Conversion	Benefit history shall be converted for view only use. No other historical data shall be converted and determination of historic benefits from historic evidence shall not be supported.	
31.	Section 5.0 Approach to Data Conversion	A significant amount of Person data is already present in Cúram production. Data conversion shall search existing production data for persons already in Cúram and, where a match is found, the person shall not be converted and conversion shall use the person already in production.	
32.	Section 5.0 Approach to Data Conversion	Data conversion shall report successful load and failure to load statistics, along with failure reasons, to allow for Legacy or Target system data cleanup.	
33.	Section 5.0 Approach to Data Conversion	During execution of conversion, there are several reasons specific cases may not be converted. To allow these cases to be converted, data conversion processes shall be designed to be run repeatedly so that additional cases can be converted as they become available in subsequent conversion executions.	
34.	Section 5.0 Approach to Data Conversion	Flagging files for case closure in the legacy system shall be sent back to legacy when cases are accepted in Cúram. Additionally,	

ITEM #	REFERENCE (Section, Page, Paragraph)	DESCRIPTION	RATIONALE
		flagging files shall identify closed and denied cases that were converted to Cúram. The legacy system shall close converted active cases and identify converted cases as being converted. This shall inhibit duplicate issuance and prevent further action on converted cases, such as reinstatement of closed cases that have been converted to Cúram.	
35.	Section 5.0 Approach to Data Conversion	Arkansas DHS will mark the legacy systems data as converted to keep converted cases/clients from being changed, reentered or reinstated.	
36.	Section 5.0 Approach to Data Conversion	State will be responsible for definition and translation of code table values (e.g. if relationship codes in Cúram do not cover those in legacy data, the State is entirely responsible for defining translation and additions.)	
37.	Section 5.0 Approach to Data Conversion	State will validate the key generation utility target mapping that will be used during the data conversion process into the Cúram system.	
38.	Section 5.0 Approach to Data Conversion	A special method, forced eligibility, should be developed to override system constraints and allow eligibility and/or issue benefits for extenuating circumstances when a case may not be workable.	
39.	Section 5.0 Approach to Data Conversion	Data clean up prior to conversion and load is the State's responsibility per the work plan. The state shall provide a data cleanup team for manual data cleanup on ANSWER/ACES/FACTS and Cúram (EEF). In many situations, a	

ITEM #	REFERENCE (Section, Page, Paragraph)	DESCRIPTION	RATIONALE
		human decision needs to be made in order to determine how to fix pre-existing MAGI data on Cúram or ANSWER/ACES/FACTS data. With the possible exception of Master Client Index (MCI) in MDM, Data conversion shall make no changes or corrections to source data during conversion. Needed corrections to source data shall be made by DHS in the Legacy systems prior to conversion of that data so that the source and target systems are consistent. Cleanup and/or de-confliction during conversion for MDM will be performed using algorithms designed and verified by IBM. The association between records in the legacy systems and MDM will be maintained during data conversion.	
40.	Section 5.0 Approach to Data Conversion	The state shall provide a minimum of 90-day security access prior to expiration for systems/data accesses required by the Conversion Team.	
41.	Section 5.0 Approach to Data Conversion	The state shall not require data obfuscation and conversion will not utilize obfuscated data.	
42.	Section 5.0 Approach to Data Conversion	Subject matter experts from the State shall be available during conversion design sessions. IBM shall provide Cúram support for targeted state programs to advise what data/data structures are required and changing within Cúram to support the target programs.	
43.	Section 5.0 Approach to Data Conversion	Subject matter expertise shall be available during testing.	

ITEM #	REFERENCE (Section, Page, Paragraph)	DESCRIPTION	RATIONALE
		The state shall provide UAT testers during data conversion sprints to validate data.	
44.	Section 6.0 Approach to Testing	IBM will use the IBM Watson Agile Methodology, which is a hybrid Waterfall/Agile approach.	It is a collaborative approach and includes involvement with the State at every phase of the SDLC that combines the best of breed processes of both methodologies into a signal methodology.
45.	Section 7.1 Organizational Change Management	IBM Digital Change Method will be used.	Delivers a high-quality customer experience.
46.	Section 7.2 Knowledge Transfer	IBM OCM Team recommended Readiness Assessment Tools	DHS leads stakeholder engagement, communication, and training delivery.
47.	Section 7.3 End User-Training	The below training processes will include as part of IBM's training approach: • Analyze, Design, Develop, Implement, Evaluation (ADDIE) methodology, • Kilpatrick's Four Levels of Evaluation	Proven methodologies and approach to training.
48.	Section 8.0 System Pilot, Roll-Out, and Go-Live	There will be a Pilot Planning Committee consisting of both IBM and State staff.	Allows IBM and State staff to determine the location and audience for the Pilot.
49.	Section 8.1 Pilot and Rollout Planning	The state of Arkansas will provide specific requirement for Title 7 for 277.18(g)(2)(ii))	Provides reports and supporting materials required to pass required or requested Federal review of the pilot results in compliance with Title 7 for 277.18(g)(2)(ii)),
50.	Section 8.1 Pilot and Rollout Planning	The state of Arkansas and IBM Team will validate specific requirements satisfy Title 7 for 277.18(g)(2)(ii))	Provides compliance with federal requirements during the Pilot phase

ITEM #	REFERENCE (Section, Page, Paragraph)	DESCRIPTION	RATIONALE
51.	Section 8.1 Pilot and Rollout Planning	CMS and or a representative will be available to support audit/regulations specific to Arkansas compliance federal statues prior to the Pilot	Provides successful outcome of audits and compliance with federal requirements throughout Design, Development, and Implementation
52.	Section 14.2 Issues, Challenges, and Potential Risks	State subject-matter experts and others that participate with the IBM Team in the IE-BM should be skilled at interpreting legislation and defining departmental policy.	This provides the right staff are available to make decisions which avoids potential delays in implementation.

Template T-12

Maintenance and Operations (M&O) Support Requirements Traceability Matrix

Response Template RFP #: SP-17-0012

State of Arkansas Department of Human Services
Integrated Eligibility and Benefit Management (IE-BM) RFP
RFP #: SP-17-0012

TemplateT-12 - Maintenance and Operations (M&O) Support Requirements Traceability Matrix

Introduction

This document captures the Maintenance, Operations and Support Requirements for the State of Arkansas's IE-BM Engagement. This document should be read in conjunction with the Solution Overview section of the RFP, which documents the recommended Solution approach. Together, these requirements and the Solution Approach section must be used to create cost and schedule estimates for the design, development, implementation and ongoing support of the IE-BM System.

The Maintenance and Operations (M&O) Requirements document contains the following sections:
1) Instructions
2) Service Request Priority
3) Maintenance, Operations and Support Requirements

Within the M&O Requirements, the requirements are categorized by area as detailed below. Each category has its own tab in this workbook.

ID	Section Title
O	**Application Maintenance and Operations Requirements**
O1	EEF Platform (MAGI Medicaid only) M&O Transition
O2	Application M&O Service Requirements
O3	Design, Development and Implementation (DDI) to M&O Transition
O4	Modifications/Enhancements Requirements
O5	M&O Turn-Over or Transition Services Requirements
O6	Provide Hosted Private Cloud Service Requirements (DHS Optional)
O7	Service Level Requirements

State of Arkansas Department of Human Services
Integrated Eligibility and Benefit Management (IE-BM) RFP
RFP #: SP-17-0012
TemplateT-12 - Maintenance and Operations (M&O) Support Requirements Traceability Matrix

Instructions

This document captures the M&O Requirements for the State of Arkansas's IE-BM System. It captures the tasks the Vendor will be responsible for performing.
The response codes below should be used by the Vendor to indicate whether it agrees to perform the requirements or whether it recommends changes to the tasks being performed.

This Template must be submitted as an Microsoft Excel file as part of the Vendor's Proposal and should be thoroughly completed.

Field	Definition / Instructions
Req. #	**Requirement Identification Number:** This should be used to refer to requirements in correspondence. DO NOT EDIT THIS FIELD.
Requirement	**Requirement:** The detailed description of requirement. DO NOT EDIT THIS FIELD.
Requirement Met	**Vendor response to whether the M&O Requirement will be met by the Vendor.** For tabs O1 - O5, indicate whether the requirement, as currently written, will be met by the Vendor's Proposal: Yes or Clarification. For each Service Level Requirement, indicate agreement with each and all of the SLRs. The Vendor is expected to show in its Proposal how it will ensure compliance with the SLRs: Yes or **No**.
Suggested Clarifying Comments (for O1 to O6)	**If the Response Code is set to "Clarification" the Vendor must provide clarifying comments** To provide more detail regarding the approach for meeting a Maintenance and Operations Requirement, use the M&O Requirements Approach Template (Template T-13 - M&O Approach) and provide a reference to the appropriate RFP Req. #(s) in this template.
Proposed Liquidated Damages Amount	For each Service Level Requirement, provide a recommended Liquidated Damages amount per measure of SLR Measurement of Non-Compliance.

State of Arkansas Department of Human Services
Integrated Eligibility and Benefit Management (IE-BM) RFP
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TemplateT-12 - Maintenance and Operations (M&O) Support Requirements Traceability Matrix

Service Request Priority

This grid below establishes the criteria which establish the criticality of Service Requests. This should be referenced while responding to the Service Request SLA (O7-4) on the Service Level Requirements Tab (O7 SLRs)

Urgency	Impact			
	State-Wide	Location	Multiple Users	Single User
A full outage of multiple services or all services and/or noncompliance with regulations	Critical	Critical	High	High
An issue completely affecting a service, no workaround available	Critical	High	High	Medium
An issue affecting a service; workaround is available	High	Medium	Medium	Medium
An issue that has no impact to the availability of the affected service; redundancy is available	Medium	Low	Low	Low

State of Arkansas Department of Human Services
Integrated Eligibility and Benefit Management (IE-BM) RFP
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TemplateT-12 - Maintenance and Operations (M&O) Support Requirements Traceability Matrix

EEF M&O Transition (MAGI Medicaid Only)

Req. #	Requirement Description	Requirement Met	Suggested Clarifying Comments
O1.1	Develop each of the EEF M&O transition Deliverables outlined in the SOW. These will be reviewed and formally approved by DHS staff, to be identified by DHS, through the process outlined in the Project Management Plan. The Vendor shall complete these deliverables in compliance with the Project Schedule and complete the deliverables approval process (e.g. invoice) in a timely manner as agreed to in the final Contract.	Yes	
O1.2	Evaluate the current EEF platform (MAGI Medicaid only) Maintenance and Operations processes, procedures and evaluate the impact of adding the EEF maintenance and support to the IE-BM maintenance and support structure and environment.	Yes	
O1.3	Collaborate with the current EEF M&O vendor to define the process changes required to integrate the EEF solution maintenance into the IE-BM support structure.	Yes	
O1.4	Develop a M&O Transition Plan which captures all activities required to seamlessly transition the EEF M&O, including: a. Documentation of the Vendor's proposed target state including: i. Proposed Vendor staff ii. Roles and responsibilities of all partners related to the Solution support and operations iii. Proposed list of activities and processes to support the activities iv. Acquisition, transition and need for tools b. Training plans to ensure staff gain the knowledge required to transition M&O activities c. Plan for coordinating roles and responsibilities between the Vendor and the EEF Vendor d. Approvals for plans by DHS and commitment to supply resources e. Staffing of target organizations and ongoing support through the duration of the Contract f. Inventory and plan for all Solution hardware and software, documentation, supplies, facilities and other resources within the Contract g. Measureable progress milestones/check-points so DHS can quantify the transition risk h. Readiness Checklist which captures all activities that must be completed prior to completing the migration	Yes	
O1.5	Collaborate with the EEF M&O Vendor to develop, document and implement changes to the transitioning of M&O activities in a multi-vendor environment including, at a minimum, processes and roles and responsibilities among DHS, the IE-BM Vendor and the EEF Vendor	Yes	
O1.6	Update/develop EEF System M&O documentation after Migration from EEF M&O Vendor to IE-BM Vendor (e.g. contact information, updated procedures and responsibilities for the Vendor)	Yes	
O1.7	Develop and document plan for maintaining all relevant Solution M&O process documentation.	Yes	
O1.8	Develop and document approach to the Solution M&O reporting including status reporting, SLR Performance reporting and reporting mechanisms.	Yes	

Req. #	Requirement Description	Requirement Met	Suggested Clarifying Comments
O1.9	Perform training and other related activities required to ready the M&O team to support the Solution including, but not limited to: a. System technologies, configurations, customizations b. EEF Platform operational processes c. EEF Platform Tools d. Existing documentation and documentation standards	Yes	
O1.10	Develop weekly transition status reports highlighting progress against plan and milestones; the report shall address risk, issues and tracks progress against the transition Check List.	Yes	
O1.11	Develop an Application M&O Plan which captures all activities required to conduct all M&O activities the processes and tools to be managed and staffed by the Vendor. Plans for the following services must be included in this deliverable: a. System administration and operations b. Help desk and incident/problem management c. Root Cause Analysis d. System monitoring e. User account management f. Security administration g. Database administration h. Break-fix i. Change and release management j. Training (initial and ongoing) of M&O and State staff k. Configuration Management l. Standards and processes to describe the Vendor’s approach to any concurrent development code streams needed m. Performance Management n. Capacity Planning and Management o. Technology Refresh and Replenishment Services p. Disaster Recovery Services q. Data Retention and Archiving	Yes	
Metrics/Key Performance Indicators (KPIs)			
O1.12	The Vendor will provide a standard set of metrics to measure vendor performance in all applicable areas in this section. These metrics must align with the full set of SLRs proposed in Tab O7, including additional SLRs proposed by the Vendor.	Yes	

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Application M&O Requirements

Req. #	Requirement Description	Requirement Met	Suggested Clarifying Comments
General			
O2.1	Develop each of the Application M&O Deliverables outlined in the SOW. These will be reviewed and formally approved by DHS staff, to be identified by DHS, through the process outlined in the Project Management Plan. The Vendor shall complete these deliverables in compliance with the Project Schedule and complete the deliverables approval process (e.g. invoice) in a timely manner as agreed to in the final Contract.	Yes	
O2.2	Integrate Vendor's operational activities into the DHS Enterprise standard processes and continuously improve the processes	Yes	
O2.3	Develop service requests on changes to the infrastructure or middleware on which the Solution runs	Yes	
O2.4	Perform all M&O activities for all middleware/COTS packages included in the EEF solution and those implemented as part of the IE-BM solution and maintain all software environments (e.g. development, testing, training, production, disaster recovery).	Clarification	The Scope will be limited to the responsibility listed in Table 13, under Sec 3.6.7.3. To summarize, our understanding is that the State retains reponsibility for Middleware support and the M&O Team provides is responsible for the application support.
System Operations and Administrations			
O2.5	Develop procedures for performing Solution specific administration that meet requirements and adhere to defined policies	Yes	
O2.6	Prepare pre-production release software for production and pre-production testing	Yes	
O2.7	Continually monitor data quality and identify opportunities for improvement	Yes	
System Performance/Monitoring			
O2.8	Propose monitoring policies, procedures and standards for the Solution including, but not limited to: a. Monitoring of buffers, database buffers, table space fragmentation, database space, unusual growth and propose a solution in case of alert b. Monitoring of System logs, update error, database corruption, jobs, and propose a solution in case of alert c. Monitoring of alert notification interface (e.g., Simple Mail Transfer Protocol (SMTP), sendmail), and propose a solution in case of an alert d. Monitoring of transaction and trace logs, network event logs and traces, garbage collector, memory and CPU utilization, indexes, etc., and propose a solution in case of an alert e. Monitoring of middleware (e.g., workflows, in- and out-bound queues) and report to DHS according to agreed procedure f. Monitoring of E2E transaction response time to allow measurements against SLAs g. Monitoring of interfaces and batch and job scheduling	Yes	

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Req. #	Requirement Description	Requirement Met	Suggested Clarifying Comments
O2.9	Perform IE-BM System related database administration tasks	Yes	
O2.10	Implement agreed to monitoring policies, procedures and standards	Yes	
O2.11	Monitor all IE-BM System components as agreed to in above mentioned monitoring policies, procedures and standards. Identify and report problems.	Yes	
Capacity Management			
O2.12	Collaborate with DHS to understand any business trends which could impact System's capacity requirements, analyze historical trends and provide capacity forecast	Yes	
O2.13	Participate in the DHS Enterprise capacity planning activities	Yes	
Change/Release Management			
O2.14	Identify and submit any Solution changes in compliance with the DHS Enterprise Change/Release Management process	Yes	
O2.15	Provide required scripts and documentation regarding each Solution change or release	Yes	
O2.16	All releases must be performed between 11PM and 7AM except critical releases. DHS must approve all releases.	Yes	
Configuration Management			
O2.17	Maintain the Solution's software configuration in the DHS Enterprise configuration management tool	Yes	
O2.18	Capture any of the Solution's software configuration changes included in any change request	Yes	
O2.19	Ensure the Solution's configuration is captured in the configuration management tools and is up-to-date; any errors should be reported to DHS immediately	Yes	
Disaster Recovery			
O2.20	Participate in and complete all Solution related disaster recovery activities outlined in the Disaster Recovery Plan	Clarification	The Scope will be limited to the responsibility listed in Table 13, under Sec 3.6.7.3
O2.21	Participate in disaster recovery planning including developing/updating the disaster recovery plan, identifying required changes in the disaster recovery plan (e.g. a change in contact information)	Yes	
O2.22	Participate in and provide support for the disaster recovery testing including, but not limited to: a. Plan and schedule disaster recovery testing b. Recovery of the application c. Recover data and storage according to RTO requirements d. Assist with/resolve remediation of recovery issues e. Help establish WAN connectivity from data center to the State/DHS WAN	Clarification	IBM will commit to this at the application layer only. Items such as Infrastructure resoration (RTO) and WAN are not in IBM's scope

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Req. #	Requirement Description	Requirement Met	Suggested Clarifying Comments
O2.23	Identify appropriate resources to support DHS' disaster recovery planning, testing and execution	Yes	
O2.24	Perform tasks outlined in the Disaster Recovery Plan within the agreed upon timeline in the event DHS initiates the disaster recovery plan	Clarification	IBM will evaluate the existing Disaster recovery plan as part of transition and then commit to this. Our support focuses at the application layer.
O2.25	Be contactable and maintain a call tree to ensure DIS can contact the Vendor and the resources required to assist with the recovery can be made available within	Yes	
HelpDesk and Incident Management (Level 2/3)			
O2.26	Maintain Level 2 / 3 Solution support escalation procedures	Yes	
O2.27	Provide Level 2 / 3 Solution expertise and involvement for incident resolution including on-call availability 24X7 to provide Level 2 support for critical incidents/problems in alignment with the SLAs	Yes	
O2.28	Periodically review the status of open incidents and related problems and the progress being made in addressing problems related to the Solution	Yes	
O2.29	Conduct/participate in incident and problem management review sessions and provide status and problem impact categorization	Yes	
O2.30	The Vendor will establish a support agreement with the solution owner (If the selected Vendor is not the owner of the solution) to provide product support, including but not limited to, product support, defect fixes, release and upgrade information, future functionality, and enhancement requests. This does not include the contract for software licensing.	Clarification	For third party vendor solution, IBM will co-ordinate with the vendor to resolve product specific issues, defect issues. The support agreement is between the State and the third party vendor.
Problem Management Services and Root Cause Analysis			
O2.31	Provide expertise and be an active participant in the process to resolve critical incidents as required (e.g. participate in "all hands on deck" meetings until incident is resolved)	Yes	
O2.32	Develop procedures for performing Root Cause Analysis (RCA) that meet requirements and adhere to defined policies	Yes	
O2.33	Conduct proactive trend analysis to identify recurring problems	Yes	
O2.34	Track and report recurring incidents or failures and provide associated consequences of repeating incidents if there is a business impact to DHS	Yes	
O2.35	Recommend solutions to address recurring problems or failures	Yes	
O2.36	Identify and document root cause of DHS defined High/Critical Priority Incidents and recommend appropriate resolution action	Yes	
O2.37	Provide status report detailing the root cause of and procedure for correcting recurring problems until closure as determined by DHS	Yes	

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Application M&O Requirements

Req. #	Requirement Description	Requirement Met	Suggested Clarifying Comments
User Account Management			
O2.38	Develop, document, manage and maintain the Solution's user account maintenance procedures including, but not limited to: a. Configuration of new users, roles and responsibilities, credentials, etc. b. Users Refresh / Change / Updates c. Users Deletion	Yes	
O2.39	Provide assistance to DHS, as required, in administering IE-BM System user accounts	Yes	
Security Administration			
O2.40	Provide Solution security plan and infrastructure based on security requirements, standards, procedures, policies, with national, DHS and local requirements and risks		
O2.41	Implement physical and logical security plans consistent with DHS' security policies and industry standards	Yes	
O2.42	Establish access profiles and policies for adding, changing, enabling/disabling and deleting Log-On access of DHS employees, agents and subcontractors	Yes	
O2.43	Review all security patches relevant to the environment and classify the need and speed in which the security patches should be installed as defined by security policies	Yes	
O2.44	Support DHS in producing security related activities such as report development, controls documentation, HIPAA compliance activities, IRS 1075 compliance activities, performing security audits, etc.	Yes	
O2.45	Develop and maintain all documentation required for security audits and internal control and control testing	Yes	
O2.46	Place and support systems with particularly sensitive data in controlled access areas. Only end-users with authorized access permission will be allowed to enter these areas (e.g., read access in the Solution's logs, write access in some folders, etc.).	Yes	
O2.47	Provide a documented set of controls that is used to ensure the separation of data and security information among customer applications	Yes	
O2.48	Provide reviews for the security of applications and any supporting code, such as Ajax, ActiveX controls and Java applets that are used	Yes	
O2.49	Provide adequate protection of data that is covered by regulatory or other compliance requirements — for example, those of the U.S. HIPAA, IRS 1075, ACA and HITECH Acts	Yes	
O2.50	Provide documented procedures to ensure background checks are performed on personnel with administrative or other privileged access to servers, applications or customer data	Yes	
O2.51	Provide documented procedures for super user privilege management and database activity monitoring controls or the equivalent to detect inappropriate behavior by personnel with administrative access	Yes	

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Req. #	Requirement Description	Requirement Met	Suggested Clarifying Comments
O2.52	Provide a documented process for evaluating security alerts from OS and application vendors, shielding systems from attack until patched, and installing security patches and service packs	Yes	
O2.53	Provide documented procedures for security monitoring and log management functions, and use write-once technology or other secure approaches for storing audit trails and security logs	Yes	
O2.54	Provide documented procedures and establish procedures for vulnerability management, intrusion prevention, incident response, and incident escalation and investigation	Yes	
Break Fix			
O2.55	Design, build and test application fixes	Yes	
O2.56	Perform regression testing on the Solution, as required, when other components of the IE-BM Solution are updated/modified	Yes	
Account Management and Quality Assurance			
O2.57	Propose Account Management structure, planning and procedures	Yes	
O2.58	Maintain and implement Account Management structure, planning and procedures accordingly.	Yes	
O2.59	Develop a service ordering process that clearly defines how to order change or delete services	Yes	
O2.60	Provide status reporting (e.g., statistics, trends, audits) including risks and issues	Yes	
Application Quality Management			
O2.61	Participate in operations and service management quality assurance and control program process and address any findings	Yes	
O2.62	Provide hours worked by employee broken down by task as defined by DHS	Yes	
O2.63	Provide application service level reporting based on agreed upon SLR Targets	Yes	
Metrics/Key Performance Indicators (KPIs)			
O2.64	The Vendor will provide a standard set of metrics to measure vendor performance in all applicable areas in this section. These metrics must align with the full set of SLRs proposed in Tab O7, including additional SLRs proposed by the Vendor.	Yes	
Tool Useage			
O2.65	The Vendor will leverage DHS' implementation of JIRA for Help Desk ticketing and defect management	Yes	
O2.66	The Vendor will leverage a document management solution as a repository for all system related documentation. DHS prefers the Vendor leverage their installation of SharePoint though the vendor can leverage other technologies, with appropriate justification. If the Vendor recommends an alternate document management solution it will be installed on Arkansas' environment and owned by DHS	Yes	
O2.67	The Vendor will propose other tools to be leveraged during the M&O phase of the engagement. DHS prefers the Vendor leverages technologies already being leveraged by DHS (see RFP Section 3.3.6 and 3.6.7) though can propose alternate technologies with appropriate justification. If the Vendor recommends an alternate document management solution it will be installed on Arkansas' environment and owned by DHS	Yes	

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DDI to M&O Transition

Req. #	Requirement Description	Requirement Met	Suggested Clarifying Comments
O3.1	Develop each of the DDI to M&O transition Deliverables outlined in the SOW. These will be reviewed and formally approved by DHS staff, to be identified by DHS, through the process outlined in the Project Management Plan. The Vendor shall complete these deliverables in compliance with the Project Schedule and complete the deliverables approval process (e.g. invoice) in a timely manner as agreed to in the final Contract.	Yes	
O3.2	Evaluate the M&O processes, procedures and evaluate the impact of adding new components/releases to the IE-BM maintenance and support structure and environment	Clarification	IBM will validate the current process and procedures as part of transition. Our focus will be at the application layer, and infrastructure support is comprised of consultative assistance which allows DIS to retain ownership and control of the environments.
O3.3	Collaborate with the DDI team to define the process changes required to integrate the new components/releases into the IE-BM M&O structure.	Yes	
O3.4	Develop a M&O Transition Plan which captures all activities required to seamlessly transition from DDI, including: a. Documentation of the Vendor's proposed target state including: i. Proposed Vendor staff ii. Roles and responsibilities of all partners related to the Solution support and operations iii. Proposed list of activities and processes to support the activities iv. Acquisition, transition and need for tools b. Training plans to ensure staff gain the knowledge required to transition M&O activities c. Plan for coordinating roles and responsibilities between the Vendor and the EEF Vendor d. Approvals for plans by DHS and commitment to supply resources e. Staffing of target organizations and ongoing support through the duration of the Contract f. Inventory and plan for all Solution hardware and software, documentation, supplies, facilities and other resources within the Contract g. Measureable progress milestones/check-points so DHS can quantify the transition risk h. Readiness Checklist which captures all activities that must be completed prior to completing the migration	Yes	
O3.6	Update/develop EEF System M&O documentation after transition from DDI team (e.g. contact information, updated procedures and responsibilities for the Vendor)	Yes	
O3.7	Develop and document plan for maintaining all relevant Solution M&O process documentation	Yes	
O3.8	Develop and document approach to the Solution M&O reporting including status reporting, SLR Performance reporting and reporting mechanisms	Yes	

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DDI to M&O Transition

Req. #	Requirement Description	Requirement Met	Suggested Clarifying Comments
O3.9	Perform training and other related activities required to ready the M&O team to support the Solution including, but not limited to: a. System technologies, configurations, customizations b. Operational processes c. Tools d. Existing documentation and documentation standards	Yes	
O3.10	Develop weekly transition status reports highlighting progress against plan and milestones; the report shall address risk, issues and tracks progress against the transition Check List	Yes	
Metrics/Key Performance Indicators (KPIs)			
O3.11	The Vendor will provide a standard set of metrics to measure vendor performance in all applicable areas in this section. These metrics must align with the full set of SLRs proposed in Tab O7, including additional SLRs proposed by the Vendor.	Yes	

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Modifications/Enhancements Requirements

Req. #	Requirement Description	Requirement Met	Suggested Clarifying Comments
General			
O4.1	Develop each of the Modifications and Enhancements Deliverables outlined in the SOW. These will be reviewed and formally approved by DHS staff, to be identified by DHS, through the process outlined in the Project Management Plan. The Vendor shall complete these deliverables in compliance with the Project Schedule and complete the deliverables approval process (e.g. invoice) in a timely manner as agreed to in the final Contract.	Yes	
Minor Enhancements and Ad-Hoc Requests			
O4.2	Maintain backlog of requests	Yes	
O4.3	Create Conceptual and Functional Design	Yes	
O4.4	Create Technical Design	Yes	
O4.5	Estimate effort and perform application impact assessment	Yes	
O4.6	Develop application configuration change/modification plans	Yes	
O4.7	Conduct walk-through review of configuration change/modification	Yes	
O4.8	Program, compile and document configuration changes/modifications	Yes	
O4.9	Perform unit testing on all changes	Yes	
O4.10	Perform integration testing for all changes	Yes	
O4.11	Perform regression testing for all changes	Yes	
O4.12	Coordinate user acceptance testing for all changes	Yes	
O4.13	Update user documentation and training materials	Yes	
O4.14	Maintain technical architecture documentation	Yes	
O4.15	Conduct annual planning for technology refresh in compliance with software vendor licensing and specifications and upgrades	Yes	
O4.16	Align with the Medicaid Enterprise Certification Toolkit (MECT)/Medicaid Enterprise Certification Lifecycle (MECL) to help ensure the System meets all federal requirements and satisfy the objectives described in the State’s Advance Planning Document (APD).	Yes	
O4.17	Support DHS in preparing for any federal reviews and certifications (e.g. Medicaid and FNS) by, at a minimum, developing a preparing required documentation throughout the project, attending interviews and providing additional documentation	Yes	

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Modifications/Enhancements Requirements

Req. #	Requirement Description	Requirement Met	Suggested Clarifying Comments
Documentation			
O4.18	Maintain existing user/training documentation	Yes	
O4.19	Create new user/training documentation for enhancements	Yes	
O4.20	Maintain overall accountability for management of technical/System documentation	Yes	
O4.21	Maintain existing technical/System documentation as required to reflect System changes and/or to enhance or improve quality of documentation	Yes	
O4.22	Document incident/request resolution/workaround in the DHS Help Desk tool as it applies	Yes	
Metrics/Key Performance Indicators (KPIs)			
O4.23	The Vendor will provide a standard set of metrics to measure vendor performance in all applicable areas in this section. These metrics must align with the full set of SLRs proposed in Tab O7, including additional SLRs proposed by the Vendor.	Yes	

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M&O Turn-Over Services Requirements

Req. #	Requirement Description	Requirement Met	Suggested Clarifying Comments
This section includes general statements about the requirement and roles and responsibilities in case of termination of Contract or migration of the Application M&O Contract to an alternate vendor at the time the Contract expir es.			
O5.1	Develop each of the M&O Turn-over Deliverables outlined in the SOW. These will be reviewed and formally approved by DHS staff, to be identified by DHS, through the process outlined in the Project Management Plan. The Vendor shall complete these deliverables in compliance with the Project Schedule and complete the deliverables approval process (e.g. invoice) in a timely manner as agreed to in the final Contract.	Yes	
O5.2	Create a detailed Turn-Over Plan that covers all activities and the efforts of all involved parties. This part of the plan should express this in time and budget requirements, action ownership and program governance.	Yes	
O5.3	Complete inventory of all assets covered by the Contract and required to provide the services	Yes	
O5.4	Ensure that the M&O Turn-Over Plan includes handing over the key assets in an agreed-to format. These assets include, but are not limited to: a. Customer and other records (including subcontractor agreements that are required to provision the services) b. Configuration information c. Databases d. Documentation e. Asset registers f. Programs g. Knowledge databases h. Fault databases i. Asset maintenance history and status j. Manuals k. Process and procedure documentation l. Any other similar items that the Vendor used or produced during the course of, or for the purpose of, provisioning the services or relating to the configuration control of the services m. Source code n. Development tools and procedures o. Architecture and design documents	Yes	
O5.5	Hold briefings on the status and comprehensive nature of all items handed over	Yes	
O5.6	Complete knowledge transfer of the services to DHS or alternate service provider(s)	Yes	
O5.7	Define the means by which no interruption of the provision of the services, or reduction in service levels, will occur during the handover period, and during transfer to DHS or the new service provider	Yes	
O5.8	Identify and complete the transfer to DHS (for the remainder of the term of the relevant license) of all software and other licenses used in the provisioning and delivering of the Solution	Yes	

Req. #	Requirement Description	Requirement Met	Suggested Clarifying Comments
O5.9	Arrange for the provisioning of a physical data room into which information shall be placed, for the organization and the new service provider to inspect and make copies for removal	Yes	
O5.10	Perform all tasks included in the Turn-Over Plan	Yes	
O5.11	Participate in and/or manage regularly scheduled and ad hoc meetings, as well as other communications, to address issues that may affect how involved parties perform their responsibilities in relation to the Turn-Over Plan	Yes	
O5.12	Arrange for the transfer of personnel, including communications, briefing and negotiation, applicable to such personnel who are required for the continuation of the involved services, and within the boundaries of applicable law	Yes	
O5.13	Develop the final handover and acceptance criteria	Yes	
O5.14	Introduce the new service provider to all relevant information and training to allow the service provider to leverage the IE-BM Platform, tools and services and operate within the multi-vendor environment, as required	Yes	
O5.15	If tools that are not DHS' standards are leveraged by the Vendor during implementation or M&O activitites, the Vendor must migrate all materials to DHS' standard tools	Yes	
Metrics/Key Performance Indicators (KPIs)			
O5.16	The Vendor will provide a standard set of metrics to measure vendor performance in all applicable areas in this section. These metrics must align with the full set of SLRs proposed in Tab O7, including additional SLRs proposed by the Vendor.	Yes	

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Provide Hosted Private Cloud Services (DHS Optional)

Req. #	Requirement Description	Requirement Met	Suggested Clarifying Comments
DHS is considering having the IE-BM Vendor provide hosting services. At the highest level, the Vendor will provide infrastructure to the applications team and provide the support associated with that infrastructure. This includes, but is not limited to, data center backbone network, servers, disk storage, tape storage, monitoring tools, security tools, and systems software that support the business application. As providing 'Private Cloud hosting' is optional, vendors do not need to complete this tab. The contents of this tab will not be considered in the proposal evaluation".			
Network, Hosting and Data Center Services			
O6.1	Provide a primary Tier III (or higher) data center for hosting of the production instance of the application	Y	
O6.2	Provide a secondary Tier III (or higher) alternate data center for disaster recovery purposes	Y	
O6.3	Provide onsite contact (at the production data center) personnel who have authorized access to rooms and racks for equipment for scheduled installation time, in accordance with security procedures	Y	
O6.4	Provide and install all necessary power distribution boxes, conduits, grounding, surge, equipment racks, and lightning protection and associated hardware	Y	
O6.5	Provide necessary building alterations to meet wiring and any other site requirements	Y	
O6.6	Provide mechanism to ensure that the environmental conditions for chosen equipment meet the manufacturer's requirements	Y	
O6.7	Provide mechanism to ensure that data center physical security meets DHS' security requirements	Y	
O6.8	Participate in any DHS Data Center audits	Y	

Req. #	Requirement Description	Requirement Met	Suggested Clarifying Comments
O6.9	Provide the infrastructure, including servers, data center network, security, storage, etc. for all environments for the IE-BM solution including, but not limited to: a. Development environments b. Testing environments c. UAT/pre-production environment d. Production environment e. Disaster Recovery environment f. Training environment	Y	
O6.10	Maintain documentation of the IE-BM infrastructure environments	Y	
O6.11	Provide Infrastructure as a Service capabilities including: a. Providing and supporting virtualized server environments b. Provisioning of servers and operating systems c. Provisioning of storage d. Provisioning of server, network and storage with no single point of failure e. Access to ISP and DHS/State WAN network demarcation points f. Capability to replicate data to the alternate data center to meet recovery point objectives g. The capability to recovery the application and data at the remote data center to meet recovery time and recovery point objectives h. The capability to migrate an application from the disaster recovery data center back to the primary data center i. Providing Maintenance (e.g. patching) on all infrastructure j. Upgrading hardware/software	Y	
O6.12	Collaborate with the applications teams to assess the impact of any enhancements they are implementing on the infrastructure	Y	
O6.13	Provision new environments and capacity as required to ensure performance requirements are met as volume increases and additional functionality is implemented	Y	
O6.14	Provide data center LAN/Core network infrastructure and management	Y	
O6.15	Provide high availability redundant network circuits connecting the hosting facility (data center) to DHS' network to meet network response time and high availability SLAs	Y	
O6.16	Adhere to the Hosting Services SLRs	Y	
O6.17	Maintain (e.g. patching) infrastructure within guidelines established by software provider and/or DHS	Y	

Req. #	Requirement Description	Requirement Met	Suggested Clarifying Comments
O6.18	Provide technical expertise to all Application vendors related to the infrastructure implementation	Y	
O6.19	Ongoing maintenance of virtual environments	Y	
Storage Management Services			
O6.20	Provide data backup and restoration services in accordance with DHS-established policies	Y	
O6.21	Recommend techniques and procedures to ensure disk storage resources are utilized in an efficient and cost-effective manner	Y	
O6.22	Maintain and improve storage resource efficiency and space requirements	Y	
O6.23	Regularly test recovery procedures and practices to demonstrate recoverability and verify that actual practices are in concert with procedures and report results, as well as meet business requirements	Y	
O6.24	Provide data storage and data management services (e.g., RAID array, SAN, NAS, tape, optical)	Y	
O6.25	Secure backup media in independently certified, U.L. Class II media storage vaults that meet the design and construction requirements of NFPA (National Fire Protection Association) 232, Standard for the Protection of Records	Modification	The media is securly backed up using disk to disk backup and adheres to the corresponding standards
O6.26	Perform periodic incremental and full backups	Y	
O6.27	Provide input processing, for activities such as loading third-party media (e.g., tape) and receiving transmission of batch files	Y	
O6.28	Maintain a tape library, tape management system, and transport tapes to production area as needed	Modification	The media is securly backed up using disk to disk backup and adheres to the corresponding standards
O6.29	Maintain data set placement and manage data catalogs	Y	
O6.30	Manage file transfers and other data movement activities	Y	
O6.31	Manage input media availability to meet processing service levels	Y	
O6.32	Manage the media inventory to ensure that adequate media resources are available	Y	
O6.33	Acquire and manage consumables, such as tape, disks, etc., in support of DHS' backup requirements for the Data Center	Modification	Cloud based Disk to Disk Backup Services (Evault Backup or R1Soft Server Backup) would be utilized
O6.34	Plan, execute and report on the replacement of media in the scratch tape pool before 80% of its expected life, as defined by the media manufacturer, on a going-forward basis	Modification	Cloud based Disk to Disk Backup Services (Evault Backup or R1Soft Server Backup) would be utilized

Req. #	Requirement Description	Requirement Met	Suggested Clarifying Comments
O6.35	Monitor and control storage performance to ensure system performance SLAs are continually met	Y	
O6.36	Monitor and demonstrate compliance with DHS' retention and storage policies and/or requirements	Y	
O6.37	Effectively track, manage, communicate and resolve all tape exceptions	Modification	Backup process exceptions are handled for Disk to Disk (vice tape) backup.
O6.38	Ensure all replaced media such as tapes and disk storage are degaussed or otherwise cleared of data per NIST 800-88 requirements. Ensure that any media no longer required is destroyed or shredded in a similar fashion.	Y	
O6.39	Provide secure off-site storage for designated media and transport media to off-site location as required	Modification	Propose using the DR site for storage backup
O6.40	Periodically test and verify validity of tapes	Modification	Cloud based Disk to Disk Backup Services (Evault Backup or R1Soft Server Backup) would be utilized. Tape validation would not be required.
O6.41	Perform periodic audits to ensure proper cataloging of media	Y	
O6.42	Report disk space and tape utilization	Y	
O6.43	Manage tape storage service provider (if applicable)	NA	
O6.44	Perform recoupment of production databases on a regular basis and verify that roll-in is done after verifying reports	Y	
O6.45	Perform restores of test systems in accordance with the mutually agreed-upon procedures manual	Y	
Operating System, Application and Database Backup and Recovery			
O6.46	Develop and implement data Backup/Restore procedures in accordance with DHS' requirements. Note: Backup must include system parameters, user IDs, passwords, etc.	Y	
O6.47	Create and maintain backup scripts to support Backup/Restore procedures	Y	
O6.48	Maintain backup infrastructure (tape library, drives, etc.)	Y	
O6.49	Test central/remote application backup/restore procedures periodically	Y	
O6.50	Perform complete/incremental backup	Y	
O6.51	Monitor backup processes	Y	
O6.52	Verify backup media integrity	Y	
O6.53	Encrypt all backups regardless of storage media	Y	
O6.54	Store copies of the backups in a fire and water proof vault and/or secure off-site facility	Y	

Req. #	Requirement Description	Requirement Met	Suggested Clarifying Comments
O6.55	Restore single/multiple objects from the application backup media	Y	
O6.56	Restore complete/incremental application backup as required	Y	
O6.57	Roll forward from the archive logs after a restore (i.e., point in time recovery)	Y	
O6.58	Validate integrity and consistency of restored information	Y	
Remote Access Infrastructure Management			
O6.59	Provide technical support, administration and security administration for Remote Access hardware and software	Y	
O6.60	Perform system or component configuration changes and maintenance (e.g. patching) necessary	Y	
O6.61	Monitor and report on Remote Access intrusion attempts	Y	
O6.62	Maintain Remote Access activity logs to include, at a minimum: a. Session status with timestamps and IP address b. End-to-end data processing/transmission c. Client ID d. Changes to account status	Y	
Capacity Management			
O6.63	Define, develop and implement tools that allow for the effective Capacity Management includuing monitoring, reporting, trending of all IT infrastructure components	Y	
O6.64	Participate in DHS Enterprise Platform capacity planning activities	Y	
O6.65	Manage infrastructure capacity plan based on requirements (users, new applications, etc.)	Y	
O6.66	Utilize application capacity forecasts to recommend infrastructure modifications and issue appropriate change requests	Y	
O6.67	Assess infrastructure capacity impacts when adding, removing or modifying applications	Y	
O6.68	Perform monitoring activities of infrastructure resources (e.g. OS, server, database, network, storage) usage to enable proactive identification of capacity and performance issues. Recommend changes to system to improve service performance.	Y	

Req. #	Requirement Description	Requirement Met	Suggested Clarifying Comments
O6.69	Analyze infrastructure performance and identify opportunities to optimize use of existing IT resources and minimize DHS' costs to receive the services at agreed-to Service Levels	Y	
O6.70	Ensure adequate infrastructure capacity exists within the IT environment to meet SLRs taking into account daily, weekly and seasonal variations in capacity demands	Y	
O6.71	Provide utilization and capacity reporting	Y	
System Monitoring			
O6.72	Manage and maintain monitoring procedures and standards (in alignment with the DHS Enterprise Platform monitoring processes, standards and polices) for the DHS Enterprise Platform infrastructure including, but not limited to: a. Monitoring of buffers, database buffers, table space fragmentation, database space, for unusual growth and propose a solution in case of alert b. Monitoring of system logs, update error, database corruption, jobs execution failures etc. and propose solution in case of an alert c. Monitoring of alert notification interface (e.g., Simple Mail Transfer Protocol (SMTP), sendmail), and propose a solution in case of an alert d. Monitoring of transaction and trace logs, network event logs and traces, garbage collector, memory and CPU utilization, indexes, etc., and propose a solution in case of an alert e. Monitoring of middleware (e.g., workflows, in- and out-bound queues) and report to DHS according to agreed procedure f. Monitoring and reporting of end-to-end transaction response time to allow measurements against SLAs g. Monitoring of interfaces h. Monitoring of batch jobs and job scheduling	Y	
O6.73	Propose enhancements to monitoring policies, processes and standards for the DHS Enterprise Platform	Y	
O6.74	Implement agreed to monitoring policies, procedures and standards for all hosted infrastructure	Y	
O6.75	Monitor infrastructure for availability as well as transaction and response time performance	Y	
O6.76	Provide regular monitoring reports of infrastructure performance, utilization and efficiency (e.g., proactive system monitoring)	Y	

Req. #	Requirement Description	Requirement Met	Suggested Clarifying Comments
Performance Management			
O6.77	Assess the performance impact on the infrastructure of any changes being implemented	Y	
O6.78	Develop and document performance management procedures for new infrastructure that meet DHS' requirements and adhere to defined policies	Y	
O6.79	Manage service component resources (e.g., devices and traffic) to meet defined availability and performance SLRs	Y	
O6.80	Proactively evaluate, identify and recommend configurations or changes to hardware configuration (e.g., hardware usage, index creation or reorganization) which will enhance performance	Y	
O6.81	Implement improvement plans and coordinate with third parties as required	Y	
Change/Release Management			
O6.82	Provide required documentation regarding each infrastructure change	Y	
O6.83	Implement/deploy all changes for the IE-BM Platform by executing the instructions provided by the vendor who submitted the change including the resetting of the training database	Y	
O6.84	Adhere to detailed DHS change and release plans/process	Y	
O6.85	Identify and submit any infrastructure changes in compliance with the DHS Enterprise Program Change/Release Management process	Y	
O6.86	Perform release of all changes (from all vendors leveraging the DHS Enterprise Platform) into the production environment and ensure every change has a back-out plan	Y	
Configuration Management			
O6.87	Maintain infrastructure configuration in coordination with DHS the configuration management tool	Y	
O6.88	Identify any infrastructure configuration changes included in any change request and ensure the configuration management tool is updated as part of the release	Y	
O6.89	Ensure infrastructure configuration captured in the configuration management tools is up to date; any errors should be reported to DHS immediately	Y	

Req. #	Requirement Description	Requirement Met	Suggested Clarifying Comments
Level 2/3 Support			
O6.90	Provide Level 2/3 support and technology expertise for escalated tickets related to the infrastructure as required to resolve ticket	Y	
O6.91	Log infrastructure related updates into the ticket tracking system (currently ServiceNow) in a timely manner in alignment with the DHS' processes, polices and procedures	Y	
O6.92	Participate in incident and problem management review sessions and provide status and problem impact categorization	Y	
O6.93	Maintain Level 2/3 infrastructure support escalation procedures	Y	
O6.94	Provide troubleshooting support – ad-hoc support for implementation challenges, including side-by-side support when/as needed	Y	
O6.95	Provide input into knowledge base to improve self-service and help desk's capabilities to address user questions	Y	
O6.96	Follow DHS' procedures for performing root cause analysis that meet requirements and adhere to defined policies	Y	
O6.97	Conduct proactive trend analysis to identify recurring infrastructure problems	Y	
O6.98	Track and report recurring infrastructure incidents or failures and provide associated consequences of repeating incidents if there is a business impact to DHS	Y	
O6.99	Recommend solutions to address recurring infrastructure problems or failures	Y	
Infrastructure Security			
O6.100	Ensure infrastructure provides data protection that meets regulatory and other compliance requirements — for example, those of the U.S. HIPAA, IRS 1075, ACA and HITECH Acts	Y	
O6.101	Evaluate impact of any modifications on the IE-BM infrastructure's security and ensure alignment with DHS' security policies and applicable regulations	Y	

Req. #	Requirement Description	Requirement Met	Suggested Clarifying Comments
O6.102	Maintain and enhance the IE-BM solution's security including an effective layered information security architecture to provide layered defense to meet DHS' security requirements. This includes, but is not limited to: a. DMZ b. Firewalls (both perimeter and internal zone firewalls) c. Data Center network zoning and VLAN design d. VPN support e. Encryption of critical data both at rest and in transit f. Security monitoring of all devices and network components g. Intrusion detection / intrusion prevention h. Monitoring of security alerts and installation of security patches	Y	
O6.103	Proactively monitor all infrastructure including network, storage, virtual environments, servers, databases, firewalls to ensure compliance with the DHS Enterprise Platform's monitoring process	Y	
O6.104	Provide ongoing compliance and support for critical security controls to ensure proper safeguarding of the technical environments: a. IAM suite b. Secure Certificates/AES 256 encryption c. Encrypted workstations and disabled media d. Oracle database encryptions e. CISCO AS Firewall/Firewall rules f. Encrypted storage and backups g. User profile and Privileges Administrations h. Test data creation tools i. Data masking j. E2E Application monitoring k. Data loss prevention l. Collaboration with OIT/DHS to leverage IT security tools, processes and polices	Y	
O6.105	Implement physical and logical security within new functionality defined in the security plan consistent with DHS' security policies and industry standards	Y	
O6.106	Review all infrastructure security patches relevant to the environment and classify the need and speed in which the security patches should be installed as defined by security policies	Y	

Req. #	Requirement Description	Requirement Met	Suggested Clarifying Comments
O6.107	Install infrastructure security patches in alignment with change management policies, processes and procedures	Y	
O6.108	Provide documented procedures for security monitoring and log management functions, and use write-once technology or other secure approaches for storing audit trails and security logs	Y	
O6.109	Demonstrate that staff has vendor certification for the specific firewall equipment it will manage	Y	
O6.110	Provide documented requirements (design and audit procedures) for network security to ensure that other customers will not compromise its shared-service infrastructure	Y	
O6.111	Place and support systems with particularly sensitive data in controlled access areas. Only end-users with authorized access permission will be allowed to enter these areas (e.g., read access in Application System logs, write access in some Application folders, etc.).	Y	
Disaster Recovery			
O6.112	Maintain a detailed Disaster Recovery plan to meet Disaster Recovery requirements. Plan shall include plans for data, back-ups, storage management, and contingency operations that provides for recovering the DHS Enterprise Platform within established recovery requirement timeframes after a disaster that has affected the users of the DHS Enterprise Platform	Y	
O6.113	Develop, document and manage the processes and procedures for Disaster Recovery operations	Y	
O6.114	Establish processes to ensure Disaster Recovery and emergency management plans are kept up-to-date and reflect changes in the DHS Enterprise Platform due to the implementation of changes or requirements	Y	
O6.115	Identify appropriate resources, including an appropriately-qualified Emergency Coordinator, that support DHS' Emergency Preparedness requirements	Y	
O6.116	Lead and complete all disaster recovery activities outlined in the Disaster Recovery Plan	Y	
O6.117	Manage and maintain disaster recovery environment including all required equipment (servers, storage, virtualization software and network)	Y	
O6.118	Manage replication to the disaster recovery site and ensure ongoing replication continues to occur	Y	

Req. #	Requirement Description	Requirement Met	Suggested Clarifying Comments
O6.119	Lead disaster recovery planning including developing/updating the disaster recovery plan and identifying required changes in the disaster recovery plan (e.g. a change in contact information)	Y	
O6.120	Lead the Disaster Recovery testing including, but not limited to: a. Plan and schedule Disaster Recovery testing b. Recovery of DHS Infrastructure in the secondary data center c. Recover data and storage according to RTO requirements d. Assist with/resolve remediation of recovery issues e. Establish WAN connectivity from data center to the State/DHS WAN	Y	
O6.121	Provide support to the applications team with implementing and configuring disaster recovery using the established infrastructure standards (SAN replication, VMware replication, etc.)	Y	
O6.122	Coordinate involvement of DHS/State personnel for Disaster Recovery testing	Y	
O6.123	Identify appropriate resources to support DHS' disaster recovery planning, testing and execution	Y	
O6.124	Track and report Disaster Recovery test results to DHS	Y	
O6.125	Develop action plans to address any issues arising from Disaster Recovery testing results	Y	
O6.126	Ensure vendors implement the approved action plan and provide ongoing status until completion of the remediation	Y	
O6.127	Lead (and perform) the execution of tasks outlined in the Disaster Recovery Plan in the event DHS	Y	
O6.128	Provide support to the third party Application M&O vendors with implementing and configuring disaster recovery using the established infrastructure standards (SAN replication, VMware replication, etc.)	Y	

Req. #	Requirement Description	Requirement Met	Suggested Clarifying Comments
Batch – Job Control and Scheduling			
O6.129	Develop, document and manage the processes and procedures for Interfaces and Batch Operations Architecture	Y	
O6.130	Define job scheduling requirements, application software interdependencies, and rerun requirements for all production jobs	Y	
O6.131	Utilize and manage scheduling tools for automating job execution (e.g., job workflow processes interdependencies, rerun requirements, file exchange functions, and print management)	Y	
O6.132	Maintain master job schedule and execute all batch jobs for the DHS Enterprise Program (e.g. any jobs provided by any vendor working on/with the DHS Enterprise Platform)	Y	
O6.133	Perform job monitoring and manage resolution of any failed jobs	Y	

State of Arkansas Department of Human Services
Integrated Eligibility and Benefit Management (IE-BM) RFP
RFP #: SP-17-0012
TemplateT-12 - Maintenance and Operations (M&O) Support Requirements Traceability Matrix

Maintenance, Operations and Support Services Level Requirements (SLRs)

O7-1 – Transition Execution		Requirement Met	Proposed Penalties	If "Clarification" is selected in "Requirement Met" Column, then clarify with proper justification
SLR Description/Objective	To avoid costly extensions of existing contracts and/or operational risk, the transition activities must stay on schedule to transition the EEF Applications M&O services prior to the incumbent vendor's contract expiring. This SLR will be measured against milestones defined in the Transition Plan.	Yes	$1000/incident with total penalties capped at 5% of monthly invoice. Per 3.6.3, Vendor Management, Penalties would not be collected for the first year thereby allowing the M&O team to establish a baseline. The IBM M&O team would also have the opportunity to earn back penalties if Service Level is met or exceeded in the following reporting period.	
Target	100% of all milestones are completed/approved on schedule			
Measurement	Date milestones are completed – planned date milestone is completed (captured in the Transition Plan)			
SLA Reporting Period	Per Milestone			
SLR Measurement of Non-Compliance	Per day the transition milestone is delayed			

O7-2 - Availability		Requirement Met	Proposed Liquidated Damages Amount	If "Clarification" is selected in "Requirement Met" Column, then clarify with proper justification
SLR Description/Objective	The Application must be available to all users of the System	Yes	$1000/incident with total penalties capped at 5% of monthly invoice. Per 3.6.3, Vendor Management, Penalties would not be collected for the first year thereby allowing the M&O team to establish a baseline. The IBM M&O team would also have the opportunity to earn back penalties if Service Level is met or exceeded in the following reporting period.	
Target	99.75%			
Measurement	(# of minutes of uptime during the reporting period) / (Total planned uptime during the reporting period)			
SLA Reporting Period	Monthly			
SLR Measurement of Non-Compliance	Uptime percentage below the target			
Planned uptime is 24X7 excluding DHS approved maintenance windows (these windows are excluded from both the "# of minutes of update during the reporting period" and "total planned uptime during the reporting period"). Scheduled downtime must be approved by DHS beforehand and performed between 11pm and 7am.				

O7-3 - Performance - Average Response Time		Requirement Met	Proposed Liquidated Damages Amount	If "Clarification" is selected in "Requirement Met" Column, then clarify with proper justification
SLR Description/Objective	System performance must meet end-user expectations to deliver increased customer satisfaction and efficiency gains	Clarification	$1000/incident with total penalties capped at 5% of monthly invoice. Per 3.6.3, Vendor Management, Penalties would not be collected for the first year thereby allowing the M&O team to establish a baseline. The IBM M&O team would also have the opportunity to earn back penalties if Service Level is met or exceeded in the following reporting period.	We can agree to performance SLRs, but prior to doing so would like to come to agreement on how the data is measured. Specifically, we would like to eliminate areas outside of our responsibility (e.g. network) from the measurements as well as understand the State's approach (e.g. the use of performance measure tools) for collecting the data.
Target	Average response time should be 2 seconds (response time from entering command to receiving result)			
Measurement	(Sum of all transaction response time) / (Number of transactions)			
SLA Reporting Period	Monthly			
SLR Measurement of Non-Compliance	Time difference between measured average response time and 2 seconds			
Performance measurement is the end-to-end response time from the user perspective, excluding any delays introduced by the network outside the data center				

O7-4 - Performance - Maximum Response Time		Requirement Met	Proposed Liquidated Damages Amount	If "Clarification" is selected in "Requirement Met" Column, then clarify with proper justification
SLR Description/Objective	System performance must meet end-user expectations to deliver increased customer satisfaction and efficiency gains	Clarification	$1000/incident with total penalties capped at 5% of monthly invoice. Per 3.6.3, Vendor Management, Penalties would not be collected for the first year thereby allowing the M&O team to establish a baseline. The IBM M&O team would also have the opportunity to earn back penalties if Service Level is met or exceeded in the following reporting period.	We can agree to performance SLRs, but prior to doing so would like to come to agreement on how the data is measured. Specifically, we would like to eliminate areas outside of our responsibility (e.g. network) from the measurements as well as understand the State's approach (e.g. the use of performance measure tools) for collecting the data.
Target	99.5% of transactions complete (response time from entering command to receiving result) in less than 3 seconds			
Measurement	(Transactions completed within required time) / (Total Transactions)			
SLA Reporting Period	Monthly			
SLR Measurement of Non-Compliance	Percentage of transactions below target			
Performance measurement is the end-to-end response time from the user perspective, excluding any delays introduced by the network outside the data center				

O7-5 - Critical Incident Restoring of Service (break/fix)		Requirement Met	Proposed Liquidated Damages Amount	If "Clarification" is selected in "Requirement Met" Column, then clarify with proper justification
SLR Description/Objective	Critical incidents must be addressed quickly to minimize the business impact of the incident (critical incident is defined as any high severity application issue for which no work around is available and users cannot perform their task)	Yes	$1000/incident with total penalties capped at 5% of monthly invoice. Per 3.6.3, Vendor Management, Penalties would not be collected for the first year thereby allowing the M&O team to establish a baseline. The IBM M&O team would also have the opportunity to earn back penalties if Service Level is met or exceeded in the following reporting period.	
Target	95% of high severity incidents fixed within 24 hours			
Measurement	(Number of high severity incidents fixed within 24 hours) / (Total number of high severity incidents)			
SLA Reporting Period	Monthly			
SLR Measurement of Non-Compliance	Per incident not fixed within 48 hours			

O7-6 - Security Incidents Response Time		Requirement Met	Proposed Liquidated Damages Amount	If "Clarification" is selected in "Requirement Met" Column, then clarify with proper justification
SLR Description/Objective	DHS needs to be aware of any security incidents as quickly as possible	Yes	$1000/incident with total penalties capped at 5% of monthly invoice. Per 3.6.3, Vendor Management, Penalties would not be collected for the first year thereby allowing the M&O team to establish a baseline. The IBM M&O team would also have the opportunity to earn back penalties if Service Level is met or exceeded in the following reporting period.	
Target	All of notifications completed in less than 1 hour (all notifications shall occur as soon as possible)			
Measurement	Number of incidents not reported within 1 hour			
SLA Reporting Period	Monthly			
SLR Measurement of Non-Compliance	Per incident not reported within 1 hour			

O7-7 – Response to Patches and Fixes		Requirement Met	Proposed Penalties	If "Clarification" is selected in "Requirement Met" Column, then clarify with proper justification
SLR Description/Objective	When COTS/software vendors release patches/fixes, the Vendor needs to apply these patches/fixes to the environment	Clarification	$1000/incident with total penalties capped at 5% of monthly invoice. Per 3.6.3, Vendor Management, Penalties would not be collected for the first year thereby allowing the M&O team to establish a baseline. The IBM M&O team would also have the opportunity to earn back penalties if Service Level is met or exceeded in the following reporting period.	DIS is responsible for MW Support such as deployment of code patches. IBM will assist in providing support, i.e. patch recommendations and verification testing prior to deployment in Production. Recommend that this SLR be revised to reflect that delineation of responsibilities.
Target	Prepare the patches to the production environment (aligned with DHS' release process) within 30 days of the vendor's release			
Measurement	(Date patch/fix is released to production) - (Date the vendor releases the patch/fix (unless prior approval))			
SLA Reporting Period	Per release			
SLR Measurement of Non-Compliance	Days late			

O7-8 – Response to Patches and Fixes - Critical Security Patches		Requirement Met	Proposed Penalties	If "Clarification" is selected in "Requirement Met" Column, then clarify with proper justification
SLR Description/Objective	When COTS/software vendor release critical patches/fixes, the Vendor needs to quickly apply critical patches/fixes to the environment	Clarification	$1000/incident with total penalties capped at 5% of monthly invoice. Per 3.6.3, Vendor Management, Penalties would not be collected for the first year thereby allowing the M&O team to establish a baseline. The IBM M&O team would also have the opportunity to earn back penalties if Service Level is met or exceeded in the following reporting period.	DIS is responsible for MW Support such as deployment of code patches. IBM will assist in providing support, i.e. patch recommendations and verification testing prior to deployment in Production. Recommend that this SLR be revised to reflect that delineation of responsibilities.
Target	Prepare the critical patches to the production environment (aligned with DHS' release process) within 5 days of the vendor's release			
Measurement	(Date critical patch/fix is released to production) - (Date the vendor releases the critical patch/fix (unless prior approval)			
SLA Reporting Period	Per release			
SLR Measurement of Non-Compliance	Days late			

O7-9 - DHS Enhancement Request Response Time		Requirement Met	Proposed Liquidated Damages Amount	If "Clarification" is selected in "Requirement Met" Column, then clarify with proper justification
SLR Description/Objective	After DHS decides to enhance the IE-BM System, the Vendor must respond in a timely manner	Yes	$1000/incident with total penalties capped at 5% of monthly invoice. Per 3.6.3, Vendor Management, Penalties would not be collected for the first year thereby allowing the M&O team to establish a baseline. The IBM M&O team would also have the opportunity to earn back penalties if Service Level is met or exceeded in the following reporting period.	
Target	Proposals/responses (including requirements, cost estimate, and schedule) must be received within 15 working days			
Measurement	(Time DHS requests enhancements) - (Time proposal is provided to DHS), unless pre-approved by DHS due to the scope			
SLA Reporting Period	Per request			
SLR Measurement of Non-Compliance	Days greater than target			

O7-10 - Delivery of Enhancements		Requirement Met	Proposed Liquidated Damages Amount	If "Clarification" is selected in "Requirement Met" Column, then clarify with proper justification
SLR Description/Objective	To avoid scheduling issues and potential end-user issues, all enhancements must be completed in alignment with the proposed schedule	Yes	$1000/incident with total penalties capped at 5% of monthly invoice. Per 3.6.3, Vendor Management, Penalties would not be collected for the first year thereby allowing the M&O team to establish a baseline. The IBM M&O team would also have the opportunity to earn back penalties if Service Level is met or exceeded in the following reporting period.	Target is 95% to be on schedule
Target	Enhancements deployed into production on schedule			
Measurement	(Date approved) - (Planned production deployment date (captured in the proposal))			
SLA Reporting Period	Per enhancement DDI effort			
SLR Measurement of Non-Compliance	Per day the enhancement is deployed to production after the planned date			

O7-11 – Documentation Updates		Requirement Met	Proposed Penalties	If "Clarification" is selected in "Requirement Met" Column, then clarify with proper justification
SLR Description/Objective	When changes are introduced to the system (e.g. new software is deployed) or processes (e.g. personnel changes involved in Disaster Recovery) the documentation (e.g. configuration management process, architecture) must be updated	Yes	$1000/incident with total penalties capped at 5% of monthly invoice. Per 3.6.3, Vendor Management, Penalties would not be collected for the first year thereby allowing the M&O team to establish a baseline. The IBM M&O team would also have the opportunity to earn back penalties if Service Level is met or exceeded in the following reporting period.	
Target	2 weeks			
Measurement	(Time the change is introduced) - (Time documentation is updated and updates approved)			
SLA Reporting Period	Per incident			
SLR Measurement of Non-Compliance	By day greater than target			

O7-12 - Customer Satisfaction Survey - Usability		Requirement Met	Proposed Liquidated Damages Amount	If "Clarification" is selected in "Requirement Met" Column, then clarify with proper justification
SLR Description/Objective	Customer (internal and external) satisfaction surveys provide insight into the usability of the Solution	Clarification	$1000/incident with total penalties capped at 5% of monthly invoice. Per 3.6.3, Vendor Management, Penalties would not be collected for the first year thereby allowing the M&O team to establish a baseline. The IBM M&O team would also have the opportunity to earn back penalties if Service Level is met or exceeded in the following reporting period.	We believe most usability issues would be addressed during DDI sprints, and if usability is missed it would not make sense to levy a penalty on the M&O Team. Prior to committing to the SLR, we would like to better understand the State's past experience and expectations.
Target	90% of all responses must have a satisfaction score of seven (7) out of ten (10) (or equivalent) or higher (10 being the highest score)			
Measurement	(# of respondents rating their satisfaction higher than or equal to 7) / (# of respondents received)			
SLA Reporting Period	Per survey			
SLR Measurement of Non-Compliance	% of surveys below 90% rating their satisfaction lower than seven (7) out of ten (10)			

O7-13 - Customer Satisfaction Survey - Internal Vendor/Partners		Requirement Met	Proposed Liquidated Damages Amount	If "Clarification" is selected in "Requirement Met" Column, then clarify with proper justification
SLR Description/Objective	Customer (other DHS vendors, DHS management etc.) satisfaction provide insight into whether the Vendor is partnering effectively with other vendors to provide services to DHS and its Clients	Yes	$1000/incident with total penalties capped at 5% of monthly invoice. Per 3.6.3, Vendor Management, Penalties would not be collected for the first year thereby allowing the M&O team to establish a baseline. The IBM M&O team would also have the opportunity to earn back penalties if Service Level is met or exceeded in the following reporting period.	
Target	90% of all responses must have a satisfaction score of seven (7) out of ten (10) (or equivalent) or higher (10 being the highest score)			
Measurement	(# of respondents rating their satisfaction higher than or equal to 7) / (# of respondents received)			
SLA Reporting Period	Per survey			
SLR Measurement of Non-Compliance	% of surveys below 90% rating their satisfaction lower than seven (7) out of ten (10)			

O7-14 - Disaster Recovery: Recovery Time Objective (RTO) (DHS Optional)		Requirement Met	Proposed Liquidated Damages Amount	If "Clarification" is selected in "Requirement Met" Column, then clarify with proper justification
SLR Description/Objective	DHS needs to recover the production environment in the event of a disaster without lenghtly downtime	Yes	$1000/incident with total penalties capped at 5% of monthly invoice. Per 3.6.3, Vendor Management, Penalties would not be collected for the first year thereby allowing the M&O team to establish a baseline. The IBM M&O team would also have the opportunity to earn back penalties if Service Level is met or exceeded in the following reporting period.	
Target	The system is fully functional at the back-up location within 72 Hours			
Measurement	(Time at which the production system is fully operational) - (Time the disaster recovery plan was invoked)			
SLA Reporting Period	Each disaster			
SLR Measurement of Non-Compliance	hours above the RTO before the system is fully operational			

O7-15 - Disaster Recovery: Recovery Point Objective (RPO) (DHS Optional)		Requirement Met	Proposed Liquidated Damages Amount	If "Clarification" is selected in "Requirement Met" Column, then clarify with proper justification
SLR Description/Objective	DHS needs to minimize the loss of data in the event of a disaster	Yes	$1000/incident with total penalties capped at 5% of monthly invoice. Per 3.6.3, Vendor Management, Penalties would not be collected for the first year thereby allowing the M&O team to establish a baseline. The IBM M&O team would also have the opportunity to earn back penalties if Service Level is met or exceeded in the following reporting period.	
Target	No more than 24 hours worth of data collected before the disaster is invoked can be lost (not available once the production enviornment is restored at the back-up location			
Measurement	(Time stamp of the most current data in the production system at the back-up site) - (time the disaster was invoked)			
SLA Reporting Period	Each disaster			
SLR Measurement of Non-Compliance	hours of data lost above 24 hours			

O7-16 - Additional Vendor Proposed SLRs		Requirement Met	Proposed Liquidated Damages Amount	If "Clarification" is selected in "Requirement Met" Column, then clarify with proper justification
Additional Vendor Proposed SLRs	To help the State in managing a more robust performance based contract, vendors are highly encouraged to propose additional SLRs for each of the areas as below. Vendors can add additional rows below, in this Section O.6-10, to propose any additional SLRs. O1. EEF Platform (MAGI Medicaid only) M&O Transition O2. Application M&O Requirements O3. DDI to M&O Transition O4. Modifications/Enhancements Requirements O5. M&O Turn-Over Requirements These additional SLRs will be evaluated by the State as part of value added services provided by the Vendor, during the proposal evaluation and selection process.	Clarification	$1000/incident with total penalties capped at 5% of monthly invoice. Per 3.6.3, Vendor Management, Penalties would not be collected for the first year thereby allowing the M&O team to establish a baseline. The IBM M&O team would also have the opportunity to earn back penalties if Service Level is met or exceeded in the following reporting period.	In T-13 Section 8, we discuss two additional SLRs: 1) Enhancements delivered on budget, 2) Defect removal efficiency. We welcome the opportunity to discuss the use of these in lieu of other SLRs identified by the State. We recommend no more than 10 SLRs as more than that becomes an administrative burden to track and report.

Template T-1

Maintenance and Operations Requirement Approach

Response Template RFP #: SP-17-0012

Template T-13

Maintenance and Operations Requirements Approach

Response Template

RFP #: SP-17-0012

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Maintenance and Operations Requirements Approach

The Vendor should provide a narrative overview of how the System will meet the Integrated Eligibility and Benefits Management (IE-BM) Project Maintenance and Operations (M&O) requirements. The following questions pertaining to Maintenance, Support and Operations should be answered by the Vendor.

While responding, the Vendor should reference the IE-BM SOW, the Generalized System Design (GSD) document and other technical and infrastructure documentation provided as part of the Procurement Library, to gain an overall understanding of the current application and infrastructure environment and future DHS vision.

Please use these response sections to provide specific details of the proposed approach to meeting DHS requirements in each area. Responses should, when necessary, reference requirements using the appropriate RFP Requirement Numbers from Template T-12 – Maintenance and Operations Requirements Traceability Matrix.

Responses for the M&O Requirements Approach should be highly focused on the specific requirements and should not simply provide generic or marketing descriptions of technology or product capabilities. Also, include one (1) or more diagrams where necessary that detail the proposed design and the relationships between key technical components.

1.0 Approach to EEF and Legacy M&O Transition

The Vendor should ensure that the responses to this section are in alignment with the requirements set forth in Template T-12 – Maintenance and Operations Requirements Traceability Matrix, Section O1.

DHS anticipates that the IE-BM Vendor (this RFP) will take over the current EEF M&O support from the incumbent Vendor. Additionally DHS envisions that the DHS vendor will be responsible for managing any changes and enhancements to the Legacy Systems that will be retired and replaced by the IE-BM solution.

Instructions: Describe the Vendor’s approach to transitioning the current EEF M&O responsibilities. The response should discuss the planned activities/tasks, roles required, staffing requirements (DHS, incumbent vendor and the Vendor by labor category and estimated hours) and approach to communicating/interacting with the incumbent vendor and DHS stakeholders required to ensure the transition occurs smoothly. For each task describe the type of resource required/skills, resourcing level/effort and include a justification for the staffing level. This is required to assist the State in understanding the vendor’s approach and level of effort for the transition. The response should also include a discussion of the inherent challenges and how the Vendor has overcome the challenge in the past.

At a minimum, this should include a discussion of the following areas:

- Transition planning
- Knowledge transfer approach
- Approach to coordinating roles and responsibilities between all stakeholders. E.g. IE-BM Vendor, Incumbent EEF Vendor and the State)
- Approach to transition progress milestones/check-points

- Quantifying the transition risk
- Approach towards readiness activities including checklists for completing transition

Introduction

To start, IBM has over 30 years of experience as a M&O provider; we have dedicated Application Management Services (AMS) and are the world's largest provider of M&O services for thousands of clients. IBM further augmented our experience by teaming with Northrup Grumman, DHS's current ISS vendor. In doing so, IBM was able to combine the unique capabilities of both companies to create an unrivaled M&O team; herein referred to as the IBM team for DHS.

IBM M&O experience:

- Demonstrated success transitioning and supporting Cúram-based eligibility systems in NYC, Missouri, and South Carolina
- Mature M&O processes that minimize risk and introduce efficiencies
- Lower cost delivery using our US Delivery Center located in East Lansing, MI

Northrup Grumman M&O experience:

- State's Lead for ISS support and instrumental to the development of enterprise procedures such as the JOPM.
- Long and proven M&O track record at DHS, as the legacy ISS vendor.
- Cúram-trained staff located in Little Rock.

To address the immediate need to transition the Eligibility and Enrollment Framework (EEF) system, the IBM team designed a transition plan focused on a quick, efficient, and effective transition, based on our understanding of scope. This further benefits DHS by minimizing the need to retain the current vendor and eliminating redundant support costs. Our approach has been designed to achieve the following during this crucial phase of the project:

- Meet State's objectives of transitioning current solution with a minimal risk to day-to-day business operations.
- Reuse leading practices and transition experiences with Cúram-based implementations.
- Provide the basis for long-term relationship between the State and IBM team.
- Build an effective M&O organization that is able to meet the State's future needs.
- Post transition, the IBM team will provide and handle the M&O for the current EEF solution.

IBM will lead EEF M&O transition through a successful transition of people, processes, tools, and technology using our signature Transition and Transformation Methodology (TTM), which has which evolved through successfully executing hundreds of transitions; TTM will lead the State to complete a smooth transition

The first step of delivery will be to transition the M&O services from the current EEF M&O support incumbent vendor to IBM's M&O team. Since IBM and our teammate, the Northrop Grumman Corporation, are already delivering services to EEF project, we will leverage the existing knowledge in terms of application, project governance, and existing infrastructure.

IBM transition approach

IBM has two decades of transition experience, delivering successful transition for over 300 clients annually. The size of these transitions varies from 10 to 1500 full-time employees (FTEs). Our transition approach uses well-defined processes and deliverables in delivering successful, cost effective, and non-intrusive transitions. The transition plan has well-defined phases with clear entry and exit criteria, adept at transitioning work directly from client organizations to IBM and with the transition of work from incumbent suppliers to IBM. IBM understand proactive communication is critical, and we will apply our experiences in vendor transitions to reduce risks and improve quality of transition. The following graphic depicts how we have used global lessons learned to establish critical success factors for transition:

The details of our methodology and tools are provided in the following section.

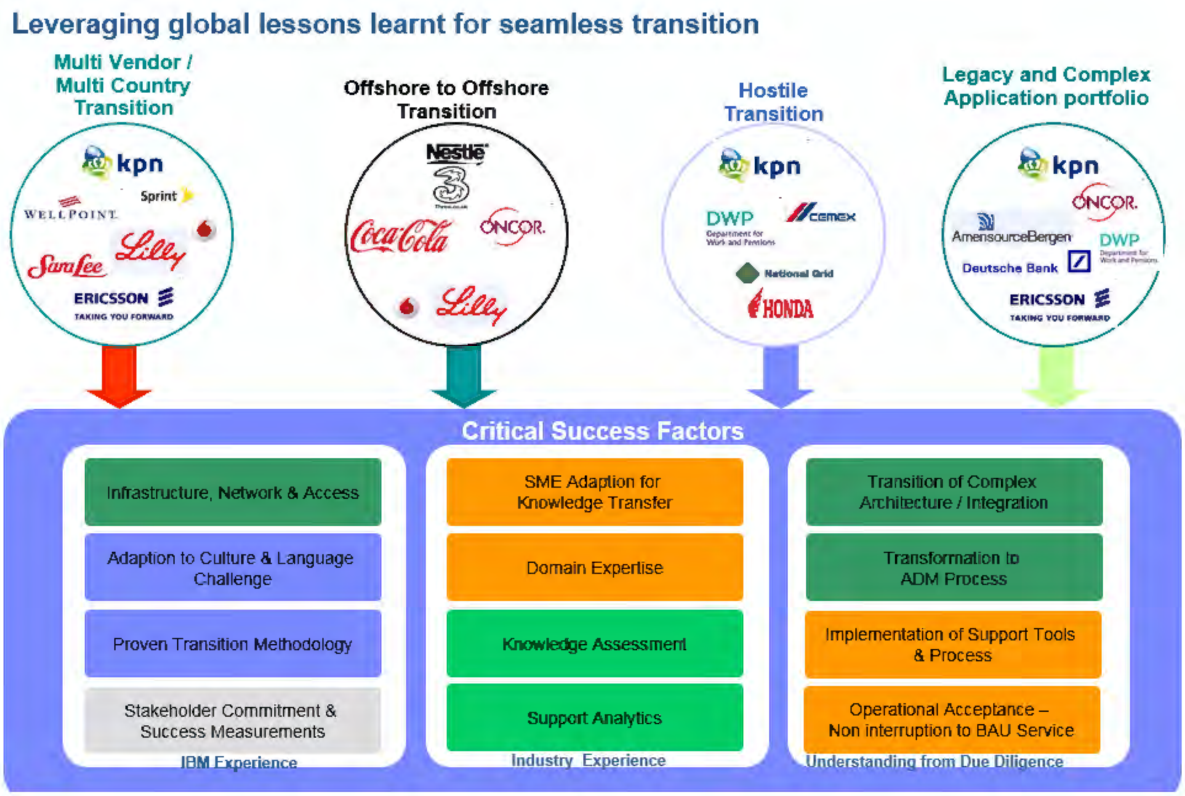


Figure 1: Leveraging lessons learned to create critical success factors for transition

The following list includes some of the key drivers that help to drive successful transitions from incumbent suppliers:

- Involve third-party vendor representative in transition governance.
- Identify SMAs from third-party vendor, who will be appropriately committed to the transition activities.
- Establish up-front agreement with third-party vendor on transition plans, quality gates, and timelines.
- Encourage joint planning with third-party vendor regarding business-critical timelines and activities to avoid interruption to the State's business.

- Implement proactive change management and critical resource planning, incorporating quality checkpoints to verify that milestones are effectively met during the phases of transition.
- Perform formal quality gates reviews and joint sign-off at completion of each phase.
- Sign non-solicitation and disclosure agreements with incumbent before the knowledge transfer (KT) start date.

Transition methodology

Our approach to transition mainly consists of two work streams:

- Application transition (AT)
- Services transition (ST)

Application transition (AT)

AT uses a set of knowledge transfer processes that provides for a smooth and effective transition of the EEF application from the State's legacy vendor team to the IBM M&O team.

IBM will group the various system components into multiple, staggered partitions based on application assessment criteria. This includes consideration of various skills and technologies involved in this transition.

Our transition approach for the State reduces risk through structured sub-phases with distinct objectives and quality review "gates" for the team members receiving the EEF Knowledge Transfer.

IBM's NextGen transition methodology, based on Agile framework, will be followed to transition application support activities from incumbent vendor resources to IBM, shown in the following graphic:

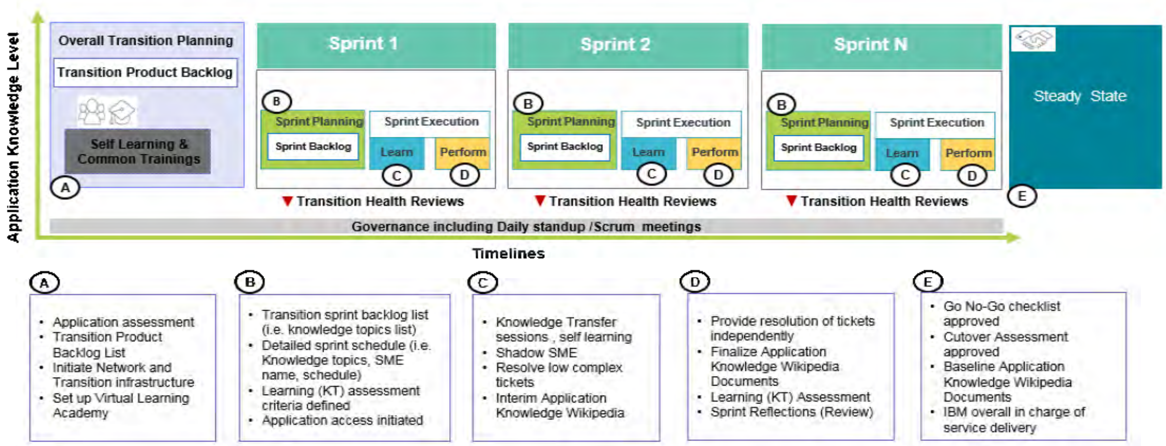


Figure 2: IBM's NextGen transition methodology

The following table includes activities to be performed in each phase along with entry exit criteria:

Table 1: Activities and exit criteria for each phase of transition

	Overall transition planning	Transition sprint planning	Transition execution
Activities	• Perform application assessment and staffing analysis. • Understand business process relationship. • Understand FTE and skills requirement per knowledge area. • Understand incumbent team organization, EEF support, and skills profile. • Initiate network and transition infrastructure and application access.	• Decompose product backlog list (sprint 0) to sprint back log list (SBL in sprint one). • Develop transition sprint schedule (in sprint 1) • Staff resources • Implement network and remote knowledge transfer (RKT) infrastructure. • Define knowledge transfer assessment criteria. • Initiate application access.	• Grant application access. • Initiate self-learning - reading project documentation and on-the-job training. • Provide resolution of production incidents, service requests, and problem tickets. • Finalize application knowledge wiki. • Identify automation use cases. • Close knowledge transfer gaps. • Complete knowledge transfer assessment. • Understand SLRs and KPIs. • Conduct sprint review and retrospective meetings. • Gain transition project completion sign-off.

Services Transition (ST)

ST establishes processes, tools, and procedures to adequately equip the delivery team to smoothly execute their roles and responsibilities in Steady State. The following graphic shows the journey from ST to Steady State:

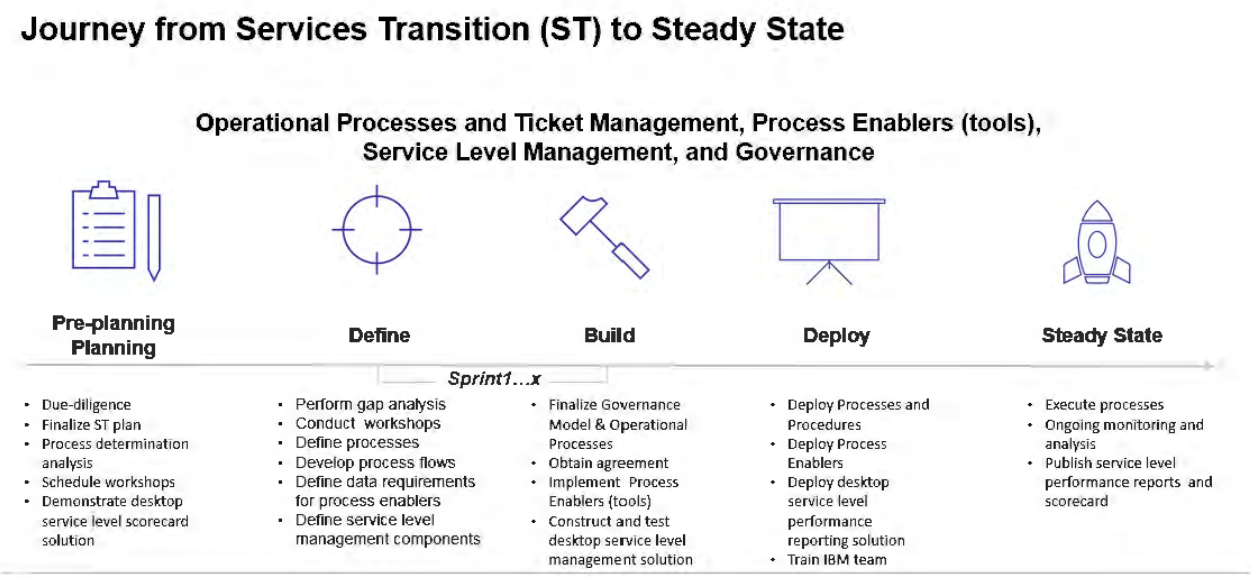


Figure 3: Journey from ST to Steady State

AT for existing EEF M&O

AT uses a set of knowledge transfer processes that provides for a smooth and effective transition to provide M&O support for the existing EEF solution from the current incumbent vendor team.

The IBM team will provide staff with the appropriate skills set to meet or exceed the expectations for tasks associated with the ongoing M&O support for EEF. Methods and tools are facilitators but, at the end of the day, people deliver solutions. The IBM team understands that for EEF maintenance to be successful, it is critical that we put forward a strong team with the right mix of skills to deliver an integrated solution that promotes automation, user friendliness, low maintenance, and coordinated service to deliver.

IBM’s staffing strategy for EEF is widespread and draws on a combination of deep resource pools from our application innovation practice and our Cúram competency consulting practice.

The staffing model was estimated based on current knowledge about EEF and other artifacts provided in the RFP, and per the RFP, the IBM team would fill the following roles:

- Cúram Architect
- Business Analysts
- Cúram Developers
- ESB Developers
- Report Developers
- Testers
- Database Analyst (DBA)
- Operations Lead
- Operations Specialists

- Build and Configuration Management (CM) Specialist

Based on the estimated staffing, IBM proposes an overall 12 weeks transition that includes two weeks transition planning and ten weeks of knowledge transfer for the EEF M&O. The following graphic demonstrates our total 12-week transition plan, shown below.

The IBM team understands the existing EEF solution in production currently provides only Modified Adjusted Gross Income (MAGI) Medicaid functionality using the IBM Cúram Health Care Reform (HCR) module

Our transition approach for the existing EEF M&O includes the following components:

- Transition of custom development done by the incumbent on the Cúram product.
- Transition of critical interfaces and other Web Services that are in scope of MAGI functionality.
- Reduced risk through structured sub-phases with distinct objectives and frequent checkpoints or milestones.

Transition planning: Overall transition planning and sprint planning

Overall transition planning (OTP) addresses the set-up of the transition project governance approach, creation of the high-level transition plan called as Project Definition report, initiation of network connectivity provisioning, set up of tools to support KT activities, and preparation of the transition Product Backlog List (PBL).

The product backlog list consists of a prioritized list of the KT topics, activities, and items related to transferring the in-scope application knowledge from the current incumbent team to the IBM team. The associated activities could be categorized by application name, customized components, group of EEF components, business area, and critical transition-related activities. The number of items in the product backlog list will depend on the overall size of the scope for application transition.

OTP shall consist of the following actions:

- Set up transition project governance approach.
- Create and deliver the EEF M&O Transition Plan Deliverable.
- Initiate network connectivity provisioning.
- Set up tools for supporting KT activities.
- Identify EEF M&O specific on-boarding and training requirements.
- Maintain policies and procedures to help governance activities related to security and privacy.
- Identify stakeholders and subject matter advisors (SMAs).
- Prepare communication and risk management plan.
- Prepare go no-go checklist.
- Define KT assessment criteria.
- Prepare Transition Product Backlog List (PBL).
- Define entry and exit criteria between transition sprints.

- Create Microsoft Project Plan for the schedule.

Transition sprint planning (Sprint 1….N)

Transition sprint planning is the first step for every sprint. The number of sprints will be based on the transition timeline and the PBL. During this step, the items identified in the PBL for the specific sprint will be refined and decomposed as Sprint Backlog List (SBL). Access will be provided to specific IBM personnel who require it. The SBL will contain the list of tasks associated with KT of an application for the specific sprint.

The following list includes some of these tasks:

- Identification of knowledge repositories.
- EEF application access process.
- EEF application overview and business overview.
- EEF application architecture and design.
- EEF components and interfaces.
- EEF functional flow and data flow.
- Known issues.
- Daily, weekly, monthly, quarterly, and yearly routine activities.
- Problem analysis, bug fixing, and testing.
- Work on day-to-day production support tasks.
- Environments and deployment.

The finished version of the SBL will have a timeline for the line items. Sprint exit criteria will be defined during transition sprint planning. The duration of a sprint is planned for three to four weeks.

KT approach

Transition sprint execution (Sprint 1….N)

During this phase, the tasks identified in the SBL will be executed as per the schedule. This will include IBM resources going through KT sessions covering the EEF M&O tasks identified in the SBL, shadowing routine tasks performed by incumbent resources, and performing the same tasks independently to demonstrate understanding and capability. As a key outcome, the IBM team will develop the application knowledge wiki that will contain the procedures to support the application and will be posted in the knowledge repository agreed during the OTP phase.

Milestones and checkpoints tracking

The first baseline version of these documents will be delivered at the end of sprint and will be further maintained throughout the contract period. IBM team members will reveal their understanding through presentations to the current incumbent vendor SMAs and State and DHS Manager and Lead for the specific application, called as “playback”.

Periodic assessment through feedback surveys will be obtained from the current incumbent vendor SMAs and State and DHS Manager and Lead.

The assessment will assess the quality and completeness of the IBM team's participation with the following elements:

- KT sessions.
- Playback sessions.
- Question and answer sessions.
- Application knowledge Wiki documentation.
- Hands-on tasks performed (such as responding to a production ticket, development activity, or a simulated event).

The sprint will be governed through a daily standup meeting and a weekly status review meeting called Application Transition Review Team meeting (ATRT). The daily standup meeting will cover quick review of day-to-day progress. The weekly ATRT will provide the status of sprint progress, review risks, issues, and action items. An integrated weekly status reporting along with the ST work stream will be conducted to present the overall transition status on a weekly basis. This meeting is called Transition Review Control Board (TCB).

Transition sprint review meetings and toll gates will be conducted towards the end of each sprint to assess if the initially-agreed assessment criteria are met. A Sprint will be deemed complete, when the tasks in the SBL are completed and the sprint exit criteria are met. This includes completion of the planned KT sessions, approval of the first baseline, release of application knowledge wiki documentation, and demonstration of IBM's readiness to begin services as demonstrated through the hands-on tasks targeted to be completed during the sprint. A sprint-level transition completion report will be prepared to list of the completed and the agreed to open activities with an owner identified for resolution during Steady State. Open items to be resolved during Steady State require State and DHS approval. IBM will conduct a sprint retrospective meeting at the end of a transition sprint to identify improvements that should be implemented in the subsequent sprints.

DHS Customer Business Knowledge Index (CBKI)

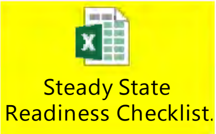
We will utilize a DHS Customer Business Knowledge Index (CBKI) which is a knowledge assessment framework that the M&O team will use to evaluate the knowledge and skill level of the IBM team throughout the transition. The objective of knowledge assessment is for the State and IBM to jointly measure the increase in knowledge levels of our resources using transition statistics, reporting, and the knowledge assessment methods. The tool helps consolidate evaluation results for large cross functional teams, through extensive lists of dimensions grouped by knowledge area. KT gaps and action plans become easier to identify and pursue.

Transition exit

IBM and DHS will review and sign-off on the overall application transition completion when the sprints are complete, there are no further items left in the PBL, and the go no-go checklist is approved by State and DHS management. This means that IBM has demonstrated readiness to begin providing the Steady State services.

Steady State readiness checklist

The following spreadsheet includes our Steady State readiness checklist: (Appendix A)



[O1.4 h]

Planned transition timeline for existing EEF M&O

The proposed transition plan is aimed at taking over the support of the already implemented EEF M&O services from existing the incumbent vendor to the IBM Application Management Services (AMS) team.

The IBM team understands that the existing EEF (MAGI Medicaid) uses 'Cúram Citizen Portal, which includes the Application Services for Cúram SPMP Package (CGISS and HCR), Cúram Workflow, Cúram Rules Engine, and WebSphere.

IBM is proposing a solution as the prime and Northrop Grumman as our Teaming Partner. The Contract is planned to be signed by December 2017. Actual transition is planned for 12 weeks including two weeks of OTP. Transition is planned to start from January 1, 2018 with two weeks of OTP, followed by three sprints of three, four, and three weeks respectively, estimated to start the Steady State starting on Mar 26, 2018.

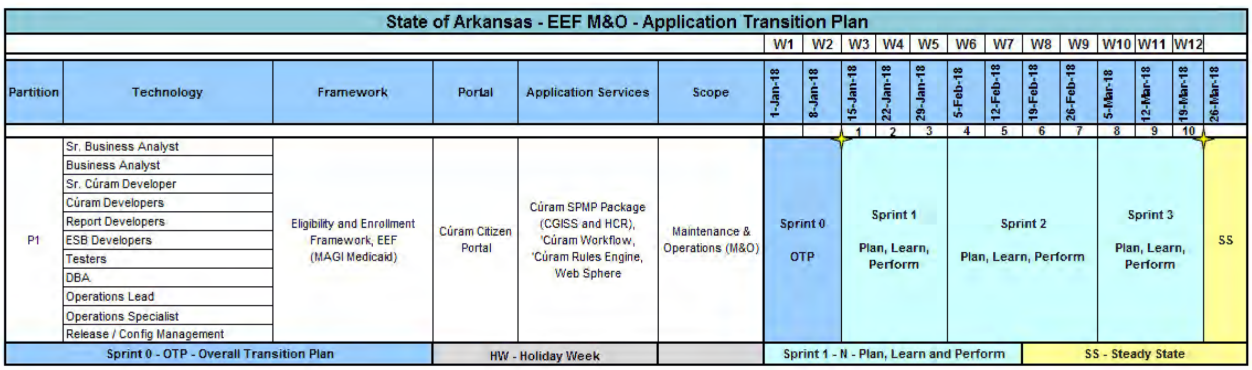


Figure 4: Estimated Transition plan

[O1.4b]

Transition milestones, checkpoints

The following table includes transition milestones:

Table 2: Estimated Transition milestones

Transition Milestone	Date
Service Commencement + 2 weeks	12-Jan-18
Service Commencement + 12 weeks	23-Mar-18

[O1.4 g]

Transition governance

IBM will set-up and actively manage a separate governance structure for transition. The objective is to assess that the transition progresses through each of the sub-phases with well-defined success criteria to build transparency and minimize surprises. The IBM transition team is a vital subset of the overall management team proposed for existing EEF M&O transition. The transition team will be organized by sub-projects or modules to facilitate consistency throughout the transition period. State of Arkansas, DHS, and your existing vendor team will play a critical role in transition, bringing the experience and knowledge that are essential to success.

The Transition Manager, who will be responsible for the successful transition of existing EEF M&O services, will lead the transition team. This governance structure will enable IBM and DHS to establish clear guidance for the transition of services and for the control of critical issues. At the appropriate level of this structure is an Executive Steering Council, run jointly by IBM and DHS and established to oversee engagement strategy, set objectives, review progress, and facilitate resolution, as required. The following figure demonstrates our multi-tiered transition governance approach that establishes robust governance procedures for Steady State:

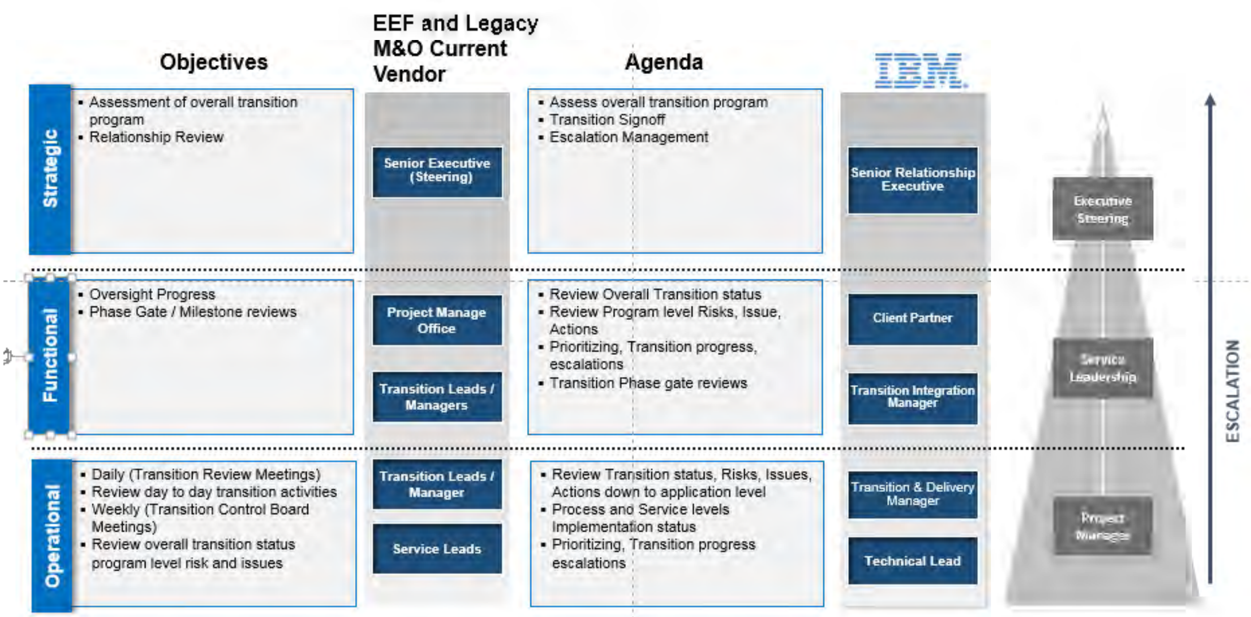


Figure 5: Our multi-tiered approach to transition governance

Approach to coordinating roles and responsibilities between all stakeholders

DHS has already made a significant investment in implementing an eligibility determination solution that supports MAGI Medicaid using IBM's Cúram platform's HCR module. Due to this, IBM has a better understanding of their environment, overall processes, roles, and responsibilities.

Additionally, IBM's team is very accustomed to working in a global model using collaborative techniques, tools, and knowledge management to become highly efficient and effective very quickly.

The current vendor team supporting EEF M&O is a critical part of the transition team. A successful transition will require dedicated vendor team resources, including a full-time transition lead and several FTEs, who each lend part-time support to the transition.

The following table includes anticipated roles from both IBM, as described previously, and DHS or existing vendor team roles during the transition period:

Table 3: Anticipated roles for transition

Organization	Role	Responsibilities
IBM	Transition Integration Manager (TIM)	• Provides program management leadership and is accountable for the overall transition.
	AT Manager	▪ Provides project management support for the assigned partition(s) within AT. • Facilitates sprint planning including KT topics and scheduling into a sprint backlog list, daily or weekly status calls.
	Infrastructure Specialist	• Sets up network and application connectivity and establish the infrastructure to support RKT.
	ST Manager	▪ Provides project management support for ST and deliverables. • Establishes operational processes, tools, and service level reporting.
	Engagement Director and Executive	▪ Serves as the primary point of contact with DHS leadership, governance bodies, and other State Executive Sponsors for activities related to contract administration, overall project management and scheduling, correspondence between DHS and the current vendor, dispute resolution, and status reporting to DHS for the duration of the contract. ▪ Is authorized to commit the resources of the vendor in matters pertaining to the performance of the contract. ▪ Is responsible for addressing issues that cannot be resolved with the current vendor Operations Manager. • Is responsible for IBM subcontractor relationships
	Delivery Project Executive (DPE) or Operations Manager	▪ Responsible for operational aspects of service delivery and providing process experience. The DPE supports the Project Executive in maintaining the business relationship with DHS and existing vendor team and verifying customer satisfaction. ▪ Serves as a liaison with DHS for M&O activities. ▪ Is available and responsive to State requests for consultation and assistance. ▪ Is responsible for establishing and maintaining a positive client relationship. ▪ Provides timely and informed responses to operational and administrative inquiries that arise.

Organization	Role	Responsibilities
		▪ Manages staff assigned to day-to-day M&O activities. ▪ Coordinates and manages enhancement requests or changes to the solution. ▪ Plays an active role in day-to-day management of the account so as to be knowledgeable and aware of issues, concerns, and requirements. ▪ Meets with DHS staff or persons that DHS may designate on a regular basis to provide oral and written status reports and other information, as required. • Manages the relationships with IBM subcontractors and IBM team member vendors.
	Technical Lead	▪ Provides detailed EEF application knowledge in support of complex application issues and incidents. ▪ Reviews potential changes (configuration, warranty fixes, enhancements) to the solutions from a technical perspective and provides technical design and assessments. • Is available to the project team for consultation on future enhancements (changes to achieve strategic objectives, implement a new program).
	Security Expert	▪ Architects changes to the application solution's security. ▪ Maintains security documentation. • Validates solutions meet applicable security regulations.
State of Arkansas and DHS Leadership	Project Manager	DHS will provide a Project Manager to lead all M&O activities including the following: • Coordinates all M&O activities. • Monitors performance against SLAs. • Provides an escalation point for operational activities (help desk issues, change, release, and configuration issues, capacity planning). • Gains approval for all system enhancements. • Monitors progress on all enhancement projects. • Leads all transition activities. • Handles contract management. • Coordinates technical resources.
	Implementation Manager	• Is full time, except when supporting the IE-BM project.

<table>
<tr><th>Organization</th><th>Role</th><th>Responsibilities</th></tr>
<tr><td rowspan="5"></td><td></td><td>• Coordinates all of the IBM's change, release, and CM activities with State processes.</td></tr>
<tr><td>Infrastructure Coordinator</td><td>• Assists with the definition of secure links between the IBM and EEF M&O networks.</td></tr>
<tr><td>DHS or current incumbent SMAs</td><td>• Conducts KT activities (training, guiding, reviewing) to facilitate KT to IBM resources.</td></tr>
<tr><td>DHS Functional Tower Manager</td><td>• Works with the IBM Application Transition Manager(s) for a specific tower in developing a transition PBL and a SBL.</td></tr>
<tr><td>Process SMA(s)</td><td>• Assists IBM in setting up operational processes, tools, and service level reporting.
• Approves deliverables.</td></tr>
<tr><td colspan="3">Since there are dependencies between the M&O support to be provided by IBM and DHS' infrastructure it is assumed that DHS will provide the following resources:</td></tr>
<tr><td></td><td>DIS Project Manager</td><td>• Is full time, except when supporting the IE-BM Project.
• Leads State's infrastructure-related activities.</td></tr>
<tr><td></td><td>DIS Security Lead</td><td>• Is part time.
• Supports the IBM and applicable third party security activities.</td></tr>
</table>

Key DHS EEF M&O existing support team responsibilities

Both IBM and the existing EEF M&O vendor are critical parties required for the success of the transition. The current incumbent vendor support team should expect to fulfill the following responsibilities across the transition sub-projects:

- Secure and mobilize transition resources per the transition plan.
- Provide existing documentation for the in-scope EEF application.
- Participate in KT activities.
- Participate in post-handoff support, potentially traveling to IBM delivery locations, as agreed to in the final transition plan.
- Provide technical assistance to facilitate the secure connection between the IBM and EEF M&O networks.

It is understood that there are key tactical issues in the current EEF platform and the current implementation vendor is already working to fix those from 2016. Hence, IBM requires that DHS ensure that the current vendor team will fix all those defects, hot fixes, and wrap them up with a report on fixed known issues.

[O1.4 c]

Quantifying transition risks

IBM, if granted, will start this engagement with an identified set of risks across each phase. As a starting point to define the risk management plan, we will conduct a Risk Identification Workshop with State of Arkansas, DHS, and current vendor management early in the transition phase.

Effective risk management during transition will be a key for success and is intrinsic to how IBM manages transitions. IBM uses a standardized risk management process and believes in transparency. IBM will adopt a stringent, unwavering approach to risk management, using technology and a structured set of tools and proven processes to keep risks from jeopardizing DHS business.

Owners will be assigned to the identified risks, and they will be responsible for conducting risk impact analyses, establishing mitigation and containment plans, and conducting risk response planning. Together, State, DHS, current vendor, and IBM will institute a process of periodically monitoring these risks, taking necessary mitigation actions and updating the risk plans.

Risks will be captured, as they are identified over the course of the transition, using an agreed-on risk management system or the DHS project management office (PMO) risk management system. Formal risk reviews will be performed both at prescribed points and on an ad-hoc basis. IBM's risk management approach enables reporting, assessment, assignment, and monitoring of resolution and action plans throughout the project. It will also provide for a smooth transfer of open risks or issues to the on-going support team at transition exit. IBM's transition risk management process is shown in the following figure:

Figure 6: Transition risk management process

IBM's PMO will take responsibility for risk reporting and risk and issue monitoring. It will act as a central point for the coordination of the integrated implementation, communications, and change management plan. At a higher level, the proposed governance structure will provide effective management of the transition and associated activities and their inherent risks. This structure provides the route for the risk escalation process, where required, and an appropriate forum to develop a credible resolution plan. The following list highlights the points required for mitigation:

- Schedule Risk Identification Workshop early.
- Document quality gates and constraints clearly.
- Identify risks at program, project, and application levels.
- Obtain management focus and create transparency to mitigate issues.
- Regularize weekly risk reporting and review.
- Assess and refine continuously.

Based on our analysis of the DHS requirements and our past transition experience, IBM has identified the following potential risk areas and proposed mitigation plans for this transition. This list will be further updated during the Risk Identification Workshop.

Table 4: Transition risks

Transition risks	Owner	Size, impact, probability	Mitigation approach
Transition from vendor: Lack of structured application knowledge, lack of cooperation, and desire to retain work and scope.	DHS	High, High, Low	– Transition tools are in place. – Leverage of existing contracts. – Plans for structured meetings with vendor management to obtain necessary knowledge. – "Backup SMAs" from State of Arkansas, DHS, and current vendor retained organization.
Transition from employees Low SMA morale and lack of cooperation.	DHS	High, High, Med	– Ramp up accelerated. – Leverage of transition tools. – "Backup SMAs" from State of Arkansas, DHS, and current vendor retained organization.
Documentation not available at the time of KT,	DHS	High, High, Med	– State of Arkansas, DHS, and current vendor to commence gathering and consolidating documentation in advance of transition. – Activities included in the transition plan to create and update documentation in time for Steady State.

Transition risks	Owner	Size, impact, probability	Mitigation approach
Adoption of change, people, tools, and process,	DHS	High, High, Med	– Communication plan created with understanding of role and responsibilities, tools, and process education requirements. – Sponsorship and active support of State of Arkansas, DHS, and current vendor Executive team to encourage and motivate DHS successful change management.

Table 5: Post transition risks

Steady State risks	Owner	Size, impact, probability	Mitigation approach
Understanding of roles and responsibilities of impacted or required third parties is ineffective in validating roles are performed as designed.	DHS	High, High, Low	– Document of understanding in place with impacted or required third parties. – Separation of Duties Matrix completed. – IBM on-boarding package including orientation to State of Arkansas, DHS, and current vendor and IBM processes, people, and tools, reporting and governance.
Applicable parties are not active members of the governance model.	DHS	High, High, Low	– The management process should be: ○ Flexible to accommodate changes and often-unpredictable IT requirements. ○ Equitable so that required parties participate per their responsible areas – Engagement of the right team members at the right activities, allowing participants at the various levels of the organization to be optimally effective.
Challenges in resource demand.	DHS	High, High, Low	– Prioritization criteria established. – Weekly, monthly review of priorities and deployment of resources to be used most effectively. – Development and release plan to forecast spikes in workload.

Steady State risks	Owner	Size, impact, probability	Mitigation approach
			– State of Arkansas and DHS strategic planning and forecasting of projects shared with IBM, so together, we can plan the demand of skilled resources, up and down.
Applicable parties not aware of status, progress, and assignments.	DHS	High, High, Low	– Communication plan and change and release Plan are established and followed. – Governance model is adhered to.

[O1.4 g]

Update and develop EEF system M&O documentation after migration from EEF M&O vendor to IE-BM vendor

A repository of EEF and IE-BM documentation will be maintained and will consist of operations procedures, training guides, services- and software-related documents, and existing user documentation specific to the EEF application's environment. Also, documentation created by IBM during transition, application knowledge wiki and Desktop-to-Desktop (D2D) recordings, will be maintained in the repository and used to perform on-going training over the term of the contract.

To manage EEF and IE-BM's knowledge base, IBM will employ our Knowledge Management System (KMS) tool. KMS is a web-based tool, which provides an integrated collaborative approach to knowledge management. This tool will support features such as forums, blogs, and EEF and IE-BM team rooms, which enable a collaborative team environment and contribute to keeping content current and relevant. KMS maintains versions of content and allows users to export and publish content as documents in various formats including MS Word and PDF. Both the State, DHS, and IBM will be able to access and update content in KMS, and KMS can be configured and maintained in a secure environment as mutually agreed-to by State and IBM.

The KMS tool contains the following features:

- Management and publishing of content (version control, document export to word and PDF).
- Subscription to e-mail notifications and RSS feeds to keep up-to-date with content changes.
- Application information collection templates (application information documents, modules, interfaces, FAQs, how-to, trouble shooting).
- Knowledge transition framework.
- Automatic generation of application information documents from application content.
- Review and approval of workflows.
- Advanced search engine.
- Knowledge mapping and context and meta data management (tagging, hyper-linking content, page hierarchies).
- Custom reporting on content.

- Web usage analytics.

The following key benefits of KMS will bring value to DHS and the State:

- Structured approach to maintaining application knowledge.
- Collaborative development of the knowledge base and retention of the collected knowledge.
- Rapid training of new staff and cross-training of existing staff to expedite productivity and reduce the risk associated with staff turnover.
- Ready access to knowledge assets.
- Demonstration of procedure compliance.
- Scalable content development using a “knowledge factory model,” which defines authoring and content standards.
- Seamless integration of the KMS framework into the standard work environment to speed adoption and institutionalization.

[O1.6]

Service Transition

Service Transition (ST) establishes processes, tools, and procedures to adequately equip the delivery team to smoothly execute their roles and responsibilities in Steady State.

ST also establishes the governance model, operational processes, service levels, operational reports, and tools to support and manage performance of the IBM AMS support team in Steady State.

Program governance: The IBM team understands the existing project governance and the objective of this step it to establish a mutually acceptable governance model, developing processes for contract management, financial management, performance management, relationship management, and security management (access management plan, workplace security plan, on and off boarding process document, and security plan including the risk management plan). Additionally, meeting charters and management reports are defined.

Program governance establishes the continuous process improvement framework that covers maintaining solution M&O process documentation with approved process changes and improvements.

Operational process: The IBM team performs a gap analysis on the current processes in place against IBM’s ITIL-based processes and leading practices. Recommendations are reviewed with the objective to establish a set of operational processes including incident management, problem management, production change management, and work request management.

Operational reporting and management system: Operational reports are established to identify and isolate significant incident variances in ticket volumes, backlogs, and closure times (against SLRs, pre-penalty). The standard components are metrics of logged, closed, and backlog tickets, trend analysis, aged open tickets, and aged closed tickets with average mean time to resolve (MTTR).

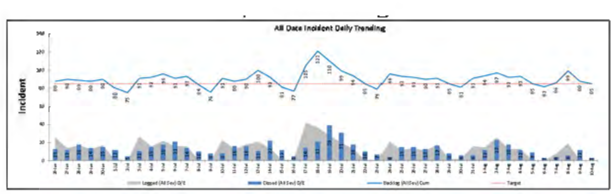


Figure 7: Trend analysis

Service levels: The basic methodology, which is outlined in the service level management work stream, is to implement the following components:

- Measurements and data sources are defined.
- Data fields are mapped.
- Data extract files are defined and manual data collection files are defined.
- Files are loaded into the IBM metrics tool, and scorecards are developed and tested.
- Support and training are provided to verify the first set of metrics reports out of IBM metrics tool are accurate and approved by IBM and State and DHS.

Processes and operations

Operational processes implement the core foundation set of delivery service management processes. The transition team will bring IBM's leading practices in each process area described below and will work with DHS to define how these processes fit into the existing delivery environment, as required. The process definition will establish the roles, tasks, touch-points, and hand-offs of how the existing incumbent vendor and IBM interface with each other.

As a note, the structure for the processes includes: Overview and definitions, roles and responsibilities, process flow, process narrative, and Policies (severity definitions, requirements for performing formal RCAs, criteria for closing tickets).

Training materials will be developed covering the processes, related service levels, and related tool usage. Training will be planned and delivered. Attendance and understanding will be tracked. The following list includes descriptions of IBM operational processes:

- **Incident management:** Incident refers to an event that is not a part of the standard operation of a service and that may cause an interruption or a reduction of that service. The incident management process defines the steps and activities followed to resolve the incident and return the service to normal operations. Escalation and communication are defined for major incidents.
- **Problem management:** The problem management process identifies the root cause of repeating errors or incidents and provides permanent solutions to remove these errors.
- **Production change management:** This is the process to document, approve, and monitor changes introduced into the EEF M&O production environment by the IBM team. A change is regarded as a modification or addition to the software, environment, or related documentation. This process describes standard methods and procedures for implementing changes with a minimum adverse impact on IT services, preventing change related incidents.
- **Work request:** This is the process to take in work (enhancements), estimate the effort, and get it authorized by DHS before the IBM team initiates the work.
- **Deliver work:** This process defines the activities, artifacts (design document), responsibilities, and touch points (design review) for performing work.
- **Work classification guide:** The work classification guide will document each type of work (bug fix, maintenance, enhancement) coming into the IBM AMS or M&O delivery organization. Work classification considers the characteristics of AMS or M&O-related business to validate the recurring, distinct work types and the technical work pattern appropriate for each. This is key to applying the correct process to manage and engineer

each type of request and to facilitate consistent reporting, tracking, and quality assurance for work requests.

[O1.2, O.1.3, O1.5, O1.6, O1.7, O1.8, O1.9c]

Application M&O Plan

The Application M&O Plan is the capstone document for the transition; it is a logical set of plans, schedules, processes, tools and reports to operationalize and manage the support services. The Application Transition, Services Transition and the Delivery Team contribute to the Application M&O Plan. The following is a brief description of the services to be included in the plan and the contributing transition work streams.

a. Help desk and incident/problem management – Processes, policies and reports are established during ST, Escalation, support team structure and reporting cadence are established by the Delivery Team.

b. Root Cause Analysis- Root Cause Analysis (RCA) process, RCA template and training are provided by ST. RCA team members and reporting is provided by the M&O Team

c. System monitoring – Monitors, alerts, parameters/thresholds and tool configurations are documented for the M&O Team.

d. User account management – User account management will be primarily addressed through the fulfillment of requests.

e. Security administration – The Data Security and Privacy Plan and the establishment of the Separation of Duties matrix provides the framework for security administration.

f. Database administration Monitors, alerts, parameters/thresholds and tool configurations and schedule of activities and Service Catalog items (e.g., restore test databases) are documented for the M&O Team.

g. Break-fix – Processes, policies and reports are established by ST, Escalation, support team structure and reporting cadence are established by the M&O Team.

h. Change and release management – Processes and policies are established by ST, Change Boards to establish release content and approve changes for promotion into production are established by DDH and the Delivery Team. Training (initial and ongoing) of M&O and State staff – Initial training requirements are defined by DDH, IBM DS&P and ST. The Training Plan is defined during ST. On-going training is managed and tracked by the Delivery Team PMO.

i. Configuration Management – The existing configuration management process and tool usage will be in scope of the Knowledge Transfer and refined and formally documented by the Services Transition and Delivery teams.

j. Standards and processes to describe the Vendor’s approach to concurrent development code streams needed – The Delivery Team will be primarily responsible for establishing controls and processes for concurrent development. The establishment of Release Management and the Change Control Board are expected to reduce the concurrent development requirements through the planning of release content,

k. Performance Management and DR Planning - The M&O Team will support and participate in the regularly scheduled DHS/DIS meetings which address IE-BM Performance and DR Planning.

l. Capacity Planning and Technology Refresh - The M&O Team will support and participate in the regularly scheduled DHS/DIS meetings which address capacity and technology refresh requirements.

m. Data Retention and Archiving – The M&O Team will work with DHS to update the State's data retention and archiving policies.

[O1.11]

2.0 Approach to Application Maintenance and Operations

The Vendor should ensure that the responses to this section are in alignment with the requirements set forth in Template T-12 – Maintenance and Operations Requirements Traceability Matrix, Section O2.

During the M&O cycle, the Vendor will be required to support the IE-BM System components it implements, as well as other transitioned application components under the Vendor's scope that were transitioned, including EEF and any Legacy components, while coordinating the delivery with the State and/or another Infrastructure Vendor of the State's choosing.

Instructions: Describe how the Vendor will lead and perform these tasks and coordinate with the State and/or infrastructure vendor to ensure the IE-BM application as well as other application components the Vendor's scope, meet SLRs, especially End-to-End performance. This should include a discussion of each of the following areas, and the approaches to overcome any challenges:

- Approach to handling application maintenance operations, administration and support
- Approach to system monitoring
- Incident and problem management
  - Help desk and incident management (Tier 2/3)
  - Problem management services
  - Root Cause Analysis (RCA) as it relates to the IE-BM platform
- Scheduling and management of releases to help ensure minimal impact to users
- User account management
- Security administration
- Break-fix
-

Introduction

The IBM team understands the application maintenance and operations scope of work and has proposed a solution that meets your stated objectives and uses many unique capabilities from the following IBM areas:

- Leading practices and experiences in handling Cúram-based eligibility system maintenance services across other clients.
- Expertise from our extensive public assistance, eligibility-based project experience.

- Collaborative governance model that promotes, enables transparency and flexibility, and manages and resolves program issues.
- Experience assessing ongoing project issues and process to manage, measure, track, and report the remediation efforts.
- Watson cognitive capabilities in handling automated self-service problem resolution that will improve the operational efficiency and optimize total cost of ownership (TCO).

As part of IBM's approach to ongoing O&M support and enhancements, we are committed to being responsive to the users' experience and to minimize disruptions to the State's EEF or IE-BM system availability.

The IBM team's proven experience:

- ✓ The IBM team has successfully implemented Agile and DevOps processes for development, database administration, CM, disaster recovery (DR) planning, and operations support; yielding higher productivity due to less task-switching.
- ✓ The IBM team has implemented DevOps practices for M&O support. We break down the silos between teams to better align M&O efforts with the needs of DHS.
- ✓ IBM's automated deployments and continuous integration enable fewer mistakes to be made and productivity is increased.
- ✓ Automated testing allows for quick and extensive testing. Agreed to defects are discovered and resolved much more quickly reducing turnaround time and cost.

IBM's approach to maintaining and operating a stable production environment is both efficient and effective with cost predictability for DHS. The core of our model is providing our staff with the necessary technical capabilities, communication and customer service skills, industry certifications, and extensive understanding of processes and procedures. These enable us to maintain, support, and operate the EEF application and new IE-BM system. The IBM team of trained and certified personnel, combined with their knowledge of the State's computing environment and DHS' mission, allows us to deliver the best value in quality and services to the State. This in turn enables DHS to deliver a high level of performance and responsiveness for your users and the citizens it serves.

The IBM team's processes and methodologies are represented by IBM Unified Methodology framework (UMF) for delivering M&O services.

The UMF has been applied to hundreds of programs, incorporating industry leading practices to include Capability Maturity Model Integration (CMMI), International Council on Systems Engineering (INCOSE), International Organization for Standardization (ISO), Information Technology Infrastructure Library (ITIL), Agile Scrum, DevOps, and lessons learned feedback from these programs. The UMF has been enhanced with support for Agile delivery and Agile M&O, which will be tailored to meet the specific EEF M&O tasks. The following graphic demonstrates the UMF:

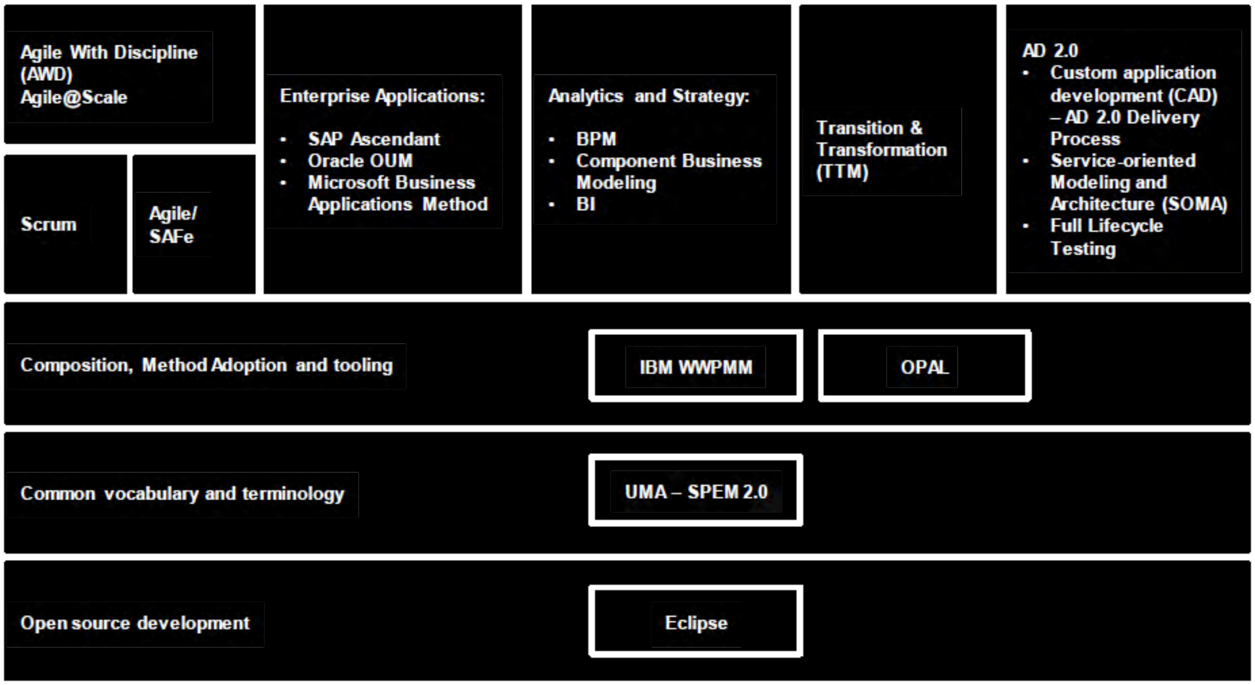


Figure 8: IBM's Unified Method

IBM has successfully embraced leading Agile concepts and adapted them for AMS with surprisingly favorable outcomes.

The following list includes key benefits from Agile Maintenance:

- Backlog reduction in tickets (~14% reduction).
- Improvement in MTTR (~8% MTTR reduction).
- Increased business satisfaction (soft benefit).

Since the launch of this program, each team has embraced this practice internally. The respective application teams are conducting independent scrum calls. This has changed the operating model and rhythm and betterment of the client delivery.

The following list includes some leading practices:

- Maintenance teams that are new to Agile should follow the scrum methodology to deliver M&O.
- The PBL will include maintenance tickets prioritized by a dedicated and empowered product owner (DHS) and sized by the delivery team (IBM).
- If the scrum team that developed the software are still developing new features, that team should work from a single PBL of maintenance tickets and user stories that are prioritized by the product owner.
- Tickets that require immediate attention (Sev 1) take precedence in the current sprint.
- If the scrum team is only performing maintenance work, they could eventually transition to a Kanban method, where each sprint only lasts as long as it takes to fix the appropriate priority from the product backlog.

The following diagram demonstrates the Agile approach for AMS:

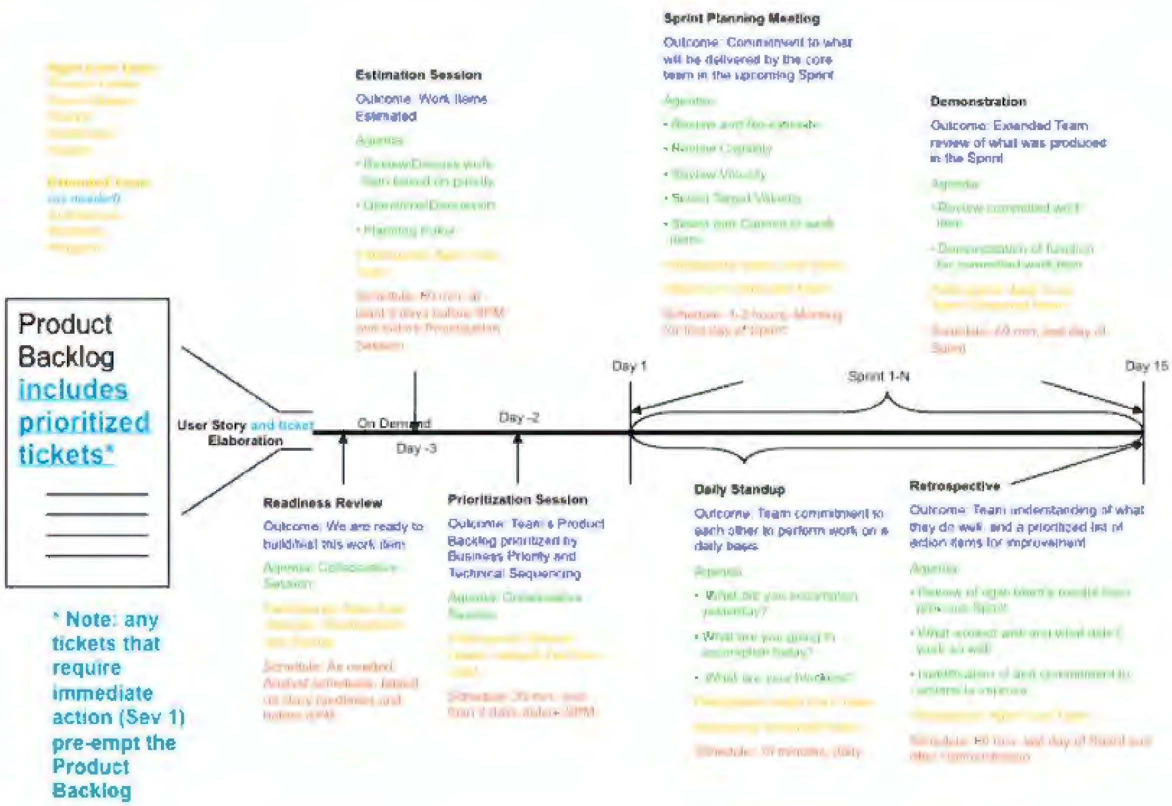


Figure 9: Agile approach for AMS

During the term of the support engagement, the IBM team will continue to drive toward productivity improvements in close cooperation with the State. The following graphic shows IBM's continuous improvement model:

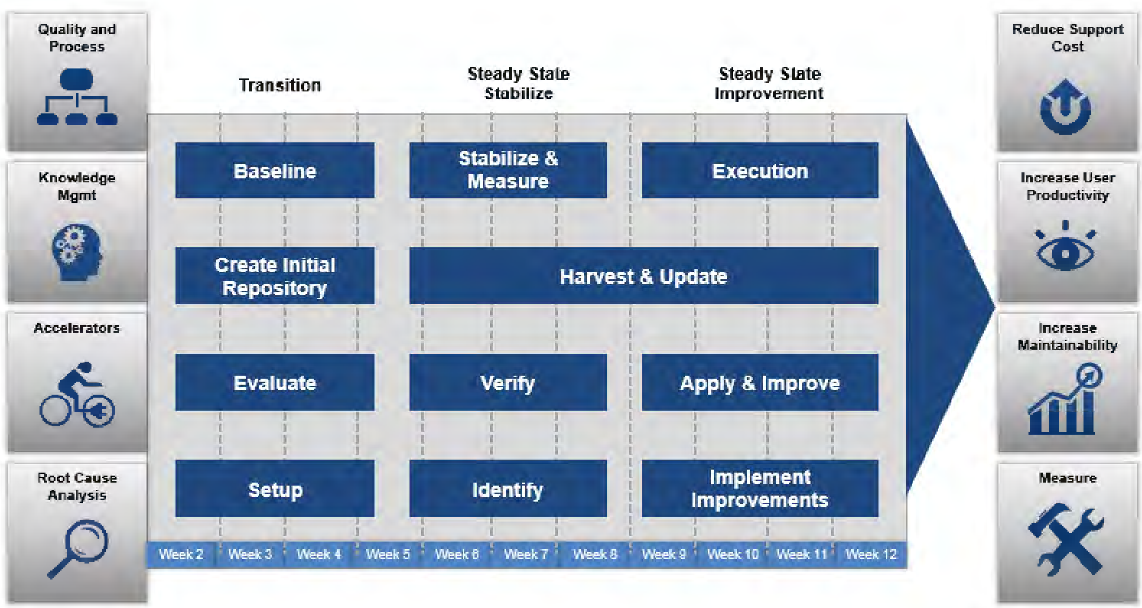


Figure 10: Continuous improvement model

Cognitive Computing capability to directly support users by providing fast and accurate answers to their questions.

We will use a Watson-powered virtual support agent and interface called Cognitive Assistant to directly support DHS users. This solution includes the following components:

- **iCurate**: A tool that allows SMAs to build and manage content within Cognitive Assistant.
- **iAssist**: A simple user interface that allows users to ask questions and get immediate, appropriate responses from the cognitive solution.
- **Natural Language Classifier (NLC)**: A Watson service capable of natural language processing and learning.
- **Retrieve and Rank:** A Watson service that works alongside NLC to provide relevant answers to users.
- **Watson Knowledge Base:** A database that stores and organizes curated question-answer pairs and other data loaded through iCurate.

To address the remaining M&O scope items, we found it best to organize our response by following the scope areas identified in the RFP in Table 13 (located on page 76 of the document). The following is an extract of the table with a column added to map the scope areas to the appropriate section of this response.

Table 6: M&O scope responsibilities mapped to Table 13 of the RFP document

Areas	Preliminary State responsibilities	Preliminary vendor responsibilities	T-13 Response section
Application security admin	Provide approved list.	Administer users.	2.1.1
System performance and monitoring	Perform monitoring in alignment with policies and procedures.	Develop policies and procedures.	2.1.2
Training	Deliver training.	Update materials as required.	2.1.3
Capacity planning	Lead process, infrastructure capacity planning.	Provide capacity estimates and usage forecast changes, application capacity planning.	2.1.4
Change, release, and configuration	Lead process.	Align State standard process, package release.	2.1.5
Incident and problem management	Lead process and Level 1.	Support application, level 2 and 3.	2.1.6
Disaster recovery	Lead process.	Complete application recovery, detailed recovery procedures and assist with testing and remediation.	2.1.7

Areas	Preliminary State responsibilities	Preliminary vendor responsibilities	T-13 Response section
System audits	Lead and coordinate audits.	Assist with audits, manage security roles, maintain documentation, review logs, and report anomalies.	2.1.8
License management and provisioning	Buy and manage licenses.	Manage certificate.	2.1.9
Back-up and recovery	Provide infrastructure and perform back-up	Design back-up using DIS architecture.	2.1.10
Database administration	Not applicable.	Primary responsibility	2.1.11
Remote access and VPN	Provide as a service.	Comply with security policies.	2.1.12
Security	Manage infrastructure security.	Manage application security.	2.1.13
Infrastructure (storage, server)	Provide hosting and infrastructure management.	Provide requirements to DIS.	2.1.14
Enterprise M&O process documentation and maintenance	Document, manage, maintain, and operate M&O processes maintenance procedures for all apps and anything unique to each application.	Provide input into process development and changes, conform to enterprise processes.	2.1.15
Application specific procedure documentation	Not applicable.	Document all procedures performed in support of the IE-BM solution.	2.1.16
Governance (tech)	Primary responsibility; establish expectations, forms, process.	Follow process and submit requests as appropriate.	2.1.17
Data quality	Primary responsibility.	Report on data quality issues, support improvement plans.	2.1.18
Master data management (MDM)	Manage and oversee ongoing governance and data clean-up.	Support process, provide reports (list of duplicate clients).	2.1.19
SLAs	Monitor against SLAs.	Report performance against SLAs.	2.1.20

Application security admin

The IBM team maintains EEF and IE-BM user account maintenance procedures and rules based upon user rights and DHS policies defined in the JOPM. Once a request for configuration of new users, roles and responsibilities, credentials, user refresh, change, updates, or user deletion is initiated, the process follows the prescribed steps. Using defined DHS 5002 forms, IBM will manage user access, roles, deactivation of accounts, and deletion of users as per the prescribed processes. Deviations to the process requires approvals by DHS and IBM team leadership. Deviation to the process may be better accommodated by updating user account procedures. In the event that changes are needed to be made to the JOPM, then a change request is initiated and approved prior to inclusion within the JOPM. The JOPM and the respective application training manual, serves as the knowledge base for actions associated with this requirement. The DBA team manages security access to the DHS databases based on role based security. Application access is defined so that only authorized users have access to the specific application sections or data.

System performance and monitoring

One of the key functions of governance is related to metrics management, where IBM intends to use our Metrics Management Framework (MMF). This is an end-to-end standard solution for performing data collection, analysis, and reporting of measurements in support of O&M services delivery. This framework includes an integrated measurement system that supports the implementation of the performance measures needed to address key measurements and Service Level Requirements (SLRs) mutually agreed upon. The following figure illustrates the key steps and process for establishing, measuring baselining and agreeing to the DHS SLRS:

Figure 11: SLR Definition process

Additional details on this SLR process is provided in our response to T-13 Section 6.

[O2.8, O2.9, O2.10, O2.11]

Training

The IBM team will work closely with DHS to provide the training support associated with our Maintenance and Operations activities. Per the State's request in the RFP, our team will include a Training Lead to maintain the Training documentation and keep it accurate and up to date.

IBM will work with the State to identify the applicable communications and training requirements, which may include the identification of the appropriate training audience at the end of a release cycle.

Capacity planning

The IBM team has a deep understanding and wide range of knowledge and experience regarding capacity management as it relates specifically to how EEF or IE-BM changes can impact the usage of IT infrastructure. Factors to be considered consist of: CPU utilization, network bandwidth, storage, I/O, and RAM. IBM collaborate with DHS and DIS to understand applicable business trends, which may impact systems' capacity requirements, analyze historical trends, assess EEF or IE-BM M&O actions that could impact capacity. We will use that data to provide capacity forecasts and thereby participate in the DIS capacity planning processes.

The IBM team understands that capacity management enables IT infrastructure to be provided at the right time, in the right quantity, and at the right price to guide the use of IT resources in an efficient manner. Capacity management aligns current and future capacity and performance aspects of the IT infrastructure with business requirements at acceptable cost.

The following figure portrays the capacity management activities, which are discussed in the detailed approach below, and aids in optimizing DHS IT resource usage:

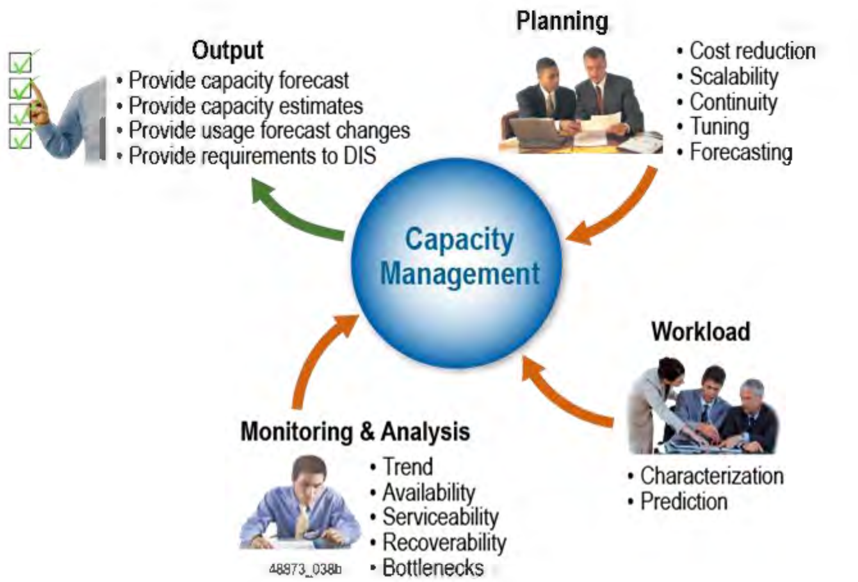


Figure 12: IBM approach to capacity management

IBM will work with the DHS and DIS to update the EEF and then IE-BM capacity management plan in order to match the evolving demands of the State in an effective and timely manner. The plan will include joint responsibilities for monitoring, since IBM will be monitoring at the application level and the State at the infrastructure level. Measurements from the monitoring will help drive the capacity plan.

[O2.12, O2.13]

Change, release, and configuration

Change management

IBM proposes to use a streamlined change management process to identify, organize, and control modification and enhancement to different artifacts including requirements, specifications, source code, configuration files, and test cases.

The change management process is concerned with requesting, evaluating, implementing, and reviewing change to the system. Change management is used for both planned and emergency (critical defect fixes) releases of software. The Change Control Board (CCB) reviews, assesses, approves, or rejects changes to the environment. Changes are organized into three categories: routine-simple, planned-complex, and emergency. Each of the categories includes dedicated staff engaged to verify the change is executed accurately. Change management is also integral to IBM release and patch management process, where we will follow leading practices for installation of critical patches. The following figure illustrates our high-level procedures:

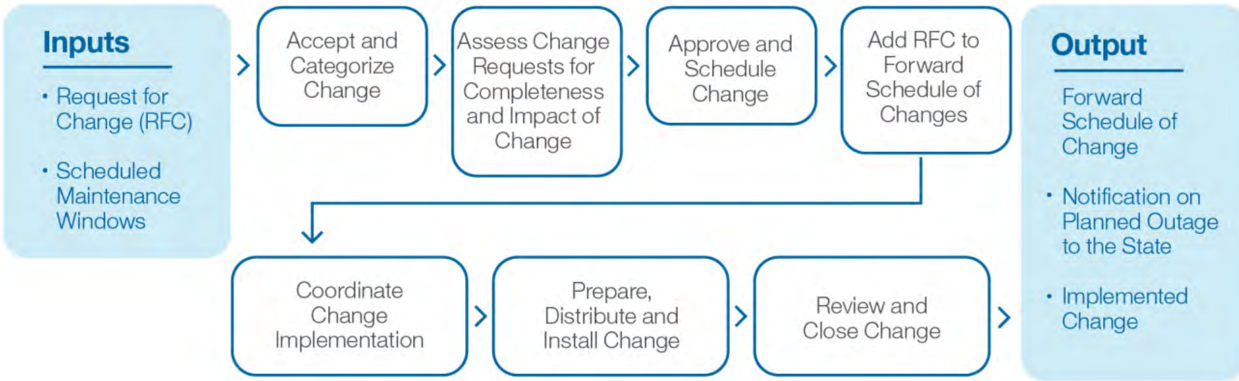


Figure 13: Change management procedure

When a change request has passed the initial review of the CCB, the IBM team will make an initial assessment of the cost, schedule, and resources needed to implement the proposed change. If the requested change is complex, a Cost and Schedule Impact Analysis (CSIA) should be requested. This will be indicated and an estimate of the cost, schedule, and resources needed to perform the CSIA will be made. The CCB will once again review the requested change and either accept, reject, or defer. As it is demonstrated here, the CCB is appraised of and has authority over releases throughout the release management (RM) process.

Release Management

IBM's Release Management (RM) process coupled with change and configuration management will provide the discipline, visibility, and transparency needed for the State to effectively plan and monitor the status the code releases. The State will gain the following advantages:

- Release data such as cost, level of effort, content, or schedule are identified, recorded, and tracked.
- Change requests plans and associated documents are baselined.
- Analysis of each change request and the associated approval or rejection.
- Changes to the environment are introduced with minimal risk and service disruption.
- Risks to the business are proactively identified and plans developed to address and mitigate.
- Only approved changes are implemented, and the plans and affected deliverables are updated.
- This includes the capability to effectively implement a release "back out."

The release measures, results, and lessons learned are fed back as part of continuous improvement. The following graphic shows our release planning in more depth:

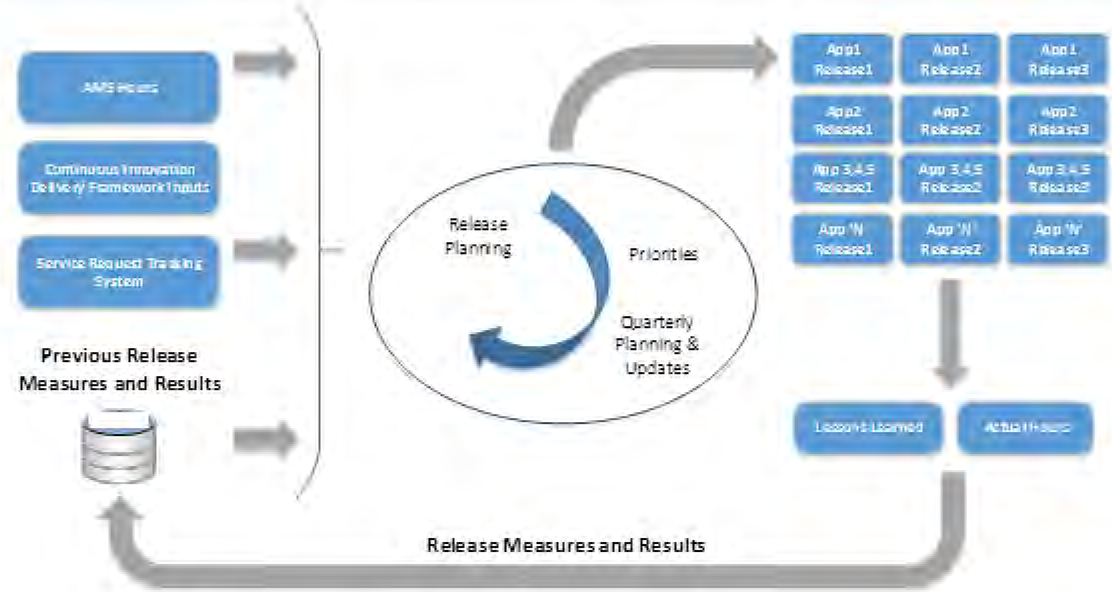


Figure 14: Release planning

[O2.14, O2.15, O2.16]

Configuration Management

The IBM team uses its Software Configuration Management (SCM) process in conjunction with the State's Library Management Systems to protect application source code and executables in a manner that is consistent with State's current practices. During transition, IBM will review the State's current practices and tools to understand capabilities and linkages with IBM's SCM process and makes recommendations to State for enhancements, if required. The SCM procedure provides the following actions:

- Establish and maintain the integrity of the work products subject to change.
- Verify that the version of a work product that has been placed in SCM control can be recreated.
- Perform security audits and report test results.

This procedure applies to projects that produce deliverables, including documentation. The procedure starts when a work request is approved and ends when either of the following happen:

- The deliverable is released to State.
- The application is decommissioned.
- The application is handed over to another entity for support.

At the start of the project, IBM will work with the stakeholders from the State to clarify the software CM policies that will guide the rest of the implementation. The following figure illustrates our high-level configuration management procedures:

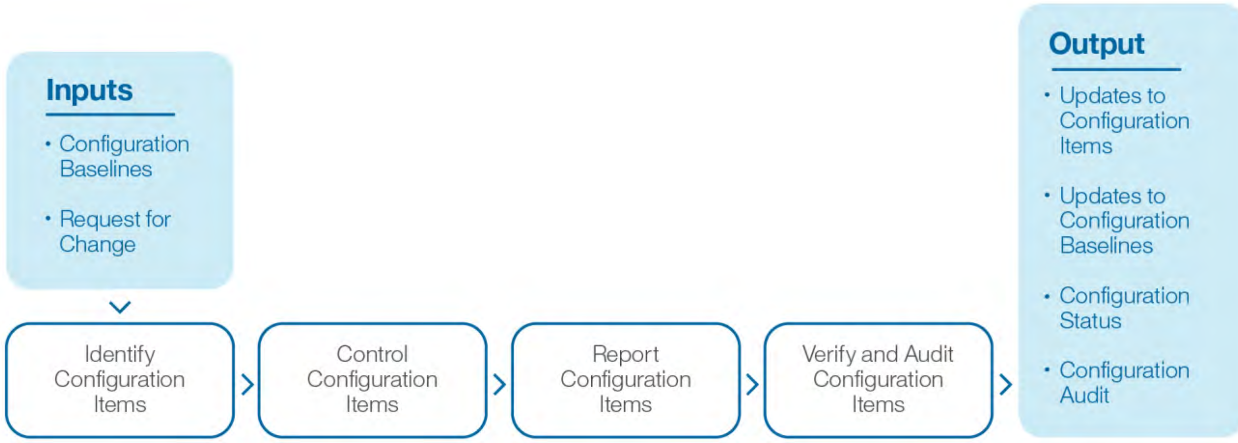


Figure 15: Software configuration management process

Based on IBM's analysis of the State's current practices and tools for SCM, we will work towards realizing the following benefits for the State:

- Improved team productivity and operational efficiency through parallel development, automated processes, reduced build errors, and reduced build and release cycle times.
- Improved individual and team effectiveness through improved communication, collaboration and coordination, and automation and control of the software life cycle.
- Management of geographic and organizational distribution by facilitating communications and collaboration across distributed teams, enabling consistency of parallel changes and coordinating work across locations.
- Better visibility into projects for improved insight, control, and predictability.
- Ease of compliance through process enforcement, audit trails, and traceability of changes across the software life cycle, and access control to verify that changes are made only by authorized individuals.
- Maintenance of secure, continuous business operations and reduced disruptions to clients and staff through replicated assets and remote access.

[O2.17, O2.18, O2.19]

Incident and problem management

Incident management process

The following graphic demonstrates IBM's incident management process:

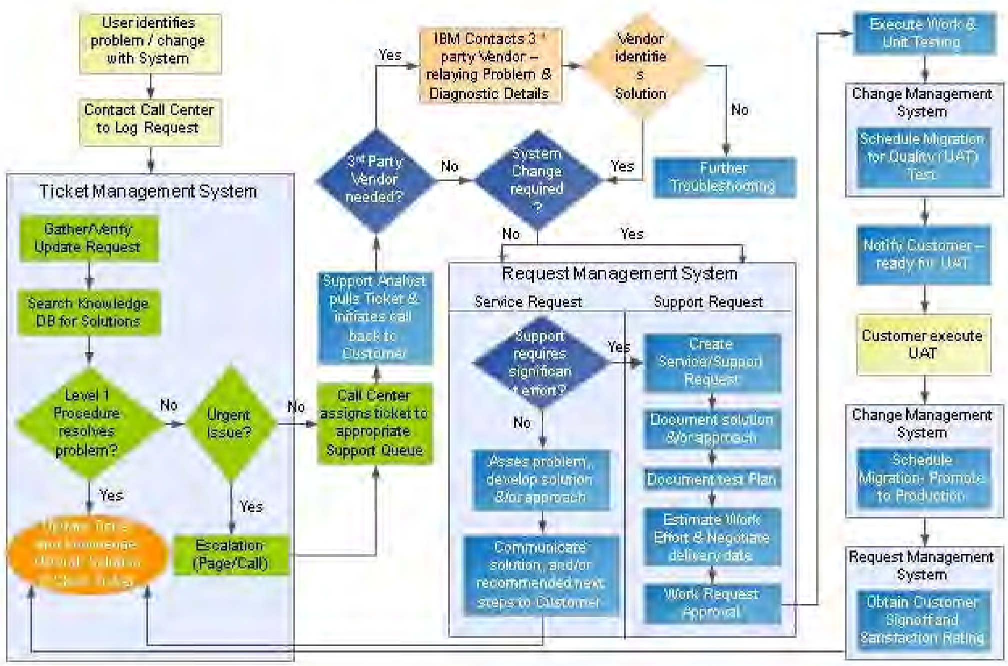


Figure 16: IBM's incident management process

IBM's incident management processes are focused on managing events that cause an IT service to be unavailable or operate with reduced functionality. IBM's stress in the services is to recover standard service operation as quickly as possible, whatever the root cause. Incident analysis and resolution is conducted first, to determine the cause of the incident. If further investigation is justified in cost and effort, then the problem management service is invoked, and a problem record is raised. The detailed incident management process, methods, and supporting tools will be defined during the transition phase and documented in a Process Handbook, which will be accessible by the team members.

IBM incident management has the following basic steps:

- Open an incident record: This can be done by the DHS Level 1 Help desk in response to a user request or by a member of the support team (IBM or DHS).
- Capture the essence of the incident and initially document as much as possible
- Update the incident record to reflect the current status of the incident.
- Assign the incident number: This could be automatically generated in the Peregrine system.
- Assign the incident to the proper resource based upon the initial analysis.
- Analyze the incident and performing incident determination:
  - Check previous incidents, similar problems, and known errors in the database, to identify if similar incidents are already registered.
  - Assess the previous documented work-around or permanent solution used.
  - Identify if a data error caused the incident.
  - Notify DHS and the provider's help desk, working to receive resolutions from different suppliers, if the cause is the responsibility of another provider (infrastructure, network, or applications outside IBM contract scope).

  - Validate DHS is informed in accordance with the contract, if an incident has a security impact.
- Define actions and implement a workaround or resolution for the incident to perform recovery of service, using an existing solution or developing a new one:
  - Execute the development life cycle steps required to build, test, and deploy a correction and involve suppliers as required in the solution delivery following the CM guide.
  - Conduct necessary tests in the test environment before the correction is delivered to the production system: regression, performance, user acceptance, or update of operational documentation.
  - Provide a RFC, as defined in the change management process, if the management of an incident requires a change in the infrastructure, to restore the service.
  - Update the database and documentation, as required including test plans, test instructions and test script for the management object in question.
  - Provide an installation package and installation instructions to the suppliers, as described in their agreement.
- Update the ticket management systems for the solution with information useful in future incident and problem investigation and diagnosis.
- Close the incident record.
- Verify documentation and designated ticket management database updates occur throughout the incident lifecycle and status is communicated.

Continuous service improvement

IBM recognizes the need to demonstrate a culture of continuous improvement. Continuous improvement is embedded into our approach to providing services and is represented in the following diagram:

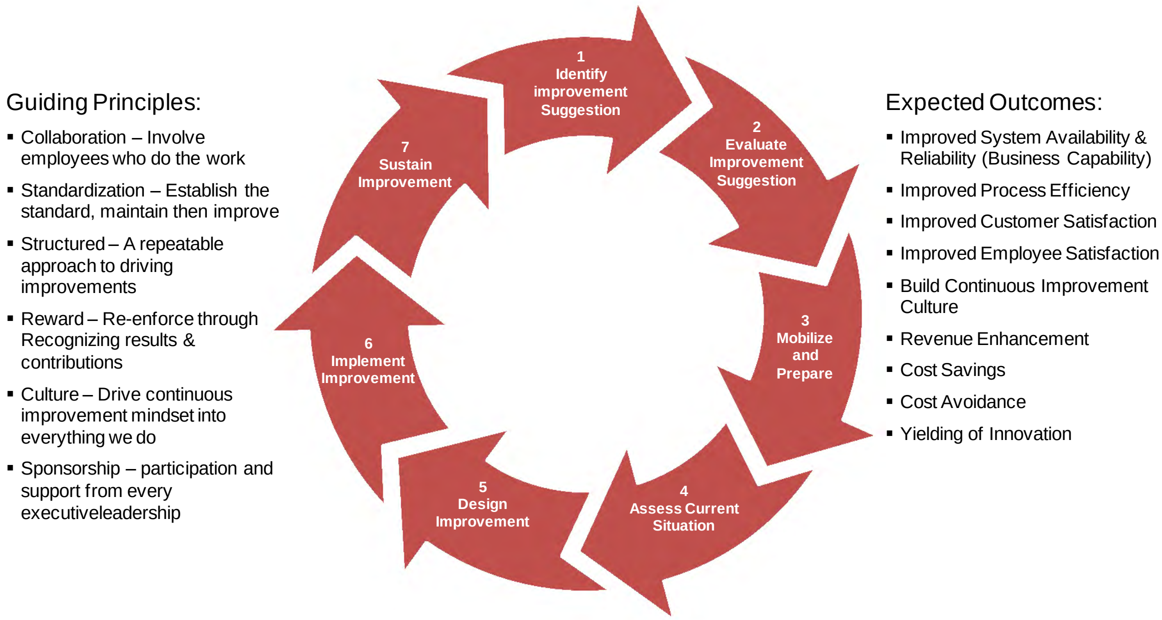


Figure 17: Managing continuous service improvement

The outcomes realized through the continuous improvement model shall drive reduction in TCO, with maintenance costs being a key element. Delivery excellence is achieved through the following aspects:

- Standardized processes and work practices to achieve high value.
- Each step of a process delivers quality to the next step.
- Tasks and tools organized to optimize productive work.
- Preventive maintenance (defect prevention activities).
- Workforce management that match supply and demand.
- By understanding that the issues surface immediately, if not anticipated.
- Efficient problem solving that eliminates gaps and validates learning.
- Improvements codified into standards and disseminated.

The “House of Continuous Improvement” is shown in the following figure:

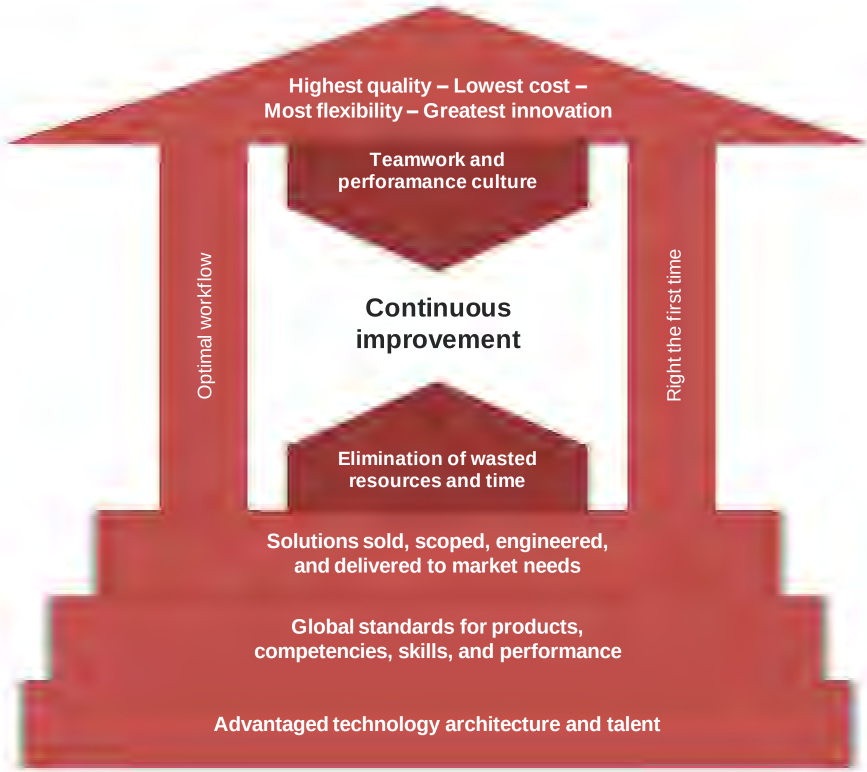


Figure 18: House of Continuous Improvement

Improvements in processes

Ticket analytics

IBM will take an integrated end-to-end view of a ticket capturing production and application service root causes, focused on improving business outcomes, not just functional service levels.

There are three primary components to the proposed support analytics capabilities:

- Guided search and resolution capabilities that use our knowledge base, and thereby introduce the capability to further reduce the time and effort associated with incidents by a projection of up to 40%.
- Predictive analytics to analyze past incidents and to highlight areas that need attention to prevent future incidents.
- Knowledge capture from both structured and un-structured sources, developing a widespread knowledge base without making extreme demands on incumbents.

The high-level approach to support analytics proposed for DHS is illustrated in the following diagram:

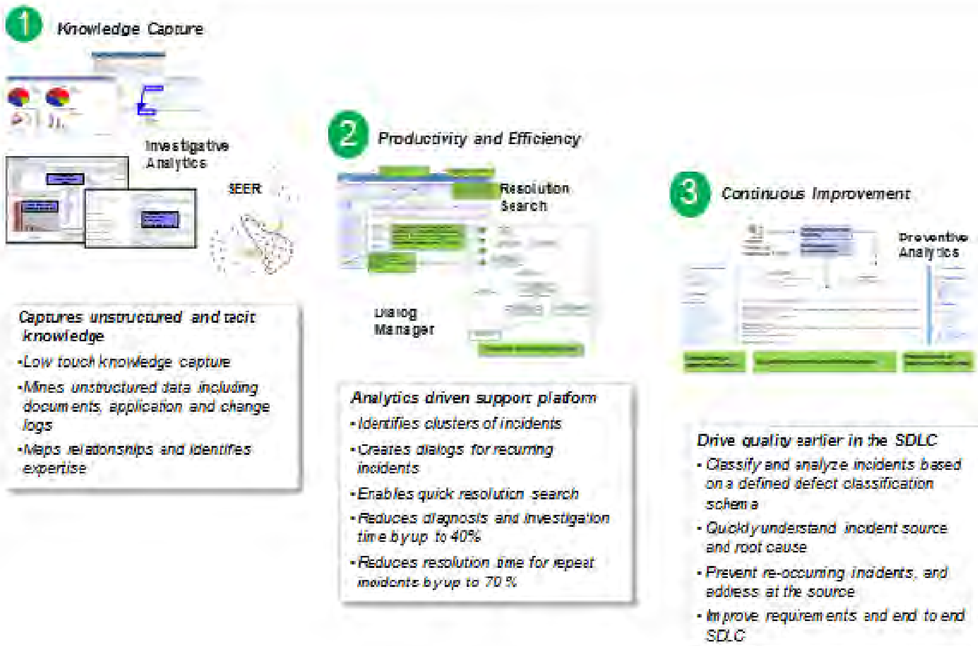


Figure 19: Analytics-driven application support

Ticket Productivity Assessment Workshop (TPAW)

IBM will use our Transition and Transformation process to enhance processes and productivity using approaches such as LEAN and Six Sigma. TPAW is a structured and focused initiative to drive ticket productivity across the maintenance and enhancement teams, with measurable improvement goals and objectives, shown in the following diagram:

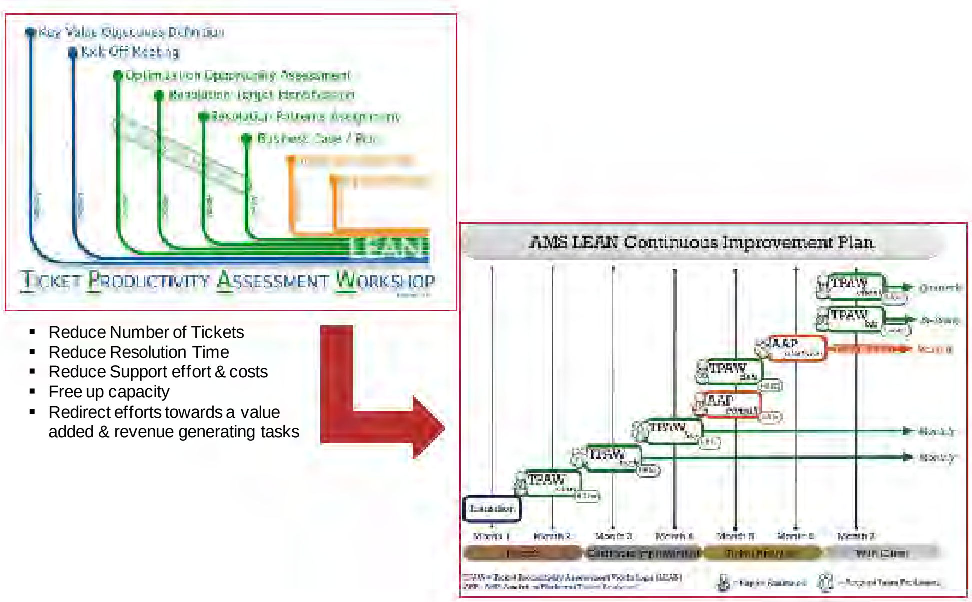


Figure 20: TPAW – Lean driven continuous improvement

Watson cognitive application support

In the area of continuous improvement, Watson now provides the opportunity to radically change the application support experience. Automation is a key part of our proposal to the State, and we will use our world-renowned IBM Watson Cognitive Computing capability to directly support users by providing fast and accurate answers to their questions.

We will use a Watson-powered virtual support agent and interface called Cognitive Assistant to directly support DHS users. Components of the solution include:

- **iCurate:** A tool that allows SMAs to build and manage content within Cognitive Assistant.
- **iAssist:** A simple user interface that allows users to ask questions and get immediate, appropriate responses from the cognitive solution.
- **Natural Language Classifier (NLC):** A Watson service capable of natural language processing and learning.
- **Retrieve and Rank:** A Watson service that works alongside NLC to provide relevant answers to users.
- **Watson Knowledge Base:** A database that stores and organizes curated question-answer pairs and other data loaded through iCurate.

Dynamic automation (DA)

The ability to automate detection of repetitive application events and associated remediation by a “virtual engineer”. DA will provide the capability to emulate human execution of repetitive processes. It will be used to automatically resolve incidents, alerts, and scheduled events, and data and analytical tasks including restarts, application recycles, password resets, data integration, health checks, reporting, and analytics. This increases the capacity of the IBM application M&O team to focus on and resolve more critical tickets. This will bring increased satisfaction to State users and free up resources and money for enhancement work. DA includes the following characteristics:

- Handling a DB2 start and stop process, which includes restarting approximately 1000 batch jobs.
- Automating the execution of weekly tasks, which are currently handled manually, with a high risk of human error.
- Savings of up to a projected 2,500 hours of manual effort which may result in significant cost reductions.

The following table shows DA use cases:

Table 7: DA use cases

Category	ITIL process	Example
Proactive maintenance		
Application monitoring	Alert and event management: Early detection of incidents, analysis and problem remediation to reduce user impact.	Alert: High file system usage (such as > 90% used).

Category	ITIL process	Example
Preventive manual maintenance	Proactive problem management to avoid incidents.	Check log file three times daily for successful PO batch job run
Scheduled maintenance	Proactive problem management to avoid incidents.	Recycle application and database every Saturday.
Reactive maintenance		
Problem ticket resolution (L1/L2)	Reactive incident and problem management.	Order not fulfilled from a retail system. Known RCA > queue failure.
Service request (SR)	SR fulfillment, addressing common user requests for non-incident support.	Check available disk space in database server and generate report upon specific customer requests.

[O2.26, O2.27, O2.28, O2.29, O2.30, O2.31, O2.32, O2.33, O2.34, O2.35, O2.36, O2.37]

Disaster recovery (DR)

In our role as the EEF and IE-BM Application M&O provider, we support DHS by assisting in the provision of effective DR. IBM's approach is shown in the following figure and described in the sections below. IBM will support DHS in preparatory planning, which is crucial to successful execution, and we will support DR exercises and assist with the execution of the DR plan. The DR approach supports the DHS mission to provide reliable critical systems.

Update and maintain the DR plan

The IBM team will meet DR requirements by participating in quarterly DR planning meetings with DIS and DHS. The subject of these meetings typically includes updating the DR plan and reviewing and updating the Business Continuity and Contingency Plans (BCCP). IBM is responsible for the portions of the plan specific for EEF or IE-BM application recovery.

Participate in and support DR testing

The IBM team will participate by supporting the integrated DHS and DIS DR team in preparing for, supporting, remediating, and applying lessons learned from DR testing. The steps of this process are included in the following list:

- Plan and schedule DR testing: Support DHS in scheduling the DR testing including scheduling test resources and personnel.
- Recovery of the EEF or IE-BM Application: Execute the test by verifying that the EEF components are properly functioning through an abbreviated regression test.
- Remediate issues: Record issues, determine cause, including root cause analysis as needed, determine solution, and apply solution.
- Provide DR plan and procedure updates: Review the test execution and issues to determine proposed updates to the DR plan, recorded in After Action report.

In conjunction with DIS, we will update and support an annual DR test of EEF or IE-BM.

Support execution of the DR plan

The IBM team resources will assist DHS with the integration of the DR plan related to the EEF or IE-BM services. The M&O Team will maintain the documentation to include the manner, processes, and procedures by which the State performs backups, provide the services associated with DR, and assist with Business Continuity.

The IBM team is familiar with DHS Crisis Management Team (CMT) Checklists for each role in the CMT. IBM stands ready to collaborate with DHS leadership, DIS, and other applicable vendors to perform tasks outlined in the EEF or IE-BM DR plan in the event DHS declared a disaster.

[O2.20, O2.21, O2.22, O2.23, O2.24, O2.25]

System audits

To fulfill the State requirement, the IBM team will update existing application security audit documentation, specifically audit and testing results and remediation plans. Security related artifacts are maintained and configuration controlled with a standardized naming convention to allow for improved accessibility by users and optimal knowledge management for employees.

In support of EEF or IE-BM system audits, user privilege management will be monitored and activities logged for compliance against security roles and controls. Security roles and controls are maintained by DHS and managed through a prescribed process to verify proper access is granted to users based upon their roles and responsibilities. Utilizing this approach, IBM supports DHS security audits of the EEF or IE-BM system.

[O2.38, O2.39]

License management

The IBM team will manage the certificates for the EEF or IE-BM software products and tools that DHS. IBM will share the compliance reports and recommended licensing changes to DHS regularly.

Back-up and recovery

As required to address the changes to the EEF or IE-BM system based on the M&O activities, the IBM team will update backup and recovery strategies so that data or code can be restored in the event of an unforeseen incident such as hardware failure, act of God, or data issue occurs. IBM can provide recommended updates to the daily, weekly, and monthly backups, including full and differentials backups, designed to facilitate point in time recovery of data.

When recovery is needed, the IBM team will coordinate with DHS and DIS to assist.

Database administration

The IBM team as part of database administration will maintain and provide the following services along with regular reports on the monitoring outcome. Our support will consist of the following activities:

- Provide application DBA support which will be available during regular business hours and after hours via a page-out process to assist with EEF or IE-BM incidents involving the:
  - Monitoring of system logs, update error, database corruption, and jobs.

  - Monitoring of transaction and trace logs, network event logs and traces, garbage collector, memory and CPU utilization, and indexes.
  - Monitoring of middleware, including workflows and in- and out-bound queues.
  - Monitoring of end-to-end transaction response time to allow measurements against the SLRs.
  - Monitoring of interfaces and batch and job scheduling.
- Work with DIS to update, when needed, the procedures to check database and memory size and CPU utilization

When an issue occurs, the IBM team will quickly respond to the incident. Our on-call staff may bring in additional members of the M&O Team, as needed, to troubleshoot and resolve an incident. We will also assist by making performing tuning recommendations, i.e. stored procedures, in order to optimize reduce hardware resources.

The IBM team spends a portion of time performing trend analysis. We strive to provide proactive actions to avoid disruptions and evaluate the use of stored procedures, triggers, and constraints to implement business rules. The IBM teams will work with DIS Physical DBAs to provide guidance for support of major systems that are hosted by DIS and support application maintenance, operations, and enhancements for problem resolution, running data fix scripts, and execution of application releases for DHS hosted systems.

Remote access and Virtual Private Network (VPN)

To meet the State's remote access and VPN requirements, the IBM team will comply with DIS remote access standards for individuals requiring authorized remote access and VPN security access to sensitive state information technology services.

We will provide the DHS forms notating the official request for individuals to be reviewed and approved for remote access and VPN rights. DHS form 5002 is completed notating the official request for individuals to be reviewed and approved for remote access and VPN rights.

Security

With an extensive history in private- and public-sector security services, the IBM team will bring proven knowledge to the State. Our clients have experienced significant paradigm shifts in their flexibility, planning, overall stability, and peace of mind with regards to the continued benefits of our relationships.

The IBM team's guidance will help mitigate risks through conformance to the State's policies, and will support, when needed, the development of additional controls during Steady State.

Maintain application security plan

The IBM team analyzed the EEF application security plan against compliance with HIPAA, NIST, IRS 1075, Centers for Medicare and Medicaid Services (CMS) Minimum Acceptable Risk Standards for Exchange (MARS-E), and State of Arkansas' requirements and security controls. If changes are required, the IBM team will modify language accordingly, so the security plan addresses requirements and meets standards. In addition, we will offer suggestions for updates to DHS security policies, procedures, and other artifacts.

Update security controls

As the need arises, the IBM team may identify and provide recommended updates to the existing EEF security controls pertinent to securing client, agency data in order to reduce security risk. The following table provides example security controls:

Table 8: Security controls

Security objective	Potential impact		
	Low	Moderate	High
Confidentiality Preserving authorized restrictions on information access and disclosure, including means for protecting personal privacy and proprietary information. [44 U.S.C., Sec. 3542]	The unauthorized disclosure of information could be expected to have a **limited** adverse effect on organizational operations, organizational assets, or individuals.	The unauthorized disclosure of information could be expected to have a **serious** adverse effect on organizational operations, organizational assets, or individuals.	The unauthorized disclosure of information could be expected to have a **severe or catastrophic** adverse effect on organizational operations, organizational assets, or individuals.
Integrity Guarding against improper information modification or destruction and includes verifying information non-repudiation and authenticity. [44 U.S.C., Sec. 3542]	The unauthorized modification or destruction of information could be expected to have a **limited** adverse effect on organizational operations, organizational assets, or individuals.	The unauthorized modification or destruction of information could be expected to have a **serious** adverse effect on organizational operations, organizational assets, or individuals.	The unauthorized modification or destruction of information could be expected to have a **severe or catastrophic** adverse effect on organizational operations, organizational assets, or individuals.
Availability Verifying timely and reliable access to and use of information [44 U.S.C., Sec. 3542]	The disruption of access to or use of information or an information system could be expected to have a **limited** adverse effect on organizational operations, organizational assets, or individuals.	The disruption of access to or use of information or an information system could be expected to have a **serious** adverse effect on organizational operations, organizational assets, or individuals.	The disruption of access to or use of information or an information system could be expected to have a **severe or catastrophic** adverse effect on organizational operations, organizational assets, or individuals.

Provide security procedures

The IBM team will verify that a member of our team, who requires privileged access to DHS systems and data, will undergo the specified background check compliant with DHS requirements. Team members that are sub-contractors will be required to undergo the same process to verify that they meet the applicable standards for privileged access. A DHS form 5002 is completed and assessed to obtain access.

IBM will assist, as needed, in developing training pertinent to attaining privileged user status. Security roles and controls are overseen by DHS and managed through a prescribed process to assess that proper access is granted to users based upon their roles and responsibilities. To determine that user roles are managed effectively, the IBM team will establish procedures for periodic compliance checks and review of access logs and procedures to assess ongoing compliance.

Establish application M&O security

The IBM team will work within the policies defined within the JOPM and by DHS to maintain user security with the following activities:

- Assist DHS group owners with managing group members, as needed.
- Assist DHS through submission of service desk tickets and identification of proper security groups, permissions, and objects that verify compliance and standardization with managing access control.
- Work with DHS and OST staff to maintain access policies and procedures.
- Provide scheduled cleanups and integrity checks for removal of employees no longer requiring group access, due to transition of roles, or are no longer employed with DHS.
- Provide ongoing adherence to the State's Data Security policies.

Security roles and controls are maintained by DHS and managed through a prescribed process to verify proper access is granted to users based upon their roles and responsibilities. To verify that user roles are managed effectively, the IBM team will perform periodic compliance checks and review of access logs and procedures to assess ongoing compliance. Audit processes and compliance standards are defined within the JOPM. Discrepancies or potential issues, such as suspicious or disallowed access, results in immediate action, and a corrective action plan (CAPs) initiated once the severity is evaluated.

Execute and monitor application M&O security

<u>Support DHS security activities</u>

The IBM team will employ our experience to assist DHS with security related activities to verify compliance with Federal and State mandates. The IBM team will provide direct auditing and assessment support to OST staff, DHS CISO, and CEO, as needed. This includes audit support to CMS, IRS, SSA, HIPAA, and others. Our team will perform assessments against the standards and provide a gap analysis to DHS leadership for review. If gaps are identified, our team will assist with documentation supporting findings, reports, metrics, and remediation plans that include Plans of Action and Milestones (POAM) documentation responses and CAPs. As needed or requested by DHS, our team will provide detailed analyses of systems and processes designed to enforce and support DHS security initiatives. This can include engaging in external support from the IBM team Cyber teams, Cyber Technical Fellows and Compliance Experts, and other cyber teams within our Corporate Cyber Community of Excellence group.

Support security audits

The IBM team will create and maintain security audit documentation specifically audits and testing results and remediation plans in a central repository for ease of access by development teams. Security-related artefacts are maintained and configuration controlled with a standardized naming convention to allow for improved accessibility by users and optimal knowledge management for employees.

In support of EEF or IE-BM system audits, user privilege management will be monitored and activities logged for compliance against security roles and controls maintained through MIM. Security roles and controls are maintained by DHS and managed through a prescribed process to verify proper access is granted to users based upon their roles and responsibilities. We will support DHS security audits.

Protect sensitive data

The IBM team maintains the appropriate level of sensitivity, while working with and around protected data. This includes controls in place to secure facilities and workstation and work area compliance. Sensitive data is maintained within controlled access areas. Our employees, suppliers, and subcontractors abide by the processes agreed to within our work agreements and business associate and data sharing agreements. The IBM team members will comply with DHS security standards by participating in required DHS training and completion of requirements as necessary for adherence to policy. IBM teams also complete the IBM team sponsored security training and awareness, in addition to accredited continuing security education.

The IBM team will conform with the EEF or IE-BM application security plan. Components of the system that are deemed as needing additional security controls will be prioritized and submitted to DHS CIO and CISO for review and action.

In conjunction with DHS, the IBM team will conform with the existing EEF Software Security Checklist (SSC) to verify that M&O changes complete the documents and reviews for gauging compliance and continued advancement and adherence to DHS policy and guidelines.

Report security incidents

To fulfill the State requirement, IBM will report discrepancies or potential security violations with notification as defined within the contract SLR. As per DHS policy, we will report suspected security violations through the online incident reporting mechanism.

Enterprise M&O process documentation and maintenance

The IBM team meets the requirement for M&O process documentation and maintenance for EEF and for new system IE-BM. During transition planning, the IBM team will analyze and assess the process and operations documents that are available and defined as per the JOPM.

The documents will be maintained and updated regularly and assessed for compliance against standards.

Application specific procedure documentation

The IBM team will update and prepare the application related documentation during transition of services for EEF take over. During transition, the IBM M&O team may identify areas that are no longer accurate, and the team will update existing, the applicable EEF application documentation.

As part of enhancement requests IBM team will assess the relevant documentation, and include support to update to keep it current. The updates will be made the following components:

- User documentation and training manuals.
- Technical architecture document.
- Specific instructions or workarounds for the DHS help desk and operations team.

Documentation, including architectures, designs, operations guides, manuals, and standards will be the property of the State and current versions will be made available at the end of every release deployment into production. The IBM team will assume accountability in maintaining the accuracy of these documents per modifications made by the M&O Team.

A repository of EEF and IE-BM documentation will be maintained and will consist of operations procedures, training guides and services, software-related documents, and existing user documentation specific to the EEF or IE-BM application's environment. Also, documentation created by IBM during transition, consisting of Application Knowledge Wiki and D2D recordings, will be maintained in the repository and used to perform on-going training over the term of the contract.

To manage EEF and IE-BM's knowledge base, IBM will employ our KMS tool. KMS is a web-based tool, which provides an integrated collaborative approach to knowledge management. This tool will support features such as forums, blogs, and EEF and IE-BM team rooms, which enable a collaborative team environment and contribute to keeping content current and relevant. KMS maintains versions of content and allows users to export and publish content as documents in various formats including MS Word and PDF. Both State of Arkansas, DHS, and IBM will be able to access and update content in KMS, and KMS can be configured and maintained in a secure environment as mutually agreed-to by the State, DHS, and IBM.

Governance (Tech)

The IBM team meets the Governance requirements in two ways. First, we will follow relevant DHS and DIS processes and procedures. As the IBM team identifies opportunities for improvement in these processes and procedures, we will submit suggestions and requests for these improvements to DHS and DIS Process Leads. In addition, we will participate in working groups with DIS and DHS seeking to improve overall processes. We recognize that our application M&O processes should fit into and support the overall State enterprise processes and that these are interlinked.

Data quality

Data quality and data integrity are important aspects of our EEF and IE-BM management and clean data are essential for DHS. Our structured processes are designed to maintain data quality and these are comprised of by the following elements:

- Front-end screening (input validation).
- Robust extraction, transformation, and load (ETL) steps for data quality during transactional processing.
- Database constraints for additional data quality checking.

MDM

The IBM team will support the State with data management processes by maintaining the MDM component of the IE-BM system once deployed in Release 1 of the DDI effort. The MDM component will aggregate demographic data and build the Master Client Index (MCI) for the IE-BM system.

SLRs

IBM intends to use our Metrics Management Framework (MMF) to monitor our performance against the State's SLRs.

This is an end-to-end standard solution for performing data collection, analysis, and reporting of measurements in support of O&M services delivery. This framework includes an integrated measurement system that supports the implementation of the performance measures needed to address key measurements and Service Level Requirements (SLRs) mutually agreed upon. The following figure illustrates the key steps and process for establishing, measuring baselining and agreeing to the DHS SLRs:

Figure 21: SLR Definition process:

Additional details on this SLR process is provided in our response to T-13 Section 6.

[O2.61, O2.62, O2.63, O2.64]

Instructions: Describe how the Vendor will provide support the State in ensuring that infrastructure requirements are adequate to meet the SLRs. Include a discussion of each of the following areas, regarding how the Vendor intends to support the State and/or Infrastructure Vendor, in overcoming some of the challenges in meeting end-to-end performance SLRs as the work is distributed across multiple entities:

- Support Network, hosting and data center services, so the State and/or Infrastructure Vendor can manage the application more seamlessly
- Support Storage management
- Support Backup and recovery
- Support Remote access
- Support Batch-job control and scheduling
- Support Change and release management
- Support Configuration management
- Support Capacity management
- Support Performance management
- Support Disaster recovery

Infrastructure (Storage, servers, and data center)

Support storage management

The IBM team will monitor system storage to develop trend analysis and assist with the identification of negative trends. These trends and analysis findings will be reported regularly to DHS and DIS. This will help DIS plan for storage requirements ahead to avoid potential issues.

To verify alignment with these initiatives, IBM will provide guidance to trends and capacity forecasting to DHS, as part of a quarterly review and alignment session. This quarterly session allows the IBM team and the DHS CIO to review our strategic plans and assess compliance and alignment with DHS. The IBM team will look to conduct quarterly capacity planning exercises with DHS and DIS, so that we are aligned.

Support network, hosting, and data center services

To support this, The IBM team, as part of monitoring, will maintain the following:

- Tune the data transfer intervals to reduce network bandwidth demands.
- Tune database, including adding indexes to reduce CPU, I/O, and network bandwidth.
- Reschedule activities off of peak load times to spread resource usage across the day or week.
- Size resources to handle peak loads, to introduce significant cost efficiencies.
- Assist with monitoring application performance using the existing monitoring tools. We monitor alerts when transactions, applications, or dependencies are slow or unavailable as

measured against SLRs. We also work to prevent future problems by reviewing the service level impact of change and finding scaling bottlenecks based on real transactions.

Support backup and recovery

The IBM team will design backup and recovery strategies to verify that DHS EEF system and data can be restored if an unforeseen event such as hardware failure, act of God, or data issue occurs. We can design daily, weekly, and monthly backups, including full and differentials, that allow for point in time recovery of data. The IBM team will keep a small amount of database backups on local storage to allow for faster recovery. We will work with DHS and DIS network teams to verify adequate backup coverage, while also not consuming excessive amounts of DIS disk and tape resources.

When recovery is needed, we will coordinate with DHS and DIS to assist.

Support remote access

To support remote access and VPN, the IBM team complies with DIS remote access standards for individuals requiring authorized remote access and VPN security access to sensitive state information technology services. The IBM team will work with DHS and DIS to assess our support and follow the remote access standards and share reports related to remote access regularly.

Support configuration management

The IBM team's approach offers control and transparency to the State for your environments and is centered on the use of CM tools, establishment of a system baselines, and tools automation to deliver robust and maintainable systems.

As a part of the CM and RM process, the IBM team will coordinate with the relevant parties involved to configure the EEF or IE-BM application and update the state of the CM tool as part of the release. If errors are encountered, they are reported to DHS and involved parties using appropriate processes implemented using tool-based reports, alerts, and notifications.

Support DR

In our role as the EEF Application M&O provider, the IBM team will support the larger DHS enterprise in providing effective DR. We will work with the State to develop a detailed DR plan that includes provisions for data, backups, storage management, and contingency operations and provides for recovering the DHS Enterprise Platform within established RTO. The IBM team will work with the State to support DR planning activity including updates to the DR plan and identifying required changes as the State needs and environments evolve.

The IBM team will work with DHS to plan and schedule DR tests, providing support and coordination. This includes coordinating activities and identifying appropriate resources to support DHS' DR planning, testing, and execution. We will track and report DR test results to DHS. To address issues arising from DR testing, we will develop action plans, assist with resolving and remediation of these issues, and track their implementation and completion status.

Support change and release management

The release, change and configuration management process aligns with the DHS Enterprise Program change and release management process and provides detailed feature rollout and back-out plans. As a part of the tasks, we will capture the necessary documentation regarding each change and document them using the appropriate CM processes and tools. The IBM team will work closely with DHS and DIS to provide support on change management and RM functions.

Support capacity management

The IBM team has a deep understanding and wide range of knowledge and experience regarding capacity management, as it relates specifically to how application changes can impact the usage of IT infrastructure, such as CPU, network bandwidth, storage, I/O, and RAM. We will collaborate with DHS and DIS to understand applicable business trends, which may impact systems' capacity requirements, analyze historical trends, analyze application M&O actions that could impact capacity, and provide capacity forecasts and participate in and adhere to DIS' capacity planning processes.

The IBM team understands that CM enables IT infrastructure to be provided at the right time, in the right quantity, and at the right price to guide the use of IT resources in an efficient manner. CM aligns current and future capacity and performance aspects of the IT infrastructure with business requirements at acceptable cost.

Support batch job control and scheduling

The IBM team will support DHS with job scheduling and control using the scheduling tools available from DHS. The IBM team has experience with most job scheduling tools, and our team will be able to support DHS for scheduling jobs for EEF application and IE-BM. The IBM team will complete the following actions:

- Develop, document, and manage the processes and procedures for interfaces and batch operations architecture.
- Define job scheduling requirements, application software interdependencies, and re-run requirements for the production jobs.
- Use and manage scheduling tools for automating job execution (job workflow processes interdependencies, re-run requirements, file exchange functions, and print management).
- Maintain master job schedule and execute the batch jobs for the DHS EEF and the IE-BM systems.
- Perform job monitoring and manage resolution of failed jobs.

Support performance management

The IBM team will work with DHS to support performance management. The IBM team will use the existing monitoring tools, and if required, will bring our own monitoring tool. Our monitoring capabilities will keep track of the performance data related to resources and will share this information with DHS for trend analysis and to assess the performance impact on the infrastructure for changes being implemented. This information can be used to tune and manage resources to meet availability and performance SLRs. We will proactively monitor key resource performance indicators and identify and evaluate configurations changes, which will enhance performance when needed. Performance management will be done in coordination with DHS, and we will develop and document performance management procedures in alignment with DHS defined policies.

Support storage management

The IBM team will monitor system storage to develop trend analysis and detect negative trends. These trends and analysis findings will be reported regularly to DHS and DIS. This will help DIS plan for storage requirements ahead to avoid issues. As part of the monitoring activities, the IBM team will monitor and report on the following components:

- File storage and backup capacity utilizing operating systems tools, existing DHS installed Microsoft System Center Operations Manager (SCOM).
- Space reports by server (web and database), data base itself, and file system.
- Removal of memory leaks from code to reduce RAM needed.
- Improvement of garbage collection to reduce RAM needed.
- Modification of third party COTS to eliminate unneeded logging to reduce storage requirements.
- Elimination of unneeded language packs from COTS software.

To verify alignment with these initiatives, the IBM team will provide guidance to trends and capacity forecasting to DHS, as part of a quarterly review and alignment session. This quarterly session allows the IBM team and the DHS CIO to review our strategic plans and assess compliance and alignment with DHS. If the direction or forecast has changed, then a reassessment will take place and priorities and duties will be modified. We will look to conduct quarterly capacity planning exercises with DHS and DIS, so we are aligned.

Support network, hosting, and data center services

To support this, the IBM team, as part of monitoring, will perform the following tasks:

- Tune the data transfer intervals to reduce network bandwidth demands.
- Tune database, including adding indexes to reduce CPU, I/O, and network bandwidth.
- Reschedule activities off of peak load times to spread resource usage across the day or week.
- Size resources to handle peak loads, to introduce significant cost efficiencies.
- Monitor performance for physical and virtual environments along with predictive alerting.
- Monitor application performance using the existing monitoring tools. We monitor alerts when transactions are slow or unavailable as measured against the IE-BM SLRs. We also work to prevent future problems by reviewing the service level impact for future enhancements.
- Assist with the review of performance metrics and alerts for VMs and their related hosts including CPU, memory, disk usage, and network.

The RFP captures the expectations regarding the Vendor's role and responsibilities for M&O activities for the IE-BM application as well as other transitioned applications under Vendor's scope. The Vendor must provide a team which has the skills required to perform the M&O tasks and to effectively manage the relationship.

Instructions: Describe the Vendor's approach to managing the account to ensure quality services are provided and the SLRs are met. At a minimum, this should include a discussion of:

- The Vendor’s approach to client management including any processes, tools and documentation
- The Vendor’s staffing approach to M&O staffing including the capabilities to identify staff with required skills for full time and part time roles, long and short term roles required to address client needs
- The proposed DHS and Vendor M&O teams roles and responsibilities and Key Personnel
- The proposed M&O team structure
- Roles and responsibilities of each team member and how these align with the tasks captured in the RFP and Response Template
- Expectations regarding on-site presence
- Vendor’s processes for identifying, proposing and transitioning to replacement personnel. This should include a discussion regarding the approach to addressing performance issues.
- Staffing approach to ensure the Solution transitions smoothly from the implementation Project to being managed by the M&O team
- Any previous experience with similar clients, the challenges faced and how these were overcome

Based on IBM’s past performances on projects of equivalent size and scope, we have developed an approach to managing resources that brings a qualified team with the right breadth and depth of skills to successfully execute the State’s objectives. We have put together the IBM Team specifically to address the functional knowledge and expertise required to meet the State’s objectives in the short term and the long term.

Client Management

As part of our client management process, we will establish the governance for the project, identify the stakeholders and initiate work on the core M&O services. This proposed high-level governance model achieves effective governance through interactions on three levels – strategic, functional and operational.

The strategic level allows State and our M&O Leadership (Key Personnel) to develop and agree on a forward-looking M&O Strategy and then set the direction for the M&O teams. This body would meet quarterly and be responsible to:

- Review the performance, organizational priorities and strategic plans.
- Review and plan for long-term IT decisions and technology strategy.
- Communicate executive management strategies and direction.

At the functional level, the M&O Project Management team will focus on the strategic direction and overall project performance. This team would be responsible for:

- Overall contract performance including Service levels and key initiatives.
- Technology strategy and implementation of direction received from the Steering Committee.

- Review calendar of deliverables and impact.
- Resolve issues requiring IBM, joint, and/or State's action.
- At the operational level, day-to-day interactions focus on the provision of consistent, high quality service delivery to State. In addition, the Project manager and leads will review and report on:
- Project status.
- Backlog, Request and Change Management.
- Problem Management.
- Issues and dependencies

The operational level provides the daily support for M&O services to State by using the processes, procedures, and tools defined in the IBM Unified Methodology framework.

The proposed tools for term of the contract include:

Table 9: Proposed tools for M&O services

Description	Tool
Reports, document deliverables, tracking and other general use documentation	Microsoft Office Adobe Acrobat
Document repository for deliverables and project document	Microsoft SharePoint
Risk and issue management	Microsoft SharePoint and Excel
Project Data Security and Privacy policies and procedures	Microsoft Office
Project financial reporting and forecasting	IBM Integrated Project Planning and Forecasting (IPPF)
Internal IBM project document and deliverable repository	IBM Program Work Center (IPWC)
Requirements and change management	IBM Rational
Internal IBM monthly progress evaluation and reporting	7 Keys to Success

Staffing Approach

Our Maintenance and Operations (M&O) Services will support the existing EEF application as well as the new IE-BM solution once deployed in the production. This includes following activities:

- Break-fix corrective maintenance
- Preventative and Perfective maintenance
- Adaptive maintenance
- Database administration
- Operational processes

- Security administration and user account management

To achieve this and provide robust services to the State, IBM team will implement an agile maintenance and operations approach in which the rapid iteration cycles of agile software delivery are applied to the time-sensitive requirements of application maintenance. The goal is to use agile-style speed and efficiency to reduce existing maintenance backlogs and then keep up with new tickets as they come in.

Success requires the right team with the right skill sets, and resources brought together at the right time. Resources are forecasted and assigned based on need, keeping in mind the scope of the project and the skills and expertise required

Based on the technology landscape and architecture of the EEF and the new IE-BM solution, we have identified resources from our key practice areas with following core technology areas

- Cúram (Portal, Case Management, HCR, CGISS, SPMP)
- WebSphere Application Server
- DB2
- Interfaces (ESB)
- Cognos
- MDM
- Informatica
- Docushare

Our staffing approach is based on the integrated delivery team approach across M&O and enhancement services. This kind of integrated, aligned, highly skilled, and focused M&O delivery team will bring quality services and flexibility to State IT operations.

Apart from this we will also identify the key personnel satisfying the requirements in the RFP.

Key Personnel and Roles and Responsibilities

The IBM team's staffing and personnel management focuses on identifying key resources who will be available Day 1 to work with State staff in kicking off the project startup activities and seeing the project through to completion.

Based on the technology landscape and architecture of the EEF and the new IE-BM solution, we have identified resources from our key practice areas with following key skills

1. Cúram Technical Architect
2. Cúram Business Analyst
3. Cúram Developers
4. Cognos Report developers
5. Interface developers
6. Data Analyst
7. Database Administrator
8. QA Lead

9. QA tester
10. Project Manager
11. Technical Lead
12. Operations Lead
13. Operations Specialists
14. Configuration / Release Manager
15. ETL developers
16. MDM specialist
17. Metrics Measurement specialist
18. Data Security and Privacy consultant
19. Training specialist

Consistent with the requirements from the RFP, the Key Personnel roles consist of:

1. Engagement Executive
2. Operations Manager
3. Technical Lead
4. Security Expert

The following table represents the responsibilities of the roles above mapped to the specific M&O tasks:

Table 10: M&O Tasks Vs M&O Roles mapping

M&O Task	Mapped Roles
Application Security Admin	Data Security & Privacy consultant
System Performance / Monitoring	Operations specialists
Training	Trainer
Capacity Planning	Operations Manager, Technical Lead, Architect
Change / Release Configuration	Release Manager
Incident / Problem Management	Operations Manager, Business Analyst, Developers
Disaster Recovery	Testers, Developers, Operations specialist
System Audits	QA Lead
License Management / Provisioning	Operations Lead
Database Administration	Database Administrators
Security	Data Security & Privacy consultant, Security Expert
Governance (Tech)	Technical Lead
Data Quality	Data Analyst, Tester
Master Data Management	MDM specialist
SLRs	Metrics Measurement Specialist

M&O Team Structure

Following figure represents our proposed M&O team structure for the specified scope of services above:

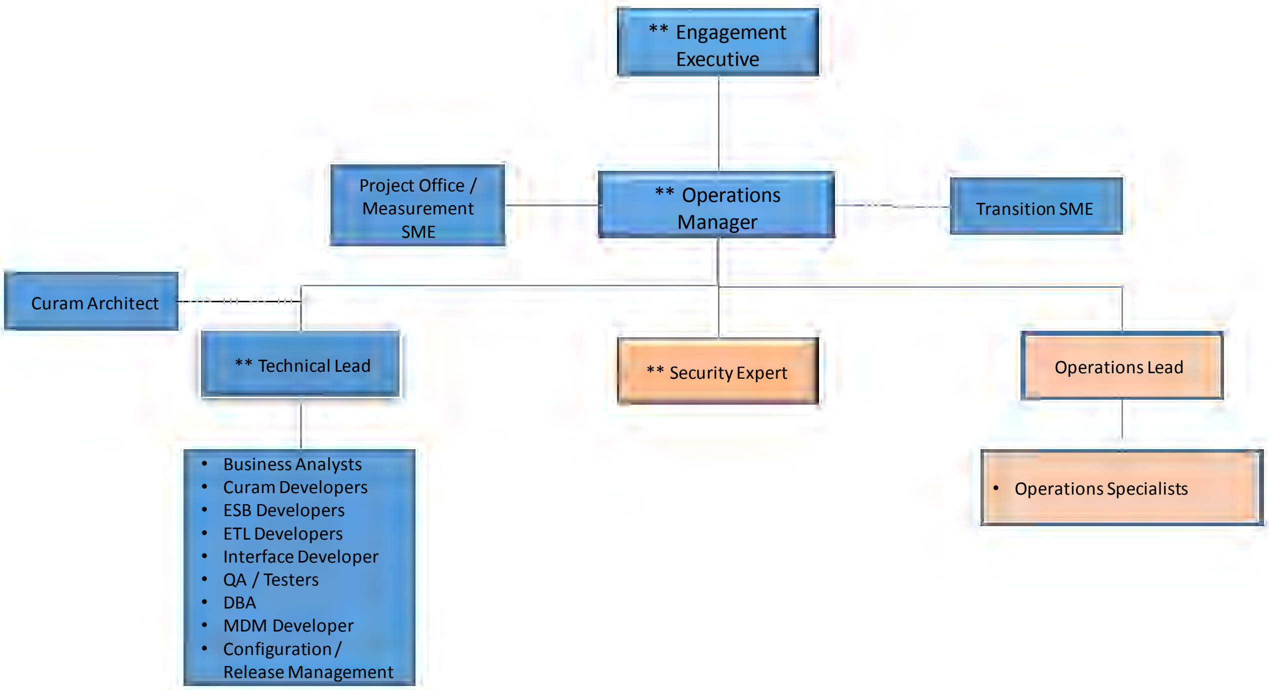


Figure 22: M&O Team structure

M&O Team Onsite presence

We will deliver M&O services using the best of our people, process, and technology, with 75% of our team at onsite, in Little Rock, and 25% in our US service delivery centers. Based on our assessment and experience, following roles will be at our US service delivery centers

1. Cognos Report developers
2. QA Testers
3. Jr Cúram developers
4. Metrics Measurement specialist

M&O Team Planning and replacement

Our core value “Dedication to Client success” is instilled in our team members who, as part of service delivery, are engaged in driving a high level of client satisfaction for the State. To retain high-caliber personnel, we use retention techniques such, preferential choice of assignment, promotions, and exceptional benefits. Our Project Manager will use the following techniques to support staff retention and identifying appropriate resources to be replaced:

1. Performance Standards: Our team will communicate performance standards to each employee throughout their employment. Our experience shows that letting an employee know exactly what is expected helps employees meet those expectations. We have found

that maintaining very high standards can lead to a sense of success and pride—key elements in identifying staff to be retained as well the as ones to be replaced

2. Regular Performance feedback: The Project Manager will monitor team performance from observation and project results, as well as using feedback from the State. This feedback is shared with the employee, thereby providing positive reinforcement for recognized superior performance or to plan a structure way to move the resource from the project
3. Continuing education and staff promotions: To align with individual team career aspirations and development plan, Project Manager will identify specific resource(s) that needs to be replaced

Once the resource movement need is identified IBM project manager will communicate to State key Stake holders as part of ongoing project communication plan. The propose resource name, and role in the project will be shared along with intended date to move the resource. Potential risk along with mitigation plan will also be shared to the State. Employee turnover is one of many project or service risks that IBM actively takes measures to mitigate. We verify that core skills are retained within the Client IBM team even if the existing resource moves out of the account due to ramp down or attrition

As part of our delivery methodology and process, IBM team produces appropriate documentation to enable a new team member to follow an accelerated learning curve with the project. IBM project Manager will identify replacement resources and on-boarded with a 3-4 week overlap with the resource being moved out. Additionally, the resource being moved out will be accountable to prepare an extensive knowledge transfer plan and content for the regular activities carried out by him/her as part of the M&O responsibility. This forms part of the hand over to the new resource during the on-boarding period.

M&O Team approach on DDI to M&O

Our staffing approach is based on our best practices and experiences in solution transfer from Project implementation to M&O team, as listed below

1. Involvement of M&O team early in to the development cycle
2. Rolling 3-month forecast of staffing requirements based on the skills and implementation project plan
3. Specific training planning for the existing M&O resources
4. Plan the staff onboarding based on the transition plan and go live period
5. Where appropriate, we utilize / move the resources from implementation team to M&O services, as part of our Integrated delivery approach

Our experiences with other projects

IBM Team has gained valuable experience and expertise from a number of successful large-scale M&O Cúram projects in the last few years. This experience has positioned IBM to deliver successful M&O services for Cúram based applications. Some of the significant lessons learned are shared below

State of South Carolina

Start Date: October 2016 End Date: On-Going

Success Story: IBM was engaged by State of South Carolina in October 2016 to work on the SC HCR Tracks Implementation project and ongoing M&O work. As part of the 4weeks assessment process, IBM conducted extensive interviews with the State stake holders and then also heard from the vendor resources. Information was analyzed by the IBM M&O SMEs and identified the following inefficiencies:

- There had been lack of clarity in communication across key stakeholders, absence of proper documentation, lack of proper configuration management procedures with parallel enhancement and development work, lack of change control / release management processes. After the assessment, IBM improved collaboration between the State and IBM resources, streamlined configuration management process, automation of critical batch jobs.

Summary of Lessons Learned and subsequent improvements by IBM

1. Daily Scrum meetings to prioritize the agreed-to defects logged in JIRA and issues with active participation across DHHS key stake holders
2. Established application support control plan and operational support control procedure documents
3. Established a clear M&O org structure with clear communication mechanisms
4. Implemented process control measures and ITIL based problem management procedures.
5. Use of Agile to manage backlogs
6. Estimates and project work-plans need joint buy-in between client and IBM to be able to maintain delivery schedules
7. Implemented measurement control processes

State of Missouri

Start Date: May 2015 End Date: On-Going

Success Story: In 2013 EngagePoint was awarded the implementation of Cúram at the State of Missouri. In 2014, EngagePoint was failing to meet its obligations and the State contracted IBM to perform an assessment of the Cúram architecture being deployed by this integrator. IBM completed the assessment and provided a report to the State. In May of 2015 the State Commissioner's office contacted IBM and informed us that a decision had been made to terminate EngagePoint's contract. We were awarded an initial 30-day transition contract, followed by a 120-day contract to do an assessment for Project-1, MEDES Implementation. This led to a subsequent award to IBM of a fixed priced $23M contract and a T&M Maintenance and Operations (M&O) contract.

Summary of Lessons Learned and subsequent improvements by IBM

1. Streamlined the process for handling backlog issues
2. Modified the release patterns for the fixpacks from once in a quarter to a weekly release utilizing a Devops approach
3. Scrum meetings for releases
4. Automation of batch jobs
5. Integrated delivery between DDI and M&O teams

3.0 Approach to DDI to M&O Transition

The Vendor should ensure that the responses to this section are in alignment with the requirements set forth in Template T-12 – Maintenance and Operations Requirements Traceability Matrix, Section O3.

DHS envisions that there are key transition activities that need to happen between the DDI team and M&O team. The DHS vendor will be responsible for managing the transition tasks between the DDI (Design, Development and Implementation teams) and M&O team.

Instructions: Describe the Vendor's approach to transitioning tasks for each release between the DDI team and M&O team, including planning activities, roles required, approach to communicating/interacting between the teams, the inherent challenges and how the Vendor has overcome these challenges in the past.

At a minimum, this should include a discussion of the following areas:

- Transition planning
- Knowledge transfer approach
- Approach to coordinating roles and responsibilities between both the teams
- Approach to transition progress milestones/check-points
- Quantifying the transition risk
- Approach towards readiness activities including checklists for completing transition

Transition planning

The IBM team objective is to facilitate seamless transfer of the IE-BM Releases to the M&O Team from the Design, Development, and Implementation (DDI) team. Our plan identifies the optimal period to add new incremental resources, as the M&O Team assumes Steady State responsibilities for each release. These new M&O Team members will commence KT activities during the test phase of the Releases, as they shadow the DDI team.

We will develop an Overall Transition Plan (OTP) which addresses setting up the transition governance, creation of a high-level transition plan, and preparation of the transition Product Backlog List (PBL).

The PBL consists of a prioritized list of the KT topics, activities, and items related to transferring the IE-BM Release to the M&O team. The items can be organized by application name, customized components, a group of components, business area, and critical transition-related activity.

The OTP shall consist of the following elements:

- Transition governance and approach.
- Creation and submission of the IE-BM M&O Transition Plan Deliverable.
- Identification of IE-BM M&O specific on-boarding and training requirements.
- Maintenance of policies and procedures to help governance activities related to security and privacy.

- Preparation of communication and risk management plan.
- Preparation of go no-go checklist.
- Definition of KT assessment criteria.
- Preparation of the transition PBL.
- Entry and Exit criteria for the Release transition.
- Creation of Microsoft Project Plan for the release transition schedule.

M&O entry criteria

As part of transition planning, M&O services' entry criteria will be evaluated.

When initially completed, an M&O entry criteria checklist is intended to depict the state the system, when it is scheduled to be turned over to the M&O team. It is important to note that it is understood that the tasks may not yet be completed. This initial pass should highlight gaps that are not currently in scope or that the implementation team does not have in plan, so the M&O Team can plan and solution accordingly. This checklist can then be used as the project progresses to verify the gaps are addressed prior to the turnover to the IBM M&O team.

The checklist focuses on key elements, such as:

- Implemented business requirements,
- Stability and completeness of the code,
- Availability of updated training and user documentation
- Required security guidelines,
- Conformance with coding standards, such as naming conventions
- Definition of the business processes required for successful transition,

The following attachment contains the entry criteria checklist: Appendix B: Entry Criteria Checklist

AMS Entry Criteria Checklist.doc

Based on the successful completion of the entry criteria checklist and the transition approach, detailed transition planning will be accomplished.

DDI to M&O transition approach

The following graphic shows the DDI to M&O transition approach:

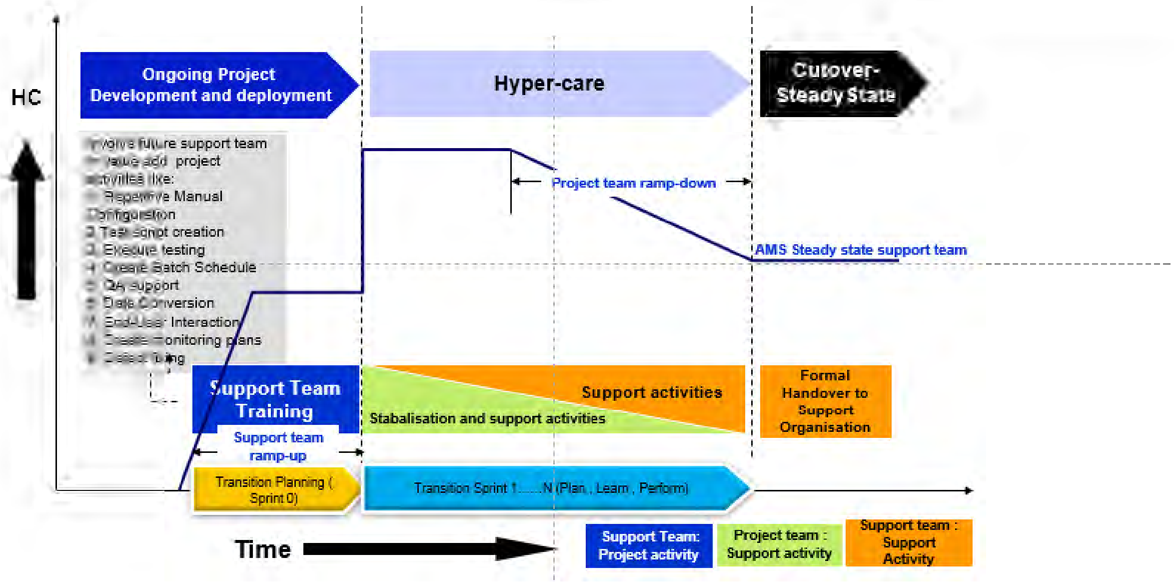


Figure 23: DDI to M&O transition approach

The IE-BM solution M&O transition task includes the activities required to effectively transition the IE-BM solution from the IBM DDI team to the IBM M&O team. This activity is expected to start prior to the start of M&O for the individual IE-BM solution releases, and in parallel with DDI activities. As M&O activities for the EEF solution will already be occurring, this task is focused on updating plans and processes rather than process development.

The transition approach will be the same as mentioned in Section 1.0 for the transition from DDI to M&O team.

There are five IE-BM releases requiring transition:

- Release 1: Client Portal enhancements and integrated application
- Release 2: Integrated application interfaces
- Release 3: SNAP
- Release 4: TANF
- Release 5: Medicaid

Release 1: Client Portal enhancements and integrated application

Release 1: Estimated Transition timeline:

- Release 1.0 is estimated to go-live by the end of Aug 2018 followed by a two month (60 days) hyper-care period.
- Transition is planned for nine weeks starting from Aug 13, 2018 with two weeks of OTP, followed by seven weeks of KT with two sprints of three to four weeks each, and estimated to start the Steady State by Oct 15, 2018.
- Transition will be from the DDI team to the M&O team.

- During the hyper-care period, the SMAs priority will be to work on the post go-live support and to provide transition to the M&O team.

The IE-BM DDI to M&O Release 1.0 AT plan is shown in the following graphic:

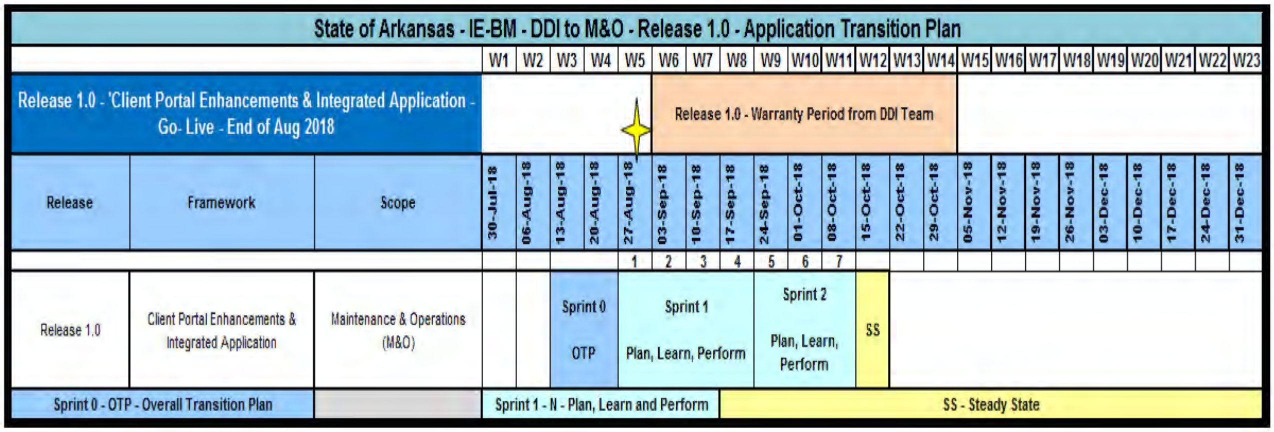


Figure 24: Estimated DDI to M&O Release 1 AT plan

Release 2: Integrated application interfaces

Release 2: Estimated Transition timeline:

- Release 2.0 is estimated to go-live by end of October 2018 followed by 60 days of a hyper-care period.
- Transition is planned for eight weeks starting from Oct 15, 2018 with two weeks of OTP, followed by six weeks of KT with two sprints of three weeks each and estimated to start the Steady State by Dec 10, 2018.
- Transition will be from the DDI team to the IBM M&O team.
- During the hyper-care period, the SMAs priority will be to work on the post go-live support and to provide transition to the IBM M&O team.
- Since this is a point release, the transition will be handled internally.

The IE-BM DDI to M&O Release 2 AT plan is shown in the following graphic:

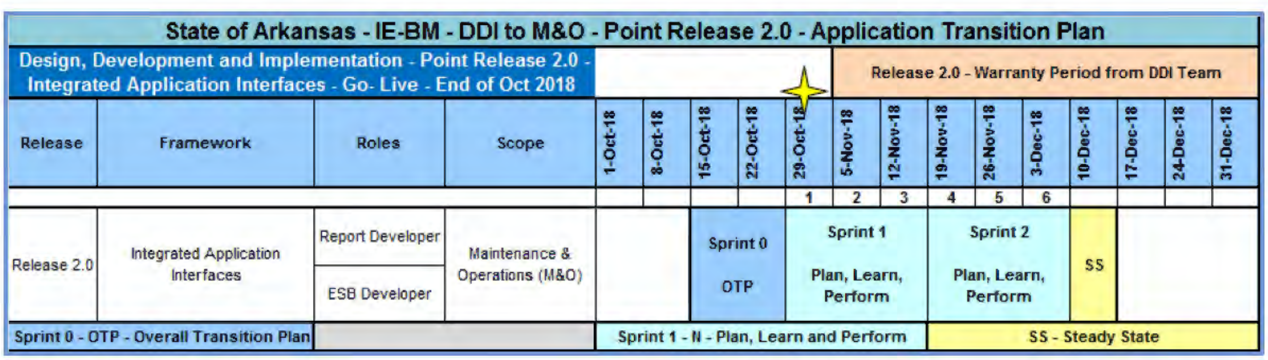


Figure 25: Estimated DDI to M&O Release 2 AT plan

Release 3: SNAP

Release 3: Estimated Transition timeline:

- Release 3.0 is estimated to go-live by end of April 2019 followed by 60 days of hyper-care period.
- Transition is planned to start from Apr 15, 2019 with two weeks of OTP, followed by eight weeks of KT with four-four sprints each and estimated to start the Steady State by Jun 24, 2019.
- Transition will be from the DDI team to the IBM M&O team.
- During the hyper-care period, the SMAs priority will be to work on the post go-live support and to provide Transition to the IBM M&O team.

The IE-BM DDI to M&O Release 3 AT plan is shown in the following graphic:

State of Arkansas - DDI to M&O - Release 3.0 - SNAP - Application Transition Plan																
Design, Development and Implementation - Release 3.0 - SNAP - Go-Live - End of April 2019							Release 3.0 - SNAP - Warranty Period from DDI Team									
Release	Framework	Roles	Scope	15-Apr-19	22-Apr-19	29-Apr-19	06-May-19	13-May-19	20-May-19	27-May-19	03-Jun-19	10-Jun-19	17-Jun-19	24-Jun-19	01-Jul-19	08-Jul-19
						1	2	3	4	5	6	7	8			
Release 3.0	SNAP	Curam Developer MDM Developer	Maintenance & Operations (M&O)	Sprint 0 OTP		Sprint 1 Plan, Learn, Perform				Sprint 2 Plan, Learn, Perform				SS		
Sprint 0 - Overall Transition Planning				Sprint 1 - N - Plan, Learn, Perform						SS - Steady State						

Figure 26: Estimated DDI to M&O Release 3 AT plan

Release 4: TANF

Release 4: Estimated Transition timeline:

- • Release 4.0 is estimated to go-Live by mid of October 2019 followed by 60 days of hyper-care period.
- • Transition is planned for ten weeks starting from Oct 1, 2019 with two weeks of OTP, followed by eight weeks of KT with four to four sprints each and estimated to start the Steady State by Dec 9, 2019.
- • Transition will be from the DDI team to the IBM M&O team.
- • During the hyper-care period, the SMAs priority will be to work on the post go-live support and to provide transition to the IBM M&O team.

The IE-BM DDI to M&O Release 4 AT plan is shown in the following graphic:

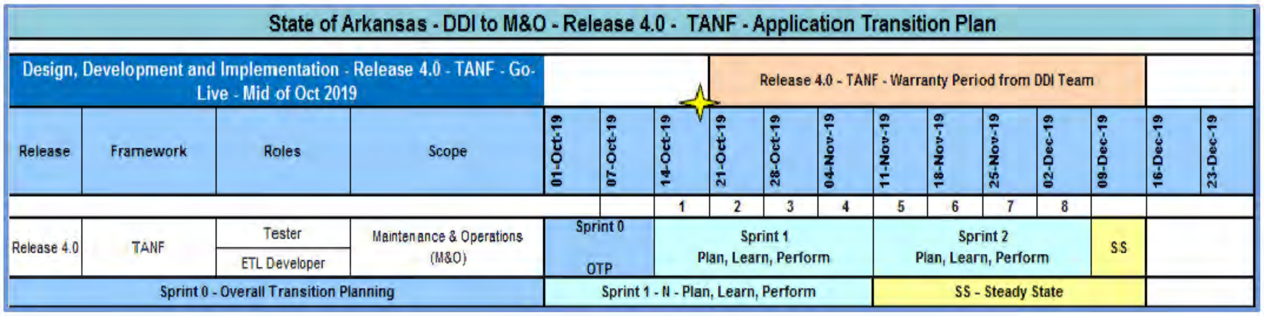


Figure 27: Estimated DDI to M&O Release 4 AT plan

Release 5: Medicaid

Release 5: Estimated Transition timeline:

- Release 5.0 is estimated to go-live by end of March 2020 followed by 60 days of hyper-care period.
- Transition is planned for ten weeks starting from Mar 16, 2020 with two weeks of OTP, followed by eight weeks of KT with four to four sprints each and estimated to start the Steady State by May 25, 2020.
- Transition will be from the DDI team to the IBM M&O team.
- During the hyper-care period, the SMAs priority will be to work on the post go-live support and to provide transition to the IBM M&O team.

The IE-BM DDI to M&O Release 5.0 AT plan is shown in the following graphic:

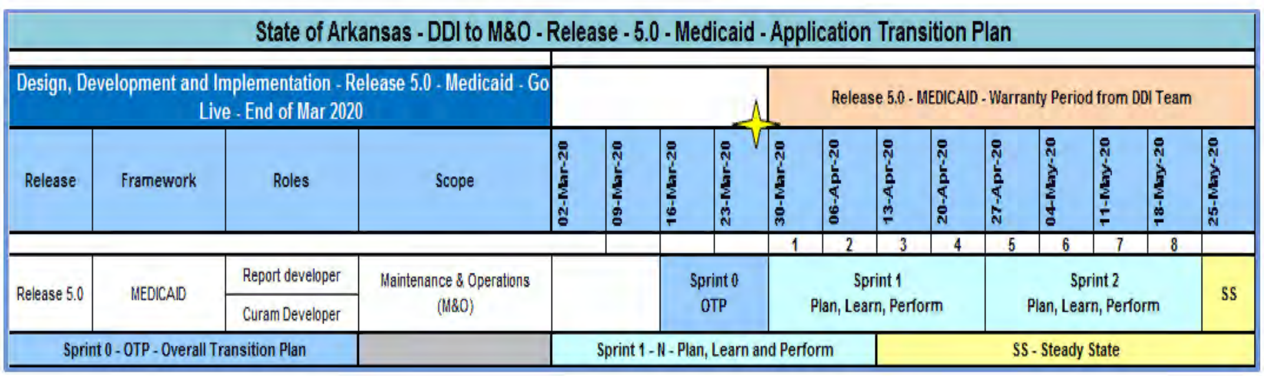


Figure 28: Estimated DDI to M&O Release 5 AT plan

Approach to coordinating roles and responsibilities between all stakeholders

IBM's transition team members have a deep understanding of the overall process, roles, and responsibilities associated with a successful transition.

DDI team SMAs will be a critical part of the transition team. A successful transition will require dedicated DDI team resources, including a full-time Transition Lead and several FTEs, who each lend part-time support to the transition.

The following table includes the envisioned roles from both IBM and the State team during transition period:

Table 11: M&O and DDI roles and responsibilities

Organization	Role	Responsibilities
M&O Team	Application Transition (AT) Manager	• DPE will serve as the AT Manager for the IE-BM Release Transitions • Provides project management support for the assigned partition(s) within AT. • Facilitates sprint planning including KT topics and scheduling into a sprint backlog list, daily and weekly status calls.
M&O Team	Delivery Project Executive (DPE)	• Is responsible for operational aspects of service delivery and providing process experience. The DPE supports the Project Executive in maintaining the business relationship with DHS and DDI team and facilitating customer satisfaction.
DDI Team	Security Lead	• Assists in providing IBM access to the EEF or IE-BM systems, components, and facilities.
DDI Team	DHS /or DDI SMAs (Subject Matter Experts)	• Conducts KT activities (training, guiding, reviewing) to facilitate KT to IBM resources.
DDI Team	IE-BM Business Analyst	• Works with the M&O DPE in developing a transition PBL and a sprint backlog list.
DDI Team	Process SMA(s)	• Assists IBM in setting up operational processes, tools, and service level reporting and approves deliverables

Approach to transition progress, milestones, and checkpoints

Transition progress will be tracked and reported on in the weekly status reports.

Transition status reporting

Transition success factors point to the need for a continued, mutually strong, collaborative relationship along with disciplined transition project execution. To achieve this state, the M&O DPE will serve as the TIM, who will be responsible for Release transitions. The TIM Lead has the following key responsibilities:

- Facilitate and maintain communications with the stakeholders.
- Manage status meetings and work sessions of their respective streams.
- Handle dependencies, issue and risk reviews, change management, deliverables management, and schedule tracking.
- Complete the transition of their respective streams as per the agreed plan.

Transition team meetings approach

Separate or combined weekly transition status meetings for the Release transition streams will be set up to discuss the transition progress. DHS, the DDI Team and the M&O Team will participate in this meeting and agree on the progress and raise risks or issues that deserve attention.

IE-BM Release KT assessment

The objective of knowledge transition is for IBM and the State to jointly measure the increase in knowledge levels of our resources using transition statistics, reporting, and the knowledge assessment methods. IE-BM Release KT assessments will be used as part of exit criteria for each release.

Through the process of transition, IBM resources will progressively increase their knowledge level for IE-BM framework M&O services. The key to successful KT is conducting the KT assessment at the end of each phase of transition and taking appropriate actions to close identified gaps.

The following typical parameters are used to establish assessment criteria for the transition of application services.

- Completion of training activities.
- Understanding of IE-BM framework support processes and methods.
- Understanding of IE-BM framework support roles and responsibilities.
- Practical knowledge of using the application tools.
- Problem detection and unique debugging information.
- Quality of application knowledge wiki.

DHS Customer Business Knowledge Index (CBKI)

As with the EEF Transition, we will continue to utilize the DHS Customer Business Knowledge Index (CBKI). The CBKI is a knowledge assessment framework that the M&O team will use to evaluate the knowledge and skill level of the IBM team for each transition. The objective of knowledge assessment is for the State and IBM to jointly measure the increase in knowledge levels of our resources using transition statistics, reporting, and the knowledge assessment methods. The tool helps consolidate evaluation results for large cross functional teams, through extensive lists of dimensions grouped by knowledge area. KT gaps and action plans become easier to identify and pursue.

[O3.8]

Quantifying the transition risks

Effective risk management during transition will be a key ingredient for success and is intrinsic to how IBM manages transitions. IBM uses a standardized risk management process and believes in transparency. IBM will adopt a stringent, unwavering approach to risk management, using technology and a structured set of tools and proven processes to keep risks from jeopardizing DHS business.

Risks will be captured, as they are identified, over the course of the transition using an agreed-on risk management system. Formal risk reviews will be performed both at prescribed points and on an ad-hoc basis. The IBM risk management approach enables reporting, assessment, assignment, and monitoring of resolution and action plans throughout the project. It will also provide for a smooth transfer of open risks or issues to the ongoing support team at transition exit. The following table includes transition risks:

Table 12: IE-BM Transition risks

#	Risk	Impact	Probability	Mitigation plan
1	Accesses are not available prior to the start of the KT sessions for new team members.	High.	Med.	• List of accesses required to be shared with State and DHS during the OTP phase.
2	Key IBM DDI resources may not to be available due to high volume of tickets during Hyper-Care.	High.	High.	• IBM DDI team and IBM M&O to jointly develop the KT training plan to identify the participation needs, including timeframes, of personnel. • When required, the IBM Transition Manager escalates to the IBM DDI team Project Manager for assignment of committed resource(s). • We will use alternative SMAs, as required. • IBM DDI team will commence application documentation early to be shared with the AMS team once they are on-boarded to speed up KT.
3	There may be a lack of application documentation thereby increasing the reliance on SMA KT.	Med.	Med.	• We will engage processes for documenting the Release at the outset. • AID templates can be pre-filled by M&O staff.
4	KT may be inadequate.	Med.	Med.	• IBM transition team will establish quality gates for each phase of transition and conduct joint reviews of progress with IBM DDI and AMS teams.
5	Communication links and external access through the firewall may not be established on time for	High.	Med.	• IBM will work closely with State DHS and your network provider to facilitate the communications link is progressed and issues are resolved in a timely manner.

#	Risk	Impact	Probability	Mitigation plan
	the proposed transition activities to commence.			
6	The change in support culture may cause concern to some business users.	High.	Med.	• IBM M&O will develop clear support processes during transition. • Communications plan will be used to facilitate education of business users about changes to the support processes. • The process changes and interlock between IBM M&O and State and DHS will be documented in the Procedure Manual as part of ST.

Approach towards readiness activities including checklists for completing transition

The transition plan is proposed based on the understanding of the functionalities involved. The timeline is defined to have essential time for detailed planning and KT. Releases 1, 2, 3, 4, and 5 KTs are proposed for nine or ten weeks including two weeks of OTP. The KT is planned during the DDI testing phase, where the M&O team will be part of the DDI team getting an understanding of the agreed-to defects and resolution strategies. When the IBM DDI team is about to exit the hyper-care, they will be provided with a checklist for them to evaluate and provide the handover to the IBM M&O team.

Exit criteria for Hyper-Care

Hyper-Care has the following exit criteria:

- To facilitate smooth transitions between the DDI Hyper-Care and Steady State M&O support, specific exit criteria will be completed (please see the Hyper-Care exit criteria checklist).
- Metrics analysis will determine the health of the system. Transactional metrics and operational metrics will be used during the transition of the new system. This will be the primary driver for exit and entrance criteria.
- Progress against each criteria will be measured and reported on a regular basis throughout Hyper-Care.

The following graphic shows how the IBM team will measure progress during Hyper-Care:

	Daily Business Metrics	Daily Deploy Metrics	Health check	Process Performance Measurement
Purpose	For the Business to monitor performance of transactional process areas and direct appropriate actions	For team to monitor system performance & compliance "issues" in transactions	Monitor business ability to operate post-Go Live without impacting customers/suppliers	Monitor Process Performance to identify & address under performing areas
Content	Metrics identified by the Process Champions	Transaction data volumetric & workflows	Measures covering fiscal, customer, supplier, systems and high level workflow	Each process area has their own process KPIs to track process performance

Figure 29: Measuring progress during Hyper-Care

The following attachment provides the Hyper-Care exit criteria checklist: (Appendix C)

Hypercare Exit Criteria Checklist V1

Once Hyper-care has been completed, the M&O team commences responsibility for service delivery. Initially there will be a baseline period, which will be six months. Upon completion of that period Steady State and the associated SLRs formally commence.

The cut-over assessment will be done based on the following work products; assessment should take into consideration the work products and individual performance based on resolution of tickets:

- Quality of content in the Application Information Document.
- KT assessment ratings and the hands-on-activity done in learn-perform phase of each sprints.
- Final status is based on the go/no-go review.

Cut-over to the baseline period is the formal completion of the KT, indicating that the M&O services team is ready to take on project management responsibilities without assistance from the current DDI team. The IE-BM framework release functionalities will be supported by the M&O team from this period onwards.

Transition deliverables will be uploaded in the DHS SharePoint repository along with the appropriate sign-offs. Lessons learned will be completed and reviewed.

[O3.4]

Service Transition (ST): DDI

The DDI ST will use the ST components, operational processes, operational reporting, SLM scorecard, and governance plan, from the EEF ST. The ST components delivered during the EEF phase will be evaluated, and gaps will be identified and reviewed with the DDI team. A ST plan will be documented based on the agreed to process, operational reporting, SLM, and governance changes. The ST plan will be aligned to the same work streams as for the EEF ST.

The ST will be managed and reported on as part of the overall TCB. Reuse of the EEF ST components is expected to be significant. Most of the updates to the operational reports and SLM scorecard are expected to be made through configuration changes (refine assignment groups and towers/sub towers). The ST Project Manager will facilitate concurrence for the changes has been obtained from DDI.

ST will cover the process, reporting, and SLM training for each release. The Account Training Tracking tool established during the EFF ST will be used for tracking.

[O3.2, O3.3, O3.7, O3.8, O3.9b]

4.0 Approach to System Modifications/Enhancements

The Vendor should ensure that the responses to this section are in alignment with the requirements set forth in Template T-12 – Maintenance and Operations Requirements Traceability Matrix, Section O4.

DHS anticipates modifications and/or enhancements will be required to the IE-BM application as well as other applications transitioned under the Vendor's scope, during the M&O phase. These could range in priority and size. The Vendor will be responsible for managing the entire implementation lifecycle for these changes from receiving the request through successful deployment into the production environment (and training, if required).

Instructions: Describe the entire process required to convert a request into a deployed enhancement. Include a discussion regarding how the Vendor plans to schedule/bundle enhancements, how the process may change based on the size/complexity of any changes, staffing approach to support the potential for variable demand, any challenges envisioned and how the Vendor proposes overcoming these challenges. The response should include a description of the approach for the following:

- Estimating costs
- Defining/documenting the requirements
- Detailed design
- Configuration and development
- Documentation management
- Testing
- Training
- Deployment
- Coordination between the various teams during deployment including activities performed such as regression and performance testing and deployment scheduling

The IBM team understands the needs specified in the proposal for the anticipated system modifications and enhancements for EEF and the to-be-developed IE-BM. IBM has put together the our team specifically to address the functional knowledge and experience required to meet the State's objectives in the short term and the long term.

IBM's processes and methodologies are represented by IBM UMF for delivering enhancement services.

The UMF provides the IBM team a set of defined assets and tools, such as work products or templates to support requirements, design, standards, and sample deliverable documents that we will customize for the State. These accelerators allow our teams to gain immediate efficiencies and move through the early months of the project by taking advantage of available assets right away and avoid starting from scratch.

Enhancements approach

IBM's approach to systems modifications and enhancements includes the following activities:

- Collaborate with DHS to outline and refine the enhancement requirements.
- Develop the schedule, estimates and associated costs for the enhancement
- Conduct an impact analysis to assess the impact on system performance, batch schedules, as appropriate.
  - Document the scope of the enhancement and submit the enhancement request (which will be project change request with the Enhancement Requirements and Cost Estimates Deliverable) to DHS for review and approval
- Once approved and per the agreed to schedule, develop the solution design and scope, based on requirements.
- Develop make modifications for the approved enhancement based on agreed-to design.
- Apply code to or configuring the development system.
- Perform the requisite testing.
- Create program documentation.
- Identifying user acceptance.
- Creating or modifying user training materials, as required.
- Promoting code from test to production.
- Complete and submit the Completed Enhancement and Release Check-List

The IBM team's proven experience:

- ✓ Our standard process is to institute a 30/60/90 day rolling forecast for Enhancements. This provides the optimal approach for both DHS and the M&O Team to plan and prepare for Enhancements.
- ✓ We will follow the IBM Watson Agile SDLC Methodology for Enhancements. This provides benefits by utilizing an Iterative Development approach and remains consistent with the process utilized during DDI
- ✓ Our IBM M&O Team will follow our Continuous Improvement framework which collects lessons learned, the results of client satisfaction surveys, process improvements, and current leading practices as part of enhancement request and project closure.

Based on the business need and release calendar, a structured 30-60-90 day rolling forecast mechanism will be used to review the prioritized enhancements, planned schedules, identify enhancement staffing requirements and make adjustment based on business demands and imperatives.

How the IBM team will deliver

Based on our wide-ranging services implementations with similar public-sector clients, IBM proposes to utilize the IBM Watson Agile delivery framework. As with DDI, the Enhancements Team(s) will follow the IBM Watson Agile SDLC methodology created by IBM in the Watson

Health organization shown in the figure below. It is based on principles extracted from the Agile Manifesto and elaborated by the Scrum Alliance and Project Management Institute as described in Section 1.0 Approach to Managing the Project. The IBM Watson Agile SDLC methodology iteratively creates software and documentation deliverables required to implement large or complex systems integrations in a health and human services environment using best industry practices.

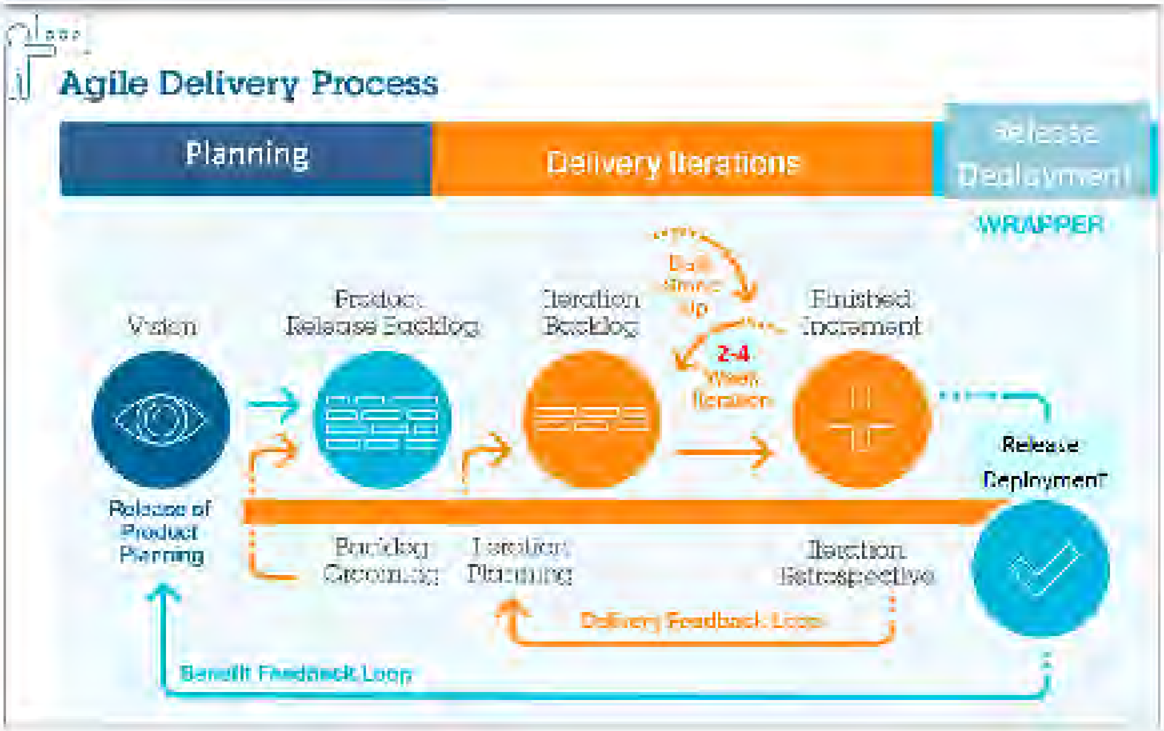


Figure 30: IBM Watson Agile SDLC Methodology applies to Enhancements

The IBM Watson Agile Methodology will release new IE-BM system Enhancement comprised of the results of iterative development sprints executed using agile principles. Key phases of the methodology are Planning, Delivery Iterations, and Release Deployment. Our methodology allows IBM to provide a consistent tailored delivery model that meets the specific requirements of the project and satisfy Arkansas policies and standards established by CMS Enterprise Life Cycle (ELC).

Planning is conducted at multiple levels:

1. Project start up
2. Release planning
3. Agile backlog grooming
4. Sprint planning

Project Start Up Planning. The IBM Watson Agile Method includes creation and review of several project-level plans to define and guide the implementation of project standard procedures throughout the SDLC process.

Agile Backlog Grooming. Agile planning will include backlog grooming where Agile epics and stories are created based on enhancements to the IE-BM system features that are related to business use cases and requirements. Agile Stories are written to identify system features to be configured or developed during the project. They will be cataloged according to their corresponding release and organized in a feature breakdown structure to facilitate planning completeness. Each Agile Story is a simple statement describing system features in role-activity-outcome format:

> "As a <role identifier> I would like to <functional action or activity> in order to <expected outcome>"

The stories are associated with Enhancement requirements and use cases, and may be documented in the Requirements Traceability Matrix (RTM) for tracking and validation.

Sprint Planning. Planning at the sprint level includes review of the stories, requirements and use cases prior to beginning the sprint. Edits are made to the stories before the sprint starts based on comments from Joint Application Design (JAD) sessions, table-top demonstrations of system capabilities and elaborations made to requirements during validation to make them specific, measurable and implementable.

Once the stories are finalized for the sprint, estimates will be validated and refined prior to starting the sprint. Adjustments to estimates may result in changes to the sprint schedule or scope subject to change management procedures.

Part of the sprint planning effort is the identification of upstream activities that need to occur before the start of the sprint. These may include high level functional and technical design, joint application design (JAD) sessions, user input solicitation, complex problem solving, and long lead items such as planning and coordinating with third data source vendors.

Planning efforts for the project for each of these areas are recorded in the project work plan and tracked and adjusted as needed during execution of the project. Delivery iterations and release deployment activities implement the features identified in the planning process

Approach. This approach helps achieve demonstrable, daily progress and promotes ongoing engagement of the key stakeholders in each project, which is essential to quality application development. When the IBM team deploys, we will seek to group those stories that have few dependencies on other stories into the current release train. This allows us to push smaller, independent functional units of work through the deployment pipeline faster, making new application releases and updates more frequent and cost-effective for the State.

[O4.1, O4.2]

Gather and document business solution requirements

IBM understands that the business functional requirements gathering is a critical activity in the planning and analysis phase and our approach includes the following characteristics:

- User centric, holistic, and inclusive way to understand the needs of the different user groups within State's department.
- Collaborative manner to gather and document the business requirements.

IBM Rational Requirements Composer will be used by the IBM team, and it provides a platform for collaborative requirements definition.

The key tenets of our requirement gathering are develop and document requirements that facilitates the following outcomes:

- The business requirements are aligned with the State's business plan, the application portfolio plan, new or emerging business needs and expectations, constraints, and interfaces.
- Common understanding of the requirements can be established, maintained, and communicated with State departments.
- System requirements and component requirements are consistent with the State department business requirements.
- Requirements are identified, traced, and refined throughout the development lifecycle.
- Changes to, or inconsistencies between the requirements, work products, work product components, and project plans are identified, managed, and controlled.

IBM will work with State department key stakeholder in formalizing the plan to conduct user surveys, interviews and diary studies, requirement workshop, or joint application requirement sessions. The following typical output is derived from such sessions:

- High-level document that outlines business goals to be achieved by the product and aligns these with the identified user needs.
- Journey maps: A single workflow through an experience, decomposable in to steps.
- Personas: A user archetype based on role and other characteristics that influence how a user interacts with the applications.
- User stories: A codeable requirement expressed in terms of user experience.

[O4.2]

Resource planning

As indicated in the earlier section, a 30-60-90 rolling forecast mechanism will be used and formally tracked, updated, and synchronized with the business demand, described in the following list:

- The first 30 days of the 90-day plan are confirmed request for projects that are already approved by the State.
- The second 30 days of the 90-day plan are requests that have higher probability of being approved by the State.
- The last 30 days of the 90-day plan are forecasts and can be either approved or rejected by the State.

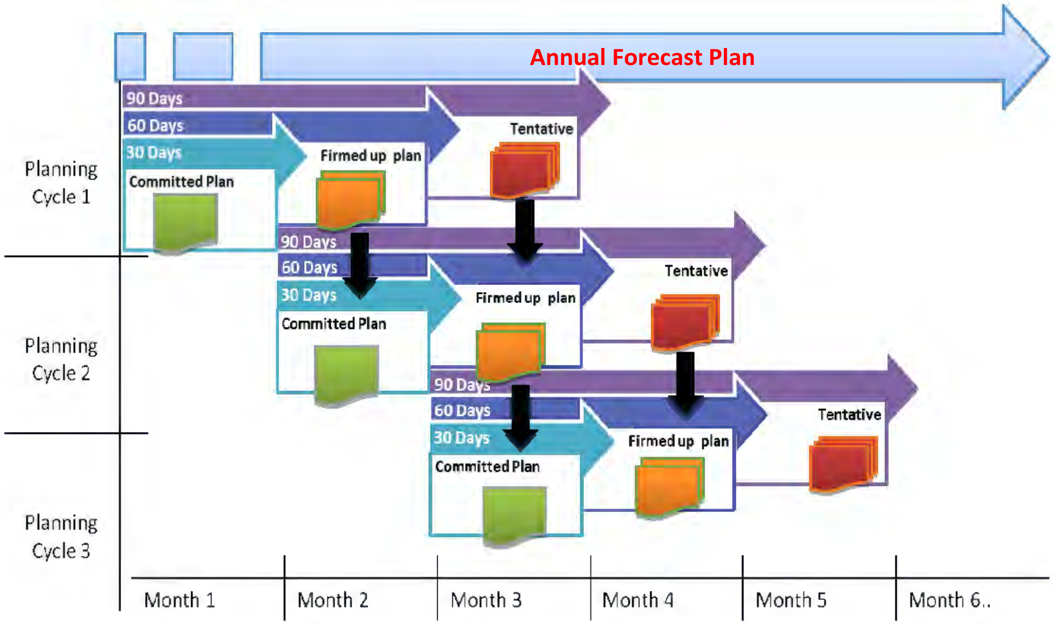


Figure 31: Rolling forecast model

IBM strongly believes that the application enhancement demand would fluctuate over a period based on the varying business demands and priorities. To reflect the actual demand on ground, IBM would like to propose a Core-Flex model.

In addition, IBM employs a management structure that provides an environment to enhance value to State while enabling skills enhancement and resource sharing in a project-based environment. Baseline reviews occur monthly as part of the continuous planning cycle. These reviews address changes to business needs, forecast resource requirements, address capacity planning needs, and suggest changes to the sourcing solution on demand.

Effort and cost estimates

As part of this phase, IBM will develop the detailed estimate and associated project plan based on the requirements as documented in the required Enhancement Requirements and Cost Estimates Deliverable. We understand the State's desire for the M&O team to be responsive to enhancement requests as specified in SLR O7.6, DHS Enhancement request response time. Our Enhancement development process flow is depicted in the following figure. For each enhancement work request, the IBM team will follow this process to estimate the effort and associated costs, based on the agreed rates. Once this is formally signed off by the State, the project will be started, per an agreed to schedule and start date.

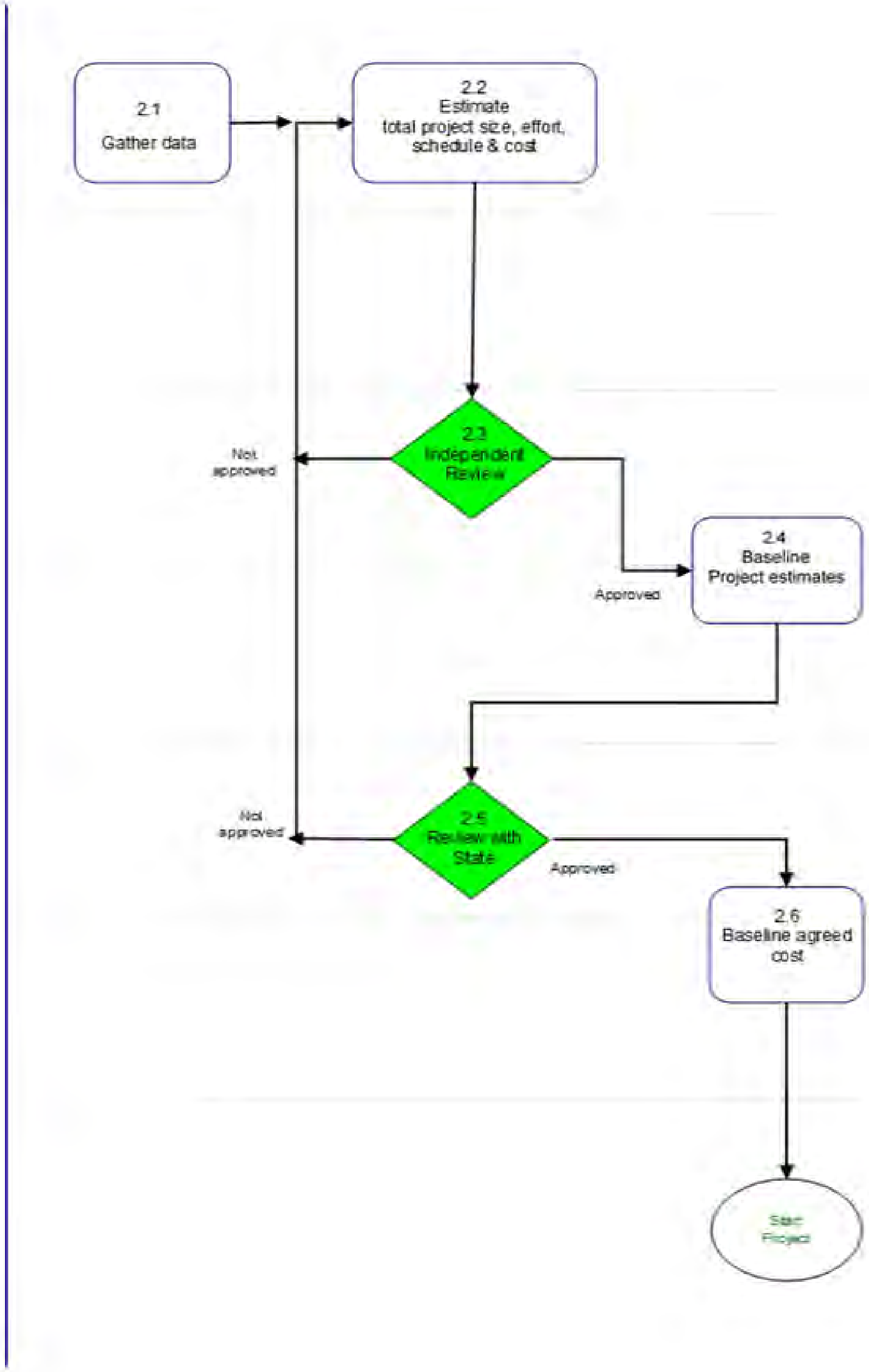


Figure 32: Estimation process flow

The following table includes the estimation process flow activities with input and output:

Table 13: Estimation process flow activities and input and output

Activity	Input	Output
2.1 Gather data.	• Project scope and requirements. • High-level solution.	• List of data sources used, including historical data from other similar projects (if available). • Chosen estimation approaches and strategy.
2.2 Estimate total project size, effort, schedule, and cost.	• High-level solution. • Project scope. • Product work breakdown structure. • Task quantities. • Work rate assumptions. • Chosen estimation approaches. • Resource assignments and cost rates. • Hardware and software costs. • Project calendar.	• Total project size, effort, schedule, and cost project plans. • Assumptions and dependencies. • List of risks and anticipated impact.
2.3 Conduct independent review.	• Estimation report.	• Approved estimation report of size, effort, schedule, and cost.
2.4 Baseline Project estimates	• Estimation report consisting of base-lined estimate of size, effort, cost, schedule, and assumptions. • List of risks and impact. • Draft the Enhancement Requirements and Cost Estimates and submit a PCR for the Enhancement	• Proposed project cost, with variance and assumptions. • Finalized project plan.
2.5 Review with State key stakeholders.	• Proposed project schedule and costs. • Estimation report and project plan.	• Approved project cost and project plan. • Project plan updated with evidence of approval from State.
2.6 Baseline agreed project cost.	• Approved and agreed project costs, project plans, and assumptions.	• Project plans with agreed effort and cost.

[O4.5]

Build and test

Build and unit testing

In this phase, the IBM team will design and build the specific components associated with the enhancement request for EEF and IE-BM system and perform unit testing of the developed components. The build will include configuration, customization, and enhancement of the product and integration with external interfaces and downstream applications as per the signed off design and technical documents. For the customization needs, existing technical architecture for EEF and IE-BM system will be followed for uniformity and easy maintenance of code. The IBM team will also prepare a traceability matrix and document the test strategy.

The IBM team will provide the following deliverables as specified in T-12. As per our Agile delivery methodology, these documents will be updated based on the agile sprints planned and iterative changes being implemented.

Table 14: Deliverables for build and test

Deliverable title
Functional Design Document (FDD)
Technical Design Document (TDD)
Updated and Completed Functional and Technical Requirements Traceability Matrix

The following table provides the tasks associated with build and unit testing, specifically, how the IBM team will collaborate with State at each stage:

Table 15: Tasks associated with build and unit testing

Tasks	IBM	State	Output
Iteration planning and updates to the project plan to create the specific design document.	R	C	Requirements Traceability matrix.
			Updated integrated project plan.
Development of FDD and TDD.	R	I	Specific FDD and TDD.
Coding and unit testing.	R	I	Application code with unit test results.

The coded components will be unit tested as per the unit test scripts. The coding and testing effort and the number of agreed to defects are the quality parameters that will be measured in this phase. The IBM team will follow the coding standard, which is defined already by industry, during this phase. Peer review and group review will be done in this phase. Checklists and templates will be used to maintain high quality of deliverables. We will also conduct walk-through review of configuration changes and modifications performed as part of the build process.

[O4.3, O4.4, O4.8, O4.9, O4.14]

Integration and regression testing

The IBM team understands the key role testing and QA plays in the successful software enhancement projects associated with EEF and to be developed IE-BM system. Based on our experience in similar projects, the IBM team will do adequate planning and testing early in the lifecycle to significantly lower the cost of software development and maintenance. It also greatly reduces the risks associated with deploying poor quality software, such as poor user productivity, data entry and calculation errors, and poor functional and performance behavior.

The IBM team will follow the V-Model shown in the following figure. The left-hand side of the model indicates how we incorporate reviews and QA throughout the requirements validation, design, and development of application enhancements. As the IBM team move back up the right-hand side, application testing, additional reviews, approvals, and QA are completed to validate that each enhancement is ready for the next release to production. Requirements traceability is clear throughout the entire process.

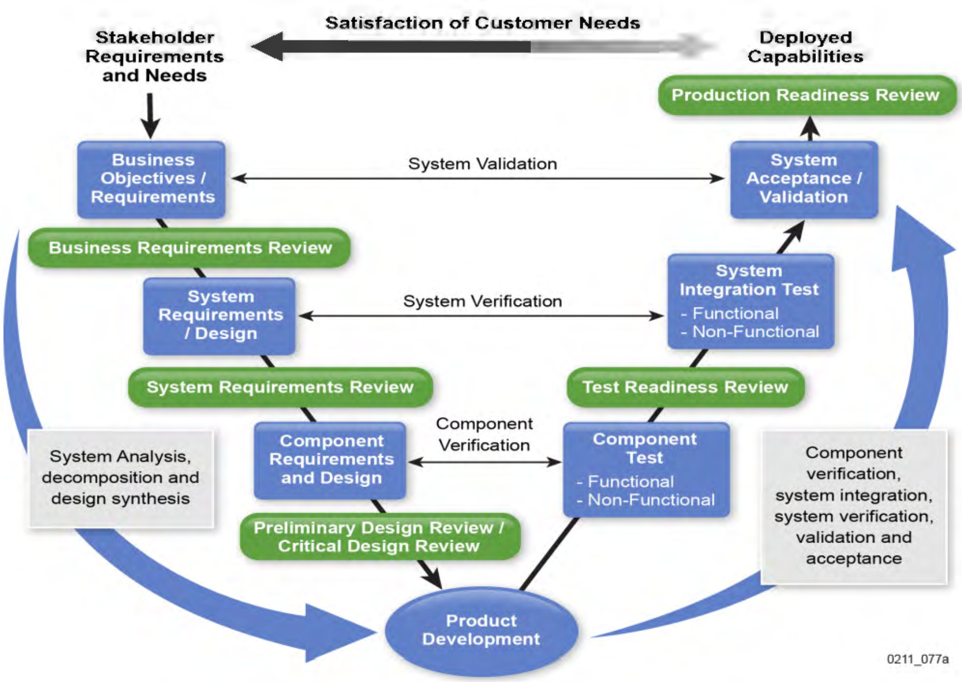


Figure 33: The IBM V-Model

The IBM team will use an IBM Research Lab-developed innovative test approach called Combinatorial Test Design (CTD). Based on our experience deploying the CTD approach on projects globally, it will enable the IBM team to improve test design and optimize testing by collapsing the number of test scripts, while simultaneously improving test coverage. The result is more efficient and widespread testing and deployment of higher quality code. We will work with the State for CTD adoption through a change control process. By addressing the key tactical issues that the State is currently experiencing in the EEF, the users and citizens will draw better satisfaction and benefit from the program. This will also enable the State to implement the future public assistance programs like SNAP and TANF in a more efficient and effective manner.

Our testing approach focuses on the steps outlined in the following table:

Table 16: CTD approach steps

Step	Description
Development of process guidelines.	Develop guideline documents for strategy, processes, and protocols.
Test planning and preparation.	Develop test plans to document milestones, test environment, entry and exit criteria, evaluation criteria, test data requirements, and resource assignments for each phase of testing. The IBM team will develop test scenarios, expected test results, and test data to test each software component, design element, and business process. We will develop and maintain Requirements Traceability Matrix for bi-directional traceability of requirements through the development cycle and Test Coverage Matrix.
Test execution.	Execute unit testing, integration testing, system testing, performance testing, regression testing, production readiness testing, and support the State users in conducting user acceptance testing (UAT). Execution of tests will use actual data that is cleansed to remove confidential information, allowing for a safe test environment that mimics production.
Test reporting and close out.	Track results of testing execution and report to the State. The exit criteria for a testing phase will be met only when the test results have been reviewed and approved by the State stakeholders. At the end of each phase of testing, we develop a Test Closeout Report that includes an evaluation and analysis of the issues and problems, associated risks, and lessons learned for continuous improvements.
Defect management	Track agreed-to defects detected during testing using Rational Test Workbench. Agreed to defects will be routed to the development team for investigation and resolution.

As part of each step, the team will update status to the State on progress, whether it be test planning or execution of the tests.

The following table provides the detailed tasks associated with integration and regression testing and post-test activities, specifically, how the IBM team will collaborate with State at each stage:

Table 17: Tasks and output for testing

Tasks	IBM	State	Output
Develop and modify test cases (integration and regression testing).	R	C	Test cases and scripts.
Conduct application integration testing and regression testing prior to UAT. Note: DHS support and participation may be	R	A	Integration and regression test results.

Tasks	IBM	State	Output
required for Integration Testing			
Develop Deployment Manual.	R	C	Release Deployment Procedures
Provision hardware required for staging environment (if available).	I, C	R	
Software installation in Staging Environment	R	I	

The IBM team will align with Medicaid-specific requirements and facilitate conformance with applicable federal requirements.

[O4.10, O4.11, O4.16, O4.17]

Configuration Management

The IBM team will use our SCM process in conjunction with State's Library Management Systems to protect application source code and executables in a manner that is consistent with the State's current practices. The SCM procedure is used to review the following actions:

- Establish and maintain the integrity of the work products subject to change.
- Verify that version of a work product that has been placed in SCM control can be recreated.
- Perform security audits and report test results.

This procedure applies to projects that produce deliverables, including documentation. The procedure starts when a work request is approved and ends in one of the following instances:

- The deliverable is released to State.
- The application is decommissioned.
- The application is handed over to another entity for support.

At the start of the project, IBM will work with State Stakeholders to clarify the SCM policies that will guide the rest of the implementation. The following figure illustrates our high-level SCM procedures:

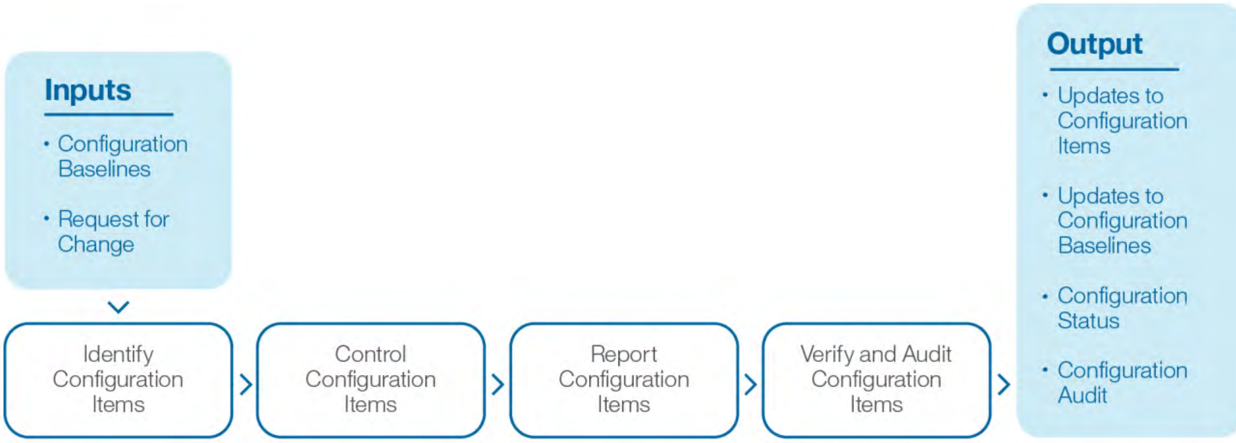


Figure 34: SCM process

Based on IBM's analysis of the State's current practices and tools for SCM, we will work towards realizing the following benefits for State:

- Improved team productivity and operational efficiency through parallel development, automated processes, reduced build errors, and reduced build and release cycle times.
- Improved individual and team effectiveness through improved communication, collaboration and coordination, and automation and control of the software life cycle.
- Management of geographic and organizational distribution by facilitating communications and collaboration across distributed teams, enabling consistency of parallel changes and coordinating work across locations.
- Better visibility into projects for improved insight, control, and predictability.
- Ease of compliance through process enforcement, audit trails, and traceability of changes across the software lifecycle and access control to verify that changes are made only by authorized individuals.
- Maintenance of secure, continuous business operations and reduced disruptions to clients and staff through replicated assets and remote access.

[O4.6. O4.7, O4.8]

Change and release management

Change management

IBM will use a streamlined change management process to identify, organize, and control modification and enhancement to different artifacts including requirements and specifications, source code, configuration files, and test cases.

The change management process is concerned with requesting, evaluating, implementing, and reviewing change to the system. Change management is used for both planned and emergency such as critical defect fixes releases of software. The CCB will review, assess, approve, or reject changes to the environment. Changes are organized into three categories: routine-simple, planned-complex, and emergency. Each of the categories includes dedicated staff engaged to verify the change is executed completely and accurately. Change management is also integral to our release and patch management process, where we will follow leading practices for installation of critical patches. The following figure illustrates our high-level procedures:

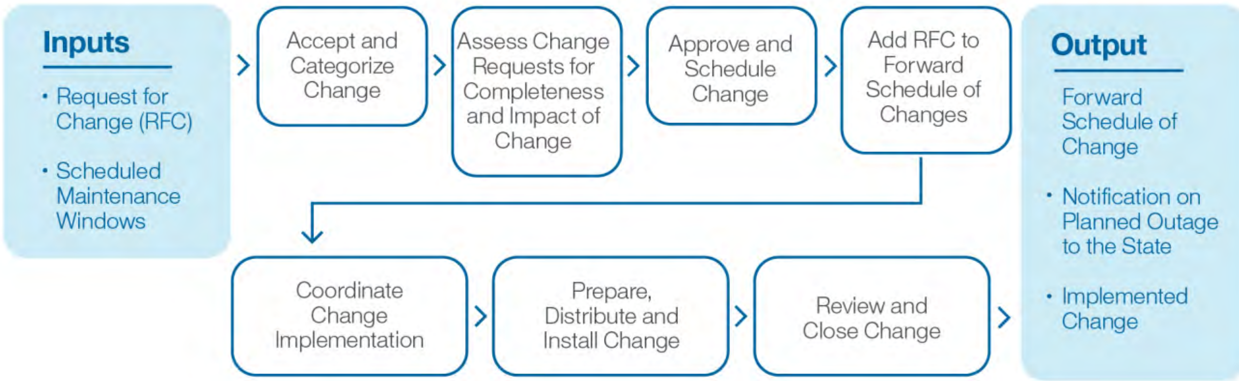


Figure 35: Change management procedure

When a change request has passed the initial review of the CCB, the IBM team will make an initial assessment of the cost, schedule, and resources needed to implement the proposed change. If the requested change is complex, a CSIA should be requested. This will be indicated and an estimate of the cost, schedule, and resources needed to perform the CSIA will be made. The CCB will once again review the requested change and either accept, reject, or defer. The CCB will be appraised of and have authority over releases throughout the RM process.

[O4.6]

Release Management

IBM's release management process coupled with change and configuration management will provide the discipline, visibility, and transparency needed for the State to effectively plan and monitor the status of code releases. The State will gain the following advantages:

- Release data such as cost, level of effort, content or schedule are identified, recorded, and tracked.
- Change requests plans and associated documents are baselined.
- Analysis of each change request and the associated approval or rejection.
- Changes to the environment are introduced with minimal risk and service disruption.
- Risks to the business are proactively identified and plans developed to address and mitigate.
- Only approved changes are implemented, and the plans and affected deliverables are updated.
- Ability to effectively implement a release "back out."

The release measures, results, and lessons learned are fed back as part of continuous improvement, shown in the following release planning diagram:

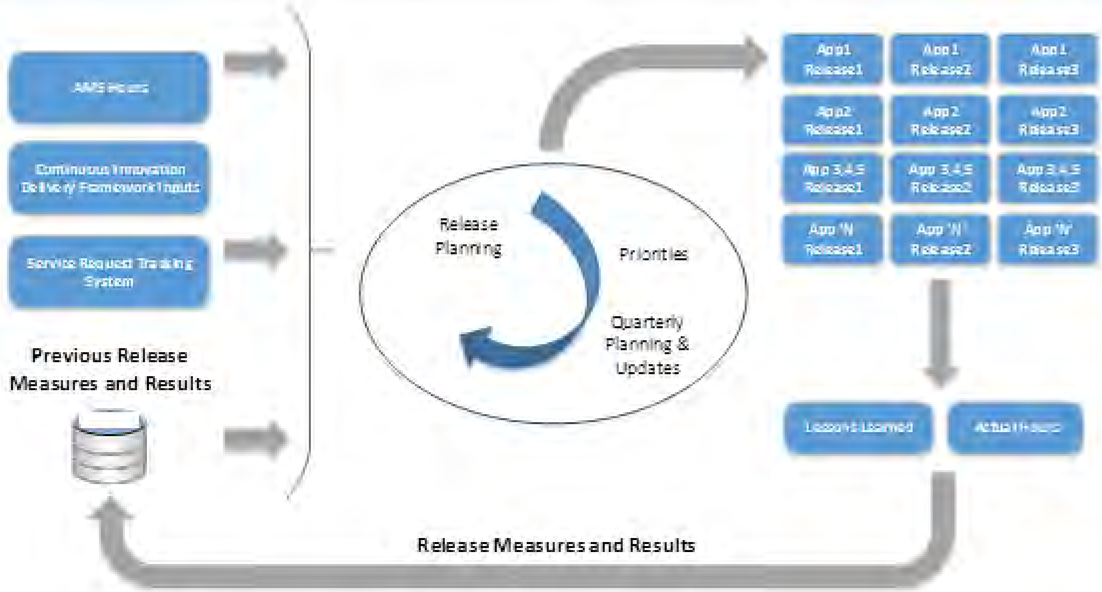


Figure 36: Release planning

[O4.6]

Documentation

The IBM team will facilitate, as part of each enhancement request, that the relevant documentations are updated to keep it current, as changes occur or are detected throughout the life of the application. We will update the following documentation:

- User documentation and training manuals.
- Technical architecture document.
- Instructions or workarounds to DHS help desk and operations team.

The IBM team will assume accountability in maintaining the technical accuracy of these documents.

[O4.13, O4.18, O4.19, O4.20, O4.21, O4.22]

Training

The IBM team will work closely with DHS to provide the training support required for approved Enhancements. As stated in the RFP, our team will include a Training Lead to maintain the Training documentation and keep it accurate and up to date.

Additionally, IBM will work with the State to identify the applicable communications and training requirements, which may include the identification of the appropriate training audience at the end of a release cycle.

[O4.13]

UAT and production deployment

UAT coordination with the State

The code will be deployed in UAT and IBM will provide support to the State for UAT testing per the project plan. The agreed to defects identified in UAT will be fixed prior to production deployment. The following table shows the UAT tasks and RACIs for IBM and the State:

Table 18: UAT tasks and responsibilities

Tasks	IBM	State
Code packaged for release to UAT environments.	R	A, C
Validate staging infrastructure readiness for UAT.	I, C	R
Perform tests as per the UAT test scripts.	C	R
Capture technical content such as, screen shots and processes for input into training materials.	R	I
Generate test reports.	R	C

Once the UAT is completed per the project plan, the code will be ready for production deployment.

Production deployment

After the completion of UAT per the project plan, IBM will provide support for the production implementation activities. The implementation plan will be prepared and upon successful deployment, and the IBM team will provide the completed enhancement and release check list.

The handover documents will be provided to the M&O team.

Technology refresh and upgrades

The IBM team understands the complexity of the IE-BM application that has been implemented using multiple software products at presentation layer, middleware, and database layer. We will adopt a systematic approach to conducting software upgrades in consultation with the State to verify that there is minimal impact to availability of the application to the users. The following figure describes the approach:

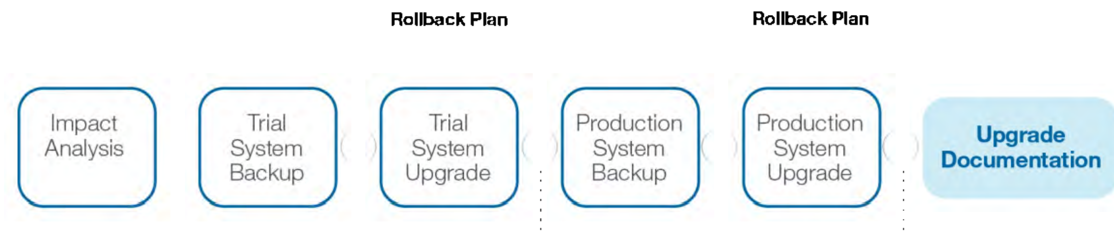


Figure 37: Systematic approach to applying software upgrades

The IBM team approach includes the following tasks:

- Identify dependencies and affected resources: IBM will do an impact analysis on how other software interfaces may be affected. There may be likely dependency on newer versions of other components or systems.
- Plan for data migration: It is likely that a new feature of software may require structural changes to the database or involve making existing production data compatible with the new version. In case of major database changes, we will plan a data migration activity.
- Calculate down-time: IBM understands that State wants to attempt the least disruption of the application to the users. We will put a process in place to calculate the time required for every small step, and then estimate the overall downtime window required for the upgrade. We will plan the system outage such that there is minimal impact to the system users due to non-availability of the system. We will also plan for the rollback time in case of failure for this downtime window.
- Backup: The first and foremost step during the upgrade process will be to backup data that is associated with the older version of the software, such as log files, executables and deployable, configuration files and settings, and databases.
- Create a rollback plan: The IBM team will perform a proper risk assessment of the upgrade and create a good rollback plan to mitigate risks in case of failures.
- Define success criteria: The IBM team will define clear-cut criteria to verify the successful completion of the software upgrade.
- Provide key documentation: The important documents for an enterprise software upgrade include software release notes and a software installation or upgrade guide. We will verify that State receives the following set of documents:
  - Software release notes: In addition to including details about the release scope, this document will also depict configuration changes, database changes, and other applicable changes between the older and newer software versions.
  - Software installation and upgrade guide: This document defines the procedures required to upgrade software to a newer version. Each step or activity will have a verification step, and the expected results are clearly defined.
- Perform the upgrade in a non-Production environment: Prior to installing a software upgrade in Production, we will incrementally install the upgrade in the non-Production environments which will culminate with the upgrade in the Test System, which is an exact replica of the Production System. This will further verify the upgrade and associated deployment procedures work product. Additionally, we will prepare the Test Scripts for Regression Testing to verify the upgrade and demonstrate the upgrade success criteria.

- Roll out production: Once the trial upgrade testing is reviewed and signed off jointly by State and IBM management, we will run the deployment scripts on the production system to apply the software upgrade and run a quick smoke test to verify the correctness and completeness. In the event the upgrade fails for some reason, we will invoke the rollback plan.

IBM processes will maintain that corresponding configuration management database (CMDB) will be updated to keep track of software upgraded versions.

The IBM Project Manager and Release Manager will be the key persons overseeing the success of software upgrade roll out and will be supported by Configuration Manager to assess that there is no version mismatch, and we have the latest versions of the software in various environments.

[O4.15]

Assist the State in Federal reviews

The IBM team will support and assist DHS in preparing for Federal reviews and certifications. We will work with DHS to provide relevant documents that are needed to support the Federal reviews.

[O4.17]

Metrics and key performance indicators (KPIs)

The IBM team is focused on high quality delivery excellence for EEF and IE-BM system. Our Project Managers continuously analyze key project metrics to keep our fingers on the pulse of the project, staying ahead of potential project pitfalls. Apart from the key metric O76.7 (delivery of enhancements), we also monitor the metrics shown in the following table:

Table 19: Additional metrics

Measurement Name	Measurement Definitions
Requirement (Rqmts)	Percent complete are calculated from the parent and/or subordinate tasks tied to the Requirements Affirmation Session tasks.
Design	Percent complete are calculated from the parent and/or subordinate tasks tied FDS Updates tasks.
Development (Dev)	Percent complete are calculated from the parent and/or subordinate tasks tied to Development/Refactoring tasks.
System Integration Test (SIT)	Percent complete are calculated by total number scripts executed out of total number of scripts per track, which is obtained from JIRA.
SIT Pass% or Fail%	Percent complete are calculated by total number scripts failed out of total number of scripts executed, which is obtained from JIRA.
User Acceptance Test (UAT)	Percent complete are calculated by total number scripts executed out of total number of scripts per track, which is obtained from JIRA.

Measurement Name	Measurement Definitions
UAT Pass% or Fail%	Percent complete are calculated by total number scripts failed out of total number of scripts executed, which is obtained from JIRA.

[O4.23]

Continuous improvement

The IBM team has developed a continuous improvement cycle, which will enhance our application enhancement services to the State. This cycle is shown in the following graphic:

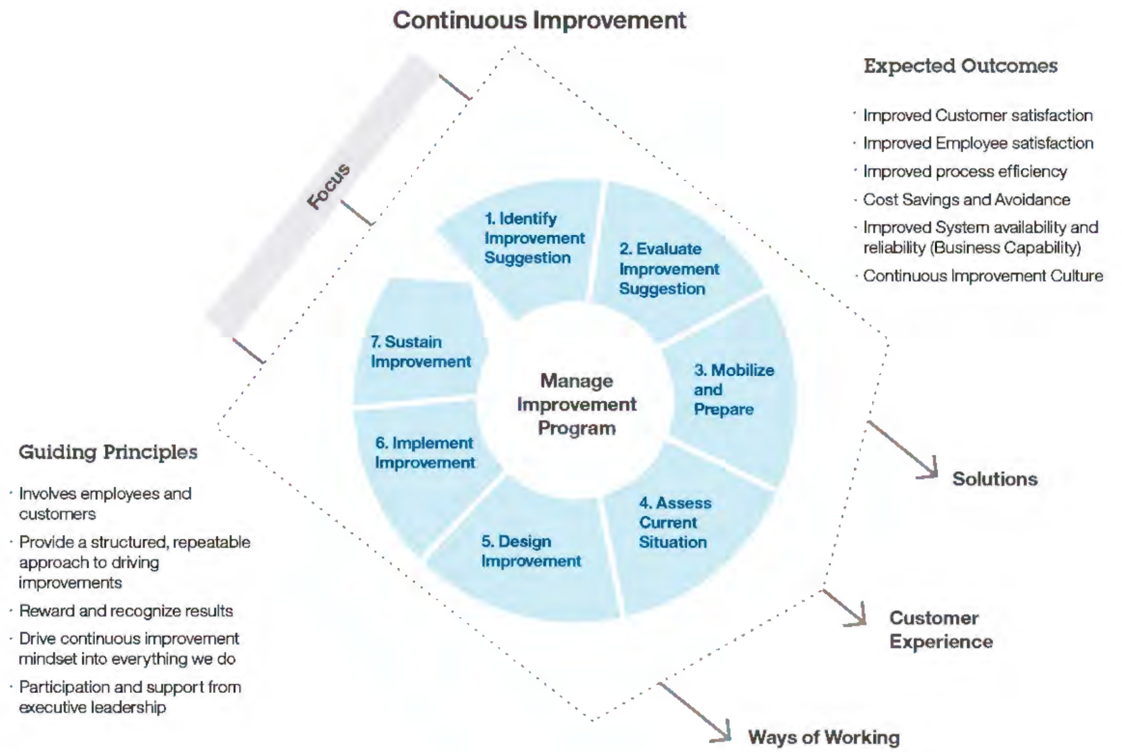


Figure 38: Continuous improvement cycle

The IBM team will also collect lessons learned, the results of client satisfaction surveys, process improvements, and current leading practices as part of enhancement request and project closure. We will manage process improvements within the organization as part of our continuous application innovation methods.

5.0 Approach to M&O Turn-Over or Transition Services

The Vendor should ensure that the responses to this section are in alignment with the requirements set forth in Template T-12 – Maintenance and Operations Requirements Traceability Matrix, Section O5.

M&O of all applications under the Vendor's scope may be transitioned to a successor service provider or to the State, after the contracted operational support period (through roll-out and steady-state) expires. The Vendor must provide assistance in this transition. The detailed roles/expectations are outlined in the RFP and Response Template. The expectation is the Vendor will provide all of the support required to transition the DHS IE-BM Solution to the new support organization without any adverse impact to DHS stakeholders during transition.

Instructions: Describe the Vendor's approach to providing transition support including planning activities, roles required, approach to communicating/interacting with the new support organization and DHS stakeholders, the inherent challenges and how the Vendor has overcome these challenges in the past.

Reverse transition

IBM understands the State of Arkansas' and DHS' desire to move the services as stated in RFP quickly and with minimum risk to the business. Keeping this in mind, the proposed reverse transition plan is based on our proven methods and leading practices, which have been the cornerstone of successful implementations for our clients around the world.

IBM has a tested and proven disciplined Agile TTM, which lends the following benefits to DHS:

- Properly planning and executing the transition of services from IBM to DHS or another State vendor.
- Minimizing the risks to DHS business during and immediately after the transition.

The overall Reverse transition project will be managed by an experienced IBM Transition Manager. The IBM Transition Manager will closely work with the DHS or vendor Transition Manager. The Transition Manager's responsibilities include managing the transition to realize the following objectives:

- Flexibility to minimize service impacts and risks.
- Innovation, quality service to achieve customer satisfaction.
- Meeting price and cost targets and speed to respond.

Turnover (Reverse transition) objectives

IBM uses objective-based reverse transition to obtain results. The following list includes the objectives:

- Focusing on planning aspects including initiate and plan phases.
- Transferring operational processes, KT, redeployment of assets, and human resources.
- Closing of the organizational services.
- Controlling, monitoring, and closing activities that run through the project, including control and close phases of the project.

Turnover project phases

To implement the reverse transition activities, IBM will use our Agile TTM that is established on IBM's KT lifecycle process and project management principles from the Project Management

Institute (PMI) and IBM's World-Wide Project Management Methods (WWPMM). The following phases comprise the reverse transition project:

- Initiate phase.
- Plan phase.
- Execute phase: Transfer services.
- Execute phase: Close services.
- Control phase.
- Close phase.

Initiate and plan phases

The scope of the transition planning and initiation activity will involve the preparation and planning required to successfully execute the transition project. The following major tasks are required under this transition initiation and planning activity:

- Assemble the transition project team.
- Establish transition interfaces to enable people, technology, service delivery, service management, and program management.
- Develop and update contact lists and organization charts.
- Develop reverse transition proposal.
- Establish project management processes and templates.
- Define the Project Control Book.
- Develop a detailed Reverse Transition Plan Document.
- Establish and implement a transition communication plan.
- Plan and execute kick-off meetings.

Execute phase: Transfer services

This phase includes the services which need to be transferred to the DHS and State or your identified incumbent vendor. This phase involves transferring of the following services:

- Operational processes, including the following major tasks:
  - Identify and document the data to be transitioned and create a common process with IBM, DHS and incumbent vendor business units within the scope of the reverse transition.
  - Transfer operational process through change management, service request management, and problem management processes.
  - Hand over the current procedure manuals to the DHS or identified incumbent vendor team.
- Agile based KT with each KT comprised of components delivered in a number of sprints based on application complexity. Each sprint in this activity focusses on the common

process, Functional and technical knowledge is transferred to the DHS or identified incumbent team. This activity is accomplished with the following three phases:

  - Plan phase.
  - Learn phase.
  - Perform phase.

For the three sub-phases, the entry and exit criteria need be followed, as agreed in the kick-off meeting.

- Redeployment of assets: This activity involves identifying and transitioning of the software and hardware assets. Reviewing and analyzing of the infrastructure and software assets needs to be done with the required licenses. The SLM plan has to be developed and should include the plan for transfer of assets and licenses. Specifics of installation and removal of software and hardware owned by IBM need to be reviewed as appropriate.
- Redeployment of human resources: The following major tasks are accomplished in this activity:
  - Conduct "all hands" meeting with IBM employees to announce account termination.
  - Review the overall reverse transition communication plan with the Transition Manager and obtain necessary approvals.
  - Develop and distribute memo to the affected employees on the M&O team.
  - Establish procedures for daily monitoring, response, escalation, and reporting the feedback.

Execute phase: Close services

In this phase, the management and workplace services are closed and communicated to the key stakeholders. The labor claiming, governance process, documents of understanding (DOUs) are closed and a notification should be sent to the stakeholders. Connectivity to the IBM internal network should be closed and the State environment should be disconnected. The contracts should be jointly verified by IBM, the DHS and the State before closing the client contract; the closing date needs to be communicated to the stakeholders.

Controlling phase

The scope of this phase is to control and monitor the recurring and ongoing activities in the reverse transition. Recurring activities include the creating status reports and conducting the review meetings and reverse TCB meetings. Ongoing activities include change, risk, and issue management processes. These involve identifying and verifying the new requirements, new risks, and issues to identify the actions for those. Each of these will need to be updated in RICA worksheet. Assistance to the audits needs to be provided and coordination with the DPE is required in identifying the audit coordinator.

Close phase

This phase involves the creation of the Reverse Transition Project Review Report and the conducting of the survey for client satisfaction. The report needs to be updated with the feedback results. The lessons learned report should also be published with the details of good aspects and the areas to be improved. Finally, the Project Control Book needs to be closed, once the open risks, issues, and changes are closed or transferred, as appropriate. The project records need to be archived, and the assets and people need to be redeployed.

Reverse transition roles and responsibilities

As in reverse transition, IBM is handing over the account responsibilities to the State, DHS, or to another vendor, so IBM management will take the role of Guide and Supporter and expects the State and Vendors to take on the primary role in this transition.

IBM roles and responsibilities

Table 20: IBM roles and responsibilities for reverse transition

IBM role	Roles and responsibilities
Reverse Transition Manager	• Is responsible for the reverse transition across application scope. • Acts as the escalation point for issues. • Assigns specific resources for KT. • Addresses license, IBM owned assets, and security concerns. • Authors the Procedures Manual. • Coordinates the network services with support from infrastructure team.
IBM DPE	• Verifies successful completion of the transition activities. • Is responsible for the reverse transition activities for a specific application scope. • Coordinates the availability of IBM SMAs for transition as per the approved project schedule. • Is responsible for customer satisfaction. • Manages overall IBM and State and DHS relationship.
IBM Subject Matter Advisors (SMAs)	• Is responsible for functional and technical KT to the DHS and identified vendor team. • Provides structured KT during workshops. • Provides existing documents, source code, and ticket data. • Guides DHS and identified vendor teams during support.

State roles and responsibilities

Table 21: State roles and responsibilities for reverse transition

State, DHS role	Roles and responsibilities
Project Manager	• Facilitates transition of application and domain.

State, DHS role	Roles and responsibilities
	• Facilitates that the accesses and facilities are provided to DHS and identified vendor team. • Acts escalation point for application management issues. • Conducts quality reviews.

Communication and transition governance plan

The following communication and transition governance plan includes the following elements:

- The IBM Reverse Transition Manager and the IBM Transition Application Managers will coordinate the activities of the IBM SMAs to provide KT to DHS or identified new vendor team per the approved project plan.
- IBM M&O delivery will provide support resources to handle project management activities such as project status tracking and reporting, issues management, and risk management.
- Project requests not already documented in the jointly approved transition plan will be provided in writing to the respective DHS and vendor stake holder. The parties will attempt to respond as soon as possible to written requests, no longer than two business days from the date of the request.
- State, DHS, and IBM will hold weekly transition status meetings, which will function as a primary source of project communication.
- Status and unresolved issues from the TCB are reported in account level executive governance meetings, normally held monthly.

Risk management

State, DHS, and IBM will create and execute a risk management plan that includes both internal and external risks identified during the kick-off meeting and throughout the project. Documented risk evaluation and mitigation plans will be captured in the project data repository and jointly reviewed during transition status meetings.

Risk evaluation

As part of the evaluation step, the risk events will be analyzed both on the probability of the event occurring and the impact to the overall contract if the event does occur. The following risk evaluation table may vary depending on the DHS and vendor team and IBM.

Table 22: Risk probability

	Probability			
Impact		**High**	**Medium**	**Low**
	High	H	H	M
	Medium	H	M	L

	Probability			
	Low	M	L	L

Risk mitigation

Once specific risk events have been identified and analyzed and the decision has been made to assign resources to develop mitigation, several activities occur. The management team will focus on the prioritized events from the risk evaluation step and create various mitigation strategies with the following objectives:

- Avoid or eliminate the risk.
- Ignore the risk and document the consequences to be accepted if the risk occurs.
- Transfer all or part of the risk.
- Contain the risk by specific actions to lower the probability or impact.
- Set up contingency funds.
- Recommend strategies as they relate to the key business success criteria.

Turnover assumptions

The IBM team has the following Turnover assumptions:

- State and DHS owns the reverse transition plan with agreement from IBM.
- State and DHS assigns their resources as needed to be available and complete the reverse transition activities, as specified in the transition plan.
- DHS management will act as a central communication to IBM and user communities across their organization.
- IBM will manage the reverse transition project.
- IBM and DHS or vendor Transition Managers will evaluate the proposed changes for impact on the schedule, cost, and quality prior to the approval.
- The IBM team provides the SMAs to transfer knowledge to the DHS and vendor team per the approved project plan.

Transition tools

IBM recommends the following transition tools for managing the reverse transition:

- D2D: Desktop sharing tool using IBM Smart Cloud Meetings.
- WebEx: Secondary option with licenses to be borne by the State.

Transition deliverables

The transition deliverables should focus on providing on-time delivery and acceptance of contract deliverables that are assigned to the reverse transition project.

The base of information for obtaining the list of deliverables is the Contract Deliverables List established at contract initiation. It includes the definitions, agreed-to acceptance criteria, owner, and delivery schedule.

[O5.2 – O5.13]

6.0 Tool Usage

DHS is driving to improve its approach to applications maintenance and operations and expects the Vendor to leverage tools to ensure M&O activities are efficient and effective including items such as the automation of tasks and tracking IE-BM related activities/information

Instructions: Describe how the Vendor plans to leverage the tools outlined in Template T-9 Technical Requirements Approach to make the M&O activities efficient and effective. The response should highlight the integration points with other DHS tools, tasks which will be automated and information/activities/processes that are tracked. This should also include a discussion of the benefits, cost, issues and risks of the approach recommended.

The IBM team verified the tools outlined in T-9 and validate that we will use the DHS standard tools shown in the following table:

Table 23: Tools usage

Tools	Usage
JIRA	For incident and defect management.
Jenkins	For continuous integration and deployment automation.
Subversion	For version control of configurable items.
SharePoint	For document management and collaboration.
Rational Test Manager and Selenium	For testing and test automation.

In addition to this, the IBM team will use a Rational suite of products that will provide a broader set of integrated lifecycle solutions for analysts, developers, and testers to unify cross-functional teams and support enterprise software projects from requirements to release. DHS will gain the following benefits:

- Share and re-use assets repeatedly.
- Optimize individual and team productivity.
- Improve team collaboration.

Additionally, the IBM team will use IBM Program Work Center (IPWC), our innovative collaborative program management solution for running M&O programs, initiatives, and transformations. It provides real-time, global visibility to the stakeholders across the State. Most importantly, it allows direct participation of business users through a personalized portal with tailored information and reports with smart links between tasks, issues, documents, and benefits to provide context and link action to strategy.

IPWC is used to establish a repeatable, high quality program management process, reduce transaction and execution risk, and accelerate realization of program objectives.

As a Web-based, hosted application, IPWC is globally accessible by the entire program team including virtual team members, outside advisors, and executive stakeholders.

Automation of IT operations and application support is a critical initiative at IBM. The IBM team recognizes that automation can reduce overall maintenance and support costs and allow our clients to shift support and maintenance costs to higher value new innovation and new investments.

Cognitive computing has the potential to significantly change the way that IT services are delivered and the way that clients consume these services. An emerging capability based on IBM's Watson technology, Cognitive automation, can increase the productivity, efficiency, and effectiveness of knowledge workers, so that much less human effort is needed to perform certain tasks. These cognitive solutions also offer the opportunity to change the way that our clients' application users receive application support services and to make the user experience much more useful, relevant, and effective.

IBM's vision for cognitive application support is to dramatically change the way users experience application support, in the following ways:

- Disrupting the employee service desk process by bringing self-service answers and insights directly to the employee.
- Reducing costs by reducing the creation of expensive trouble tickets.
- Shrinking L1 and L2 call centers by bringing critical system awareness to employees with highly contextual and up-to-date information regarding system status including outages.
- Improving employee productivity through instant answers that they need to efficiently continue work.
- Enhancing enterprise productivity by facilitating that employees have unhindered work activities.

Automated self-service problem resolution can increase the productivity, efficiency, and effectiveness of knowledge of workers by providing fast and accurate answers to their questions, sometimes before they have even asked the question. Our solution for the State is based on our IBM Watson Cognitive Computing technology.

Our IBM Team will use a Watson-powered virtual support agent and interface called Cognitive Assistant to directly support State application users. Components of the solution include:

- **iCurate**: A tool that allows SMAs to build and manage content within Cognitive Assistant.
- **iAssist**: A simple user interface that allows users to ask questions and get immediate, appropriate responses from the cognitive solution.

- **Natural Language Classifier (NLC)**: A Watson service capable of natural language processing and learning.
- **Retrieve and Rank**: A Watson service that works alongside NLC to provide relevant answers to users.
- **Watson Knowledge Base**: A database that stores and organizes curated question-answer pairs and other data loaded through iCurate.

Furthermore, Watson can integrate with the JIRA system and analyze the inbound tickets. If DHS approves the integration, the State will receive the following key benefits:

- Users will get direct, self-service answers and insights, thus reducing creation of expensive trouble tickets.
- System status alerts and outage information will be updated and communicated at machine speed, with contextual analysis applied to facilitate that the right people have the right information at the right time.

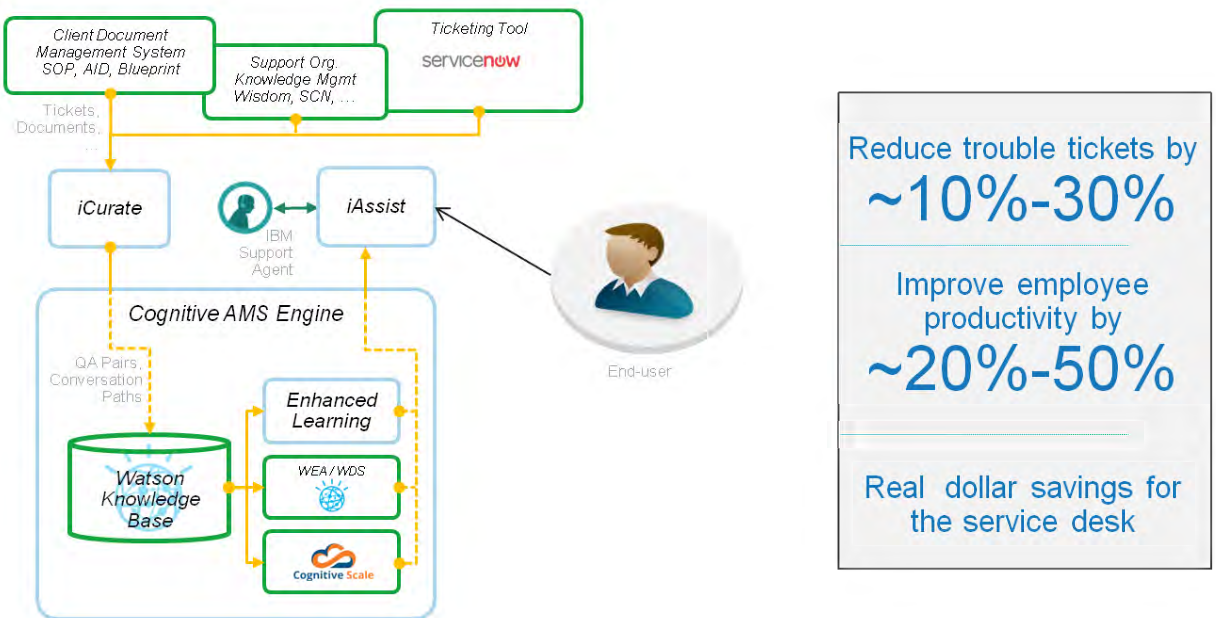


Figure 39: Watson Cognitive automation tools

Watson Cognitive automation tools will enable assistance that continues to improve for end-users. Both employee and enterprise productivity will improve when people and processes are freed from unanticipated hindrances and roadblocks.

7.0 Approach to Providing Hosted Private Cloud Services (DHS Optional)

The Vendor should ensure that the responses to this section are in alignment with the requirements set forth in Template T-12 – Maintenance and Operations Requirements Traceability Matrix, Section O6.

DHS is considering having the Vendor provide the hosting and infrastructure services for the IE-BM Solution. This includes all components (e.g. OS, servers, data center, network,

storage, etc.) and the related services (e.g. back-up and disaster recovery) required to provide the hosted private cloud services.

Instructions: Describe the Vendor's understanding of DHS' needs for hosted private cloud services and how it will cost effectively scale the infrastructure. The response should also discuss the role and responsibilities (Vendor vs. the State of Arkansas), how it will provide the staff to support the infrastructure, meet the Service Levels, when the current infrastructure would be migrated and its approach and the critical success factors required to coordinate with DHS and other applications.

Include a discussion of each of the following areas, the challenges and approaches to overcome these challenges:

- Network, hosting and data center services
- Storage management
- Operating system, application and database backup and recovery
- Remote access
- Capacity management
- System monitoring
- Performance management
- Change and release management
- Configuration management
- Infrastructure support
- Infrastructure security
- Disaster recovery
- Batch-job control and scheduling

The IBM Team is uniquely qualified to provide a highly scalable cloud option, as well as the strategy, tools, and expertise necessary to support the State's goal of Operational Robustness. We deliver and maintain the cloud services in a controlled ITSM Lifecycle using approved SLRs to measure availability and security. We exceed the capabilities of our competitors by including distinctive features: an Integrated Network and Security Operations Center (NOC/SOC) dashboard providing a complete view of solution status, a portal providing program performance and a self-help enabled Service Catalog. We provide a single pane of glass interface for real-time cloud service measurements and reporting using ServiceNow®, OpenStack, VMware vCenter and IBM Security QRadar® and other commercially tested technologies. Our Service Catalog delivers automated and semi-automated user provisioned, metered, scalable and elastic cloud capabilities incorporating capacity management, request escalation and/or complete request pass-through.

Optimizing the IE-BM Solution for the Cloud

Our conceptual cloud solution is based on the as-is, on-premise EEF environment information provided in the RFP. However, the RFP did not include server sizing, historical trends, utilization data, or data regarding seasonal variations. Consequently, the Cloud option provided in our response is sized for peak capacity of the as-is environment. With the available information provided in the RFP, we have used IBM best practices and assumptions to solution a representational cloud environment and it is important to note that the corresponding costs and effort are indicative. We believe there are opportunities for further requirements elaborations and simplifications. Our recommendation is to carry out the steps and activities detailed below to verify and refine a cloud solution. Changes to the proposed tasks as a result of these activities would be addressed in further Cloud interchanges with the State prior to the State formally procuring the cloud option.

The IBM team's unique capabilities:

- ✓ IBM proposes leveraging capabilities used by our Federal clients. This approach provides the security processes and controls needed for the IE-BM data.
- ✓ We have the option to work with the State to determine the optimal hosting platform. We have the ability to utilize our zCloud or Federal SoftLayer as the IaaS platform.
  - IBM can assist DIS and DHS with Cloud Managed Services for Z - to potentially lower current risk and cost of operations.
  - IBM's Cloud Managed Services for Z ireduces the overall risk of the environment due to current backlevel versions of software that are no longer supported
  - Support for the current environment due to aging and retiring workforce
  - Projected breakeven of 24 months

The IBM Team has significant experience in porting, migration, consolidation and virtualization of applications and servers from any source to target platform including cloud. This migration process was created 30 years ago and has evolved at a tremendous rate since then which uses proven methodologies and help mitigate risk. IBM Migration Factory has performed more than 2500 porting/migration/re-platforming projects, 100 large server consolidation projects & over 200,000 server consolidation and/or upgrades which makes it a perfect candidate for State's Migration activities. IBM Migration factory can be using a phased approach to migrate State's Applications and Databases to the Cloud.

The following provides our recommended approach to follow to migrate the IE-BM workload to the cloud:

1. **Requirements Verification & Workload Discovery**: Collects and verify the inventory of the servers, OS images and application data for the specified in-scope locations to solidify an actionable baseline.
2. **Analysis and Solutioning**: Create a central repository that drives Migration Factory's work products and deliverables throughout the project
3. **Cloud Design & Optimization**: Define the overall migration approach (dependencies, constraints and methods).
4. **Cloud Migration:** Transform the application workload to the modern target environment according to the Wave plan and the Technical Solution Design

Requirements Verification & Workload Discovery

IBM methods and tools are used to determine the cloud fit, cost, and migration impact of moving components to target cloud environment taking into consideration factors such as: ongoing operating costs; improved service levels; flexibility; responsiveness; compatible infrastructure, middleware and OS; performance, availability and other non-functional requirements; security, privacy, and regulatory requirements; licensing cost impacts. During the validation phase, we identify technical solution components and determine if they are standard and service compatible with the target cloud environment and if they are using the target standards and cloud enterprise services. If components are found to be not compatible, we identify these as potential opportunities for improvement.

During the workload discovery we collect and assess documents of the current environment and gather additional data. The data gathered includes high-availability requirements, performance requirements, and platform dependencies. We engage stakeholders in design review workshops to validate requirements and design and validate the as-is and target environments and deployment topology options. We collect usage and sizing data and use our environment design tools and patterns to develop spreadsheet models to predict the size and capacity of components. This information along with the direction and feedback from stakeholders, is used to validate and refine the proposed solution.

Analysis and Solutioning

The as-is on premise solution does not utilize the features of the proposed cloud services as it was not designed with these services in mind. Through the M&O process, we work with the State to plan how to transform the solution to take advantage of the newly available features in the cloud environment. These transformations can account for the efficient usage of service features including: API usage, onboarding of servers, on-line storage, and monitoring. We exploit Reliability, Maintainability, and Availability (RMA) services and DR solutions to satisfy application reliability, maintainability, and availability requirements. Factors that influence the migration effort required include: current virtualization, unique specifications, consistency of server/VM configurations, software, number of unique VMs, and technology/version currency. These factors are identified during early discovery efforts.

Licensing Impact

Migration to the cloud can also provide an opportunity to simplify costs related with software licensing. Team IBM gathers and verifies existing licensing information and status during discovery efforts and document additional known licensing requirements. We also validate the software against existing Enterprise Cloud Standards and the duplication with software that is a part of the managed services offering to identify areas where the existing solution can be simplified and cost reduced as a part of the migration process. We evaluate the legality, constraints, and/or other complexities of using the existing licenses and identify opportunities to consolidate licenses across environments and to optimize licensing and related costs. We review and recommend licensing consolidation availability as bundled with hosted and/or cloud services, where feasible. We identify licensing recommendations and software licensing readiness dates to so that critical licenses are in place, at the right time.

Migration Planning

Team IBM conducts further analysis, develops a detailed design and an actionable migration wave plan. We identify further dependencies and configuration needs (e.g., IP addresses, network and security dependencies, etc.), document the target environment and finalize testing plans. We also update the Systems Migration Plan, document the migration approach, schedule, risk mitigation strategy, and develop the final version of the Cutover Plan. Support for Certification & Accreditation (C&A) needs and documentation is conducted as well. The following activities are carried out:

1. **Update Plan & Target Design**: Systems Migration Plan to document approach, schedule, and risk mitigation strategy; document target environment

2. **Address Environment Dependencies**: Address environment dependencies (enable for cloud; use cloud services). We design the elasticity features required between the applications and the target Cloud. We identify IP address or other network/security dependencies of the applications, affecting potential use of (Reliability, Maintainability, and Availability (RMA) levels, availability, DR, or supplemental features. We also establish availability dates for network, system, storage, and software licensing readiness.
3. **Determine External Impacts**: Determine impact of in-flight projects and resource availability constraints
4. **Develop Migration Plan**: Prioritize, and plans the target state of the system, application, components, database and middleware.
5. **Identify Migration Units**: We use component affinity and dependency data to determine optimal "migration units", focusing on the interdependencies between applications, data, appliances and middleware components. Interdependencies between components are considered to determine migration impacts.

Cloud Design & Optimization

It may be possible to achieve further optimizations through a redesign of some of the components of the existing solution. The following table lists the detailed activities that are carried out to refine the proposed solution as more information is identified during solution validation. Changes are handled through the change management process. The following activities are carried out.

1. **Redesign & Re-Platform**: We use this as input to re-design and re-platform the solution to utilize the newly available features of the cloud environment. This includes a review the on premise design and map it to the appropriate cloud patterns and determining where to use commodity components and services. We also identify areas where components can be shared and design simplified there by reducing licensing costs. We also identify areas where the architecture can be enhanced by introducing external and internal load balancers thereby reducing tight coupling between components. The components are also instrumented to collect and report statistics that can be further used to fine tune the infrastructure design during continuous improvement phase.
2. **Environment Automation**: In order to the construction and scaling of the environment, we identify parameters and scripts and automate the provisioning and configuration processes.
3. **Reports & Monitoring Dashboard**: We also identify resource utilization parameters and construct reports and dashboards to monitor them.

Migration

Once the design is finalized we implement it on the cloud and smoothly integrated on premise and cloud resources. The complete solution is finally tested and goes through the acceptance test and authority to operate (ATO) processes. Once ATO is obtained, we would with the customer to identify appropriate migration windows and schedules and cutover customers to the cloud. The implementation phase involves continuous coordination of activities and scheduling of resources with different stakeholders.

IBM Cloud Services

Network, hosting, and data center services

The IBM team will provide a primary tier two data center in Richardson, TX for hosting the production IE-BM system and a secondary one in Ashburn, VA for DR that comply with the physical security requirements for DHS. Our industry standard physical security processes and procedures are used to provide trained onsite personnel authorized access for scheduled equipment installation and maintenance. The data center physical design and layout accommodates the power distribution and environment design constraints for equipment used. Before configuring components, we will conduct reviews to assess that environmental conditions for chosen equipment meet the manufacturer's requirements and meet DHS standards and security requirements. The IBM team will also provide core network infrastructure and management of the data center network. The State will be responsible for redundant circuit connectivity to the data centers. We will work with the State to configure the hybrid cloud setup.

The IBM team will provide Infrastructure as a Service (IaaS), M&O services, and the associated resources for the six cloud-based application environments including development, testing, UAT and pre-production, production, DR, and training. Our IaaS capability provides environment design services for producing and enhancing designs and provision, maintaining and configuring virtualized environments for resources such as servers, operating systems, network, and storage. Connectivity support services to ISP and DHS and State WAN network demarcation points is also provided. We will provide the capability to replicate and recover application and data to the alternate data center, and the ability to fall back to the primary site, meeting recovery time and recovery point objectives.

The IBM team will maintain the IE-BM solution adhering to the hosting services SLRs and the DHS processes, procedures, and guidelines. We will provide technical collaboration, technical application infrastructure management, ongoing maintenance and support of virtual environments, and design support and impact analysis to assess the impact of enhancements on the infrastructure. Once enhancements are approved, we will provision, test, and maintain the enhanced environments and capacity according to the agreed upon design. From an audits and documentation perspective, the IBM team will maintain documentation of the IE-BM infrastructure environments and support DHS audits processes and procedures.

[O6.1, O6.2, O6.3, O6.4, O6.5, O6.6, O6.7, O6.8, O6.9, O6.10, O6.11, O6.12, O6.13, O6.14, O6.15, O6.16, O6.17, O6.18, O6.19]

Storage management services

The IBM team will provide data backup and restoration services that provide trained resources and supporting processes and procedures for periodic incremental and full backups. We will provide disk-to-disk backup and maintain the backup catalog and library at the DR site. These data management services include management of resources such as RAID array, SAN, NAS, tape, optical, and storing backups at the DR sites. We will monitor storage resources and provide recommendations to improve disk storage usage. The IBM team will also work with DHS to support activities such as loading third-party media and receiving transmission of batch files, as required.

From a testing perspective, the IBM team will periodically verify backup and restore processes and media and report use statistics. On a scheduled basis, we will also support manual test systems restore operations. We will periodically test recovery procedures and practices to demonstrate recoverability and verify that actual practices are in concert with backup and restoration policies and procedures.

[O6.20, O6.21, O6.22, O6.23, O6.24, O6.25, O6.26, O6.27, O6.28, O6.29, O6.30, O6.31, O6.32, O6.33, O6.34, O6.35, O6.36, O6.37, O6.38, O6.39, O6.40, O6.41, O6.42, O6.43, O6.44, O6.45]

Operating system, application, and database backup and recovery

The backup management service provides backup and restoration of client data. This includes configuration of the backup storage, scheduling, encryption, and management of sequential media and coordination of offsite storage. The activities performed by this service include backup implementation and administration, maintenance of the backup storage system, sequential media capacity management, encryption configuration and management, coordination of tape labeling, and coordination of repairs with vendors, as necessary.

The IBM team will work with the State to develop and implement the application-level procedures aligned to the DHS Enterprise standards, policies, and procedures. We will create and maintain scripts to automate these procedures and test them periodically.

[O6.46, O6.47, O6.48, O6.49, O6.50, O6.51, O6.52, O6.53, O6.54, O6.55, O6.56, O6.57, O6.58]

Remote access infrastructure management

In order to facilitate administration and configuration of cloud resources, the IBM team will provide remote access to these resources. Administrators can use this access to perform system or component configuration changes, component patching, and maintenance activities. For remote access activity, we will maintain session logs that track significant attributes such as activity timestamp, client ID, and IP address.

[O6.59, O6.60, O6.61, O6.62]

Capacity management

The IBM team will participate in DHS Enterprise Platform capacity planning activities and coordinate with them to keep the infrastructure capacity plan aligned to the evolving system requirements. The solution design is kept aligned to the evolving capacity requirements to facilitate that adequate infrastructure capacity exists to address the evolving capacity demands and meet SLRs. We will monitor the infrastructure resources usage to proactively identify capacity and performance issues and recommend mediations to improve service performance, as needed. IBM’s monitoring and trending tools keep track of resource capacity use in various environments. This includes infrastructure resources usage to proactively identify capacity and performance issues. We will analyze data opportunities to optimize use of existing IT resources and minimize costs. This analysis is also used to produce capacity forecasts to recommend infrastructure modifications and used for usage and capacity reporting.

[O6.63, O6.64, O6.65, O6.66, O6.67, O6.68, O6.69, O6.70, O6.71]

System monitoring

The IBM Team will work with DHS to setup Enterprise Platform infrastructure Monitoring, Notification and Reports to monitor the health of component operations and raises alerts in situations that may require human intervention. Team IBM offers Middleware Monitoring Services including: Installation, configuration and setup of middleware environments, Fix Pack upgrades, applying patches, installing/updating plug-ins, automated monitoring of middleware, ongoing Administrative activities, troubleshooting and Problem resolution, performance tuning and ITCS104 compliance monitoring. We manage, maintain and implement monitoring procedures and propose enhancements to monitoring policies, processes and standards for the DHS Enterprise Platform and monitor infrastructure for availability as well as transaction and response time performance, providing regular monitoring reports of infrastructure performance, utilization and efficiency. We also conduct the ongoing monitoring, performance reviews and optimizations of middleware components. We configure component monitoring and alerts for batch and scheduled jobs, interfaces, workflows and queues and the middleware stack components to detect variations for expected operations. We also setup dashboards to monitor alerts and notifications to detect activity that may require human intervention and take the necessary remediation steps based on the standard operation procedures. The monitoring and reporting of end-to-end transaction response time allows us to measure against SLRs.

[O6.72, O6.73, O6.74, O6.75, O6.76]

Performance management

IBM's monitoring capabilities will keep track of the performance data related to cloud managed resources, and we will use this information to do trend analysis and assess the performance impact on the infrastructure for changes being implemented. This information can be used to tune and manage resources to meet availability and performance SLRs. We will proactively monitor key resource performance indicators and identify and recommend configurations changes, which will enhance performance when needed. Performance management will be accomplished in coordination with DHS, and the IBM team will develop and document performance management procedures in alignment with DHS-defined policies.

[O6.77, O6.78, O6.79, O6.80, O6.81]

Change and release management

The release, change, and configuration management process aligns with the DHS Enterprise Program change and release management process and will provide detailed feature rollout and back out plans. The IBM team will capture the necessary documentation regarding each infrastructure change and document them using the appropriate CM processes and tools.

[O6.82, O6.83, O6.84, O6.85, O6.86]

CM

IBM provides robust and automated configuration and release management (CM and RM) to manage various facets of the change, release, and deployment, audits, and verification processes. This not only removes the possibility of human error but results in the consistency of work products. The IBM team will establish a baseline identifying the key components to be managed and define standards, configuration steps, and automated scripts to enable controlled software releases with error-free and regression tested migrations. IBM's approach supports the SDLC methodology, through integrated tools and processes, to provide traceability across the lifecycle. IBM's approach is based on leading practices derived from government and industry standards such as ANSI/EIA-649, ITIL, and ISO-9001 standards. Audits validate that the implementation is compliant with the baseline. The IBM team's approach offers control and transparency to the State for your environments and is centered on the use of CM tools, establishment of a system baselines, and tools automation to deliver robust and maintainable systems.

As a part of the CM and RM process, the IBM team will coordinate with the relevant parties involved to configuring the cloud applications and updating the state of the CM tool, as part of the release. If errors are encountered, they are reported to DHS and involved parties using appropriate processes implemented using tool-based reports, alerts, and notifications.

[O6.87, O6.88, O6.89]

Level 2 and 3 support

IBM's help desk is an essential component of our client support strategy, enhancing user satisfaction through timely problem and issue resolution, and facilitating the collection and analysis of critical information for managing operations.

The IBM team will provide Level 2 and 3 support and technology experience for escalated infrastructure related tickets, to integrate into our ServiceNow system and participate in incident and problem management review sessions providing status and problem impact categorization. We will use a robust knowledge base based on experience gained from similar engagements, resulting in minimized disruption to the business by resolving incidents efficiently. We will analyze historic incidents and their responses to determine common patterns and provide training and knowledge base updates to reduce the likelihood of repeat and follow-on tickets.

The IBM team will implement a cohesive incident reporting and escalation process across severity levels that focuses on quick resolution of recurring issues, and escalation to a team of specialists for more complex issues. When an incident is escalated to Level 2/3 customer support, we will categorize, investigate, and diagnose the incident. We will attempt to identify its root cause and review our knowledge base and system documentation to identify potential "workarounds." On occasion, Level 2/3 is not able to quickly resolve the incident and re-categorizes the 'incident' as a 'problem'. This is an indicator that the issue is more complex and will need to be tracked carefully in our knowledge base, so it can be closed more quickly in the future.

The Level 3 Engineer and SMAs typically act to resolve problems and agreed-to defects. They also perform RCA, document resolution actions in the appropriate service tool, create reference pointers to code defect and fix for implementation in upcoming releases, test the fix in the appropriate test environments, and complete an analysis of the code change for system, interface, and application impact and performance, if applicable. A complete resolution typically includes process improvements, documentation and training updates, preventive maintenance, and periodic reviews.

The IBM release management process will verify that changes are tested and assessed. Rigorous regression testing and performance checks will be performed in production validation to verify that new issues have not been introduced as a result of the change. This approach enables the IBM team to reduce error rates and provide stability through changes from release to release and through the resolution of issues. In addition to functional and technical testing for each release, the M&O support team will perform a quality test for software changes in the validation environment prior to production insertion.

[O6.90, O6.91, O6.92, O6.93, O6.94, O6.95, O6.96, O6.97, O6.98, O6.99]

Infrastructure security

IBM cloud is standards compliant and supports U.S. HIPAA, IRS 1075, ACA and HITECH Acts. We will work with the state to validate the alignment of our security policies and procedures with DHS' security standards, policies and applicable regulations. Security controls for the cloud make use of a layered information security architecture and are implemented using our state of the art IT security tools, processes and polices. We will work with the state to define a Security Plan that is consistent with DHS' security policies and industry standards and implement the physical and logical security controls defined in this plan.

In a physically shared infrastructure environment, each customer is kept in its own logical isolated areas. Our methods and security controls demonstrate that other customers will not compromise this shared-service infrastructure. Applications also, go through a rigorous design review process before they are hosted in the data center. We work with the applications team to review the network design providing design support and implementation for DMZ, firewalls, network zoning, VLAN, VPN components. During security design review, we validated data encryption (rest & transit), security monitoring of components and intrusion detection & prevention mechanisms for the hosted solution. Once the design has been validated, we work with the application team to configure security monitoring including: alerts, applying security patches, infrastructure resources monitoring to conform with the DHS Enterprise requirements and standards.

Proof points:

- ✓ Gartner Magic Quadrant Leader for Desktop and Help Desk Outsourcing.
- ✓ Support for 4.1 million users and 1,400 customers; 21 call centers handling 3.2 million service calls per month; Responds to 37 million help desk calls annually.
- ✓ Support Federal agencies, including the Transportation Security Administration, US Army, US Forest Service, and the Center for Medicare and Medicaid Services.
- ✓ *ESS and FDIC ITAS* programs use IBM's automated processes for application configurations, builds, releases, and deployments.
- ✓ *HIGLAS* program uses IBM's method for deployment and retirement of system components.
- ✓ MeF uses IBM's CM approach and tools to deploy into the IRS Modernization environment.

We conduct regular scans of the cloud infrastructure to identify security vulnerabilities and relevant patches relevant to address them. We coordinate with the appropriate stakeholder to implement these patches in alignment with change management policies, processes and procedures. Besides verifying that appropriate security controls protect environment resources, changes to the environment are fully audit and only end-users with authorized access credentials are allowed access to these resources.

SOC services include: Security Information Event Management (SIEM) monitoring, Firewall Protection/monitoring, Network Intrusion Detection/monitoring, Host Based Intrusion Prevention and Monitoring, System Patch Management and compliance monitoring, Event log correlation and monitoring. The SOC uses tools to collect, store, and analyze events, formally tracking Plan of Actions and Milestones (POA&M) for vulnerability remediation. POA&M items include a detailed issue description, individuals responsible, and estimated completion dates.

The SOC team, consisting of qualified and certified personnel, monitors network traffic and performs log analysis using SIEM tools. The SOC performs regular evaluations including both automated and manual control assessments. The SOC performs vulnerability scans for customer systems and manual assessments to verify anti-virus definitions are current, event logs are reviewed, and changes are audited and documented. The data captured is analyzed to identify anomalies, threats and system vulnerabilities. Reports are generated which provide a comprehensive audit trail.

[O6.100, O6.101, O6.102, O6.103, O6.104, O6.105, O6.106, O6.107, O6.108, O6.109, O6.110, O6.111]

DR

The IBM team will work with the State to develop a detailed DR plan that includes provisions for data, backups, storage management, and contingency operations and provides for recovering the DHS Enterprise Platform within established RTOs. We will work with the State to lead the DR planning activity including updates to the DR plan and identifying required changes as the State needs and environments evolve.

For DR design and implementation, we will help establish WAN connectivity from data center to the DHS WAN and provide technical support to the rest of the IBM team with implementing and configuring components. The IBM team will work with DHS to plan and schedule DR test, providing leadership and coordination. We will perform the recovery of DHS Infrastructure (data and storage) in the secondary data center according to RTO requirements and work with the Team to bring the IE-BM system on line in the DR infrastructure. We will track and report DR test results to DHS. To address issues arising from DR testing, the IBM team will develop action plans, assist with resolving and remediation of these issues, and track their implementation and completion status.

The IBM team will keep the DR plan and processes up-to-date and reflect changes and implement the corresponding processes and procedures. The documentation is also kept up-to-date and the Emergency Coordinator and DR resources are identified. From an implementation and operations perspective, we will provide support to vendors with implementing and configuring DR, maintaining the DR environment, and assessing that ongoing replication continues to occur. In the event DHS initiates DR, we will perform the DR activities outlined in the plan.

[O6.112, O6.113, O6.114, O6.115, O6.116, O6.117, O6.118, O6.119, O6.120, O6.121, O6.122, O6.123, O6.124, O6.125, O6.126, O6.127, O6.128]

Batch job control and scheduling

The IBM team will provide job control and scheduling services to DHS. This includes working with DHS to identify requirements for job scheduling and re-runs and identifying interdependencies. Once identified, we will develop and manage the processes, procedures, and documentation for batch operations and automate them using scheduling tools. We will maintain the master job schedule, execute batch jobs, and monitor and manage the resolution of failed jobs.

[O6.129, O6.130, O6.131, O6.132, O6.133]

IBM Migration Factory

Besides offering standard services described previously, the IBM team has significant experience in porting, migration, consolidation, and virtualization of applications and servers from a source to target platform including cloud. This migration process was created 30 years ago and has evolved at a tremendous rate since then; it uses proven methodologies that are designed to be cost-effective and help mitigate risk. IBM Migration Factory has performed more than 2,500 porting, migration, and re-platforming projects, 100 large-server consolidation projects, and over 200,000 server consolidations or upgrades, which makes it a perfect candidate for State's migration activities. IBM Migration Factory can use a phased approach to migrate the State's applications and databases to the cloud. The following table describes the major steps in migrating workloads to the cloud:

Table 24: IBM Migration Factory steps to migrate workloads to the cloud

Stage	Description
Workload discovery.	Collects and verify the inventory of the servers, OS images, and application data for the specified in-scope locations to solidify an actionable baseline.
Analysis and macro design.	Creates a central repository that drives Migration Factory's work products and deliverables throughout the project.
Micro design.	Defines the overall migration approach including dependencies, constraints, and methods.
Implementation.	Transforms the application workload to the modern target environment according to the wave plan and the Technical Solution Design.

8.0 Approach to meeting Operational and Performance Service Level Requirements

The Vendor is required to meet various Operational and Performance SLRs. The Vendor should ensure that the responses to this section are in alignment with the requirements set forth in Template T-12 – Maintenance and Operations Requirements Traceability Matrix, Tab O7.

Instructions: Describe the Vendor's approach to meeting the various SLRs some of which include:

- System Availability
- System Performance
- System Response time
- Incident Response time
- Security Incidents Response Time
- Customer Satisfaction Survey

A key component of IBM's value proposition for application services is the delivery of improved services with contractual service levels, providing delivery excellence in key areas like quality and responsiveness. This approach injects an appropriate level of rigor into the delivery processes, enabling ongoing visibility into delivery performance against a set of agreed to service-level targets and the supporting activities for analysis and reporting to enable continuous improvement against these targets.

We have an end-to-end standard solution for performing data collection, analysis, and reporting of measurements in support of O&M services delivery. This framework includes an integrated measurement system that supports the implementation of the performance measures needed to address key measurements and Service Level Requirements (SLRs) mutually agreed upon. The following figure illustrates the key steps and process for establishing, measuring baselining and agreeing to the DHS SLRs:

Figure 40: SLR Definition process

The IBM team analyzed the SLRs specified in T12 Section 07 and understands the importance of performance standards. We have reviewed and confirmed our ability to meet the requirements, as specified in Section 07.

[O7-1,O7-2,O7-3,O7-4,O7-5,O7-6,O7-7,O7-8,O7-9,O7-10,O7-11,O7-12,O7-13,O7-14,O7-15]

IBM’s approach to meeting these requirements focuses on using the right tools and software, services, methods, and skills to support both the existing EEF system and new IE-BM solution.

The IBM team will put processes in place to measure adherence to performance metrics. We will use IBM's **Metrics Management Framework (MMF)**, which is an end-to-end solution for performing data collection, analysis, and reporting. This framework includes an integrated system that will support the implementation of the performance measures needed to address DHS's key measurements. As a measurement system, MMF is flexible and can adapt to changing needs and scope of work. When implemented, the results will provide measures that are in direct alignment with States' business needs and objectives and allow a focus on continuous improvement. Service level measurements will be implemented using Agile (iterative sprint phases) methodology focused on outcomes that describe each service level, with the primitive measurements and calculations required to implement the measurements and report results. The solution will contain an executive summary, which displays results at a glance, with the capability to link to detailed service level metric graphs for month-over-month trends and analysis. The following list includes key features of MMF:

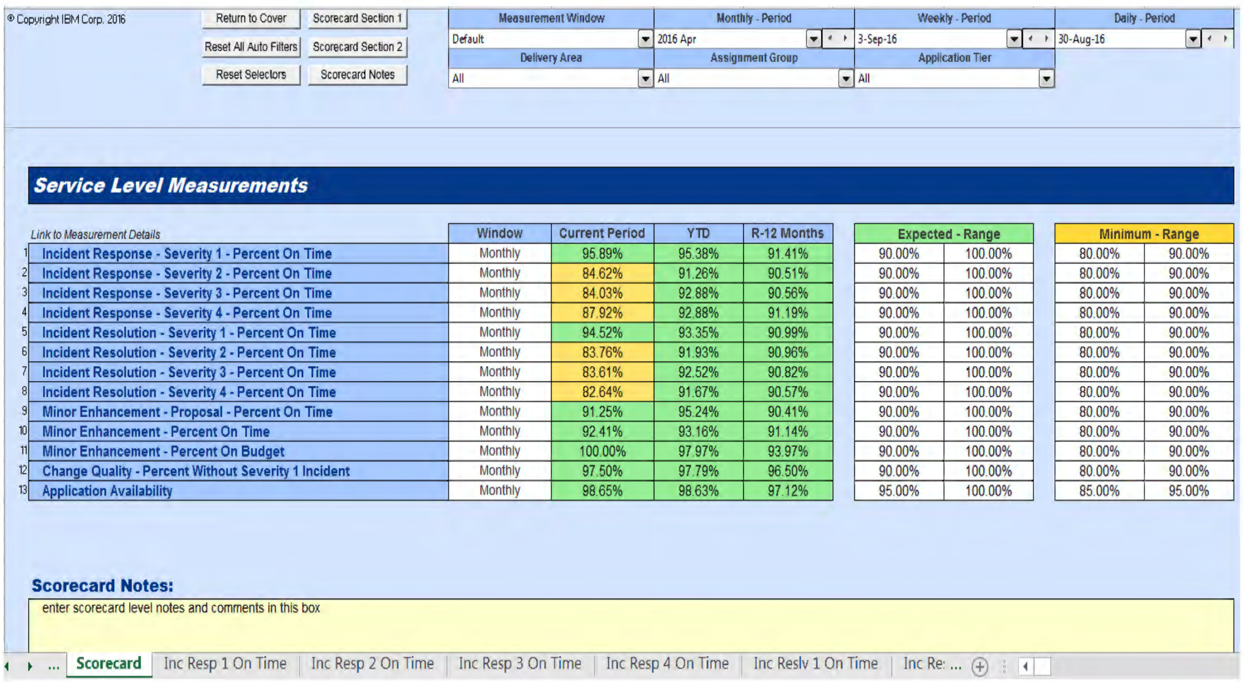
- Supports configurable measurements from multiple service and process areas supported.
- Provides single viewpoint for services received and delivered.
- Streamlines RCA with dimensional drilldown and raw data views that identify patterns that help plan corrective actions.
- Reduces cost associated with service level management reporting and tracking.
- Supports continuous improvement efforts by providing insight into potential areas of scrutiny.

- Uses trending and forecasting to provide a forward-looking view, so performance issues are addressed before they become critical.
- Supports management of customer relationship with unified reporting and dashboards.

The **SLM desktop solution** provides an executive dashboard approach for services management; an approach that provides broad visibility into the health of the services and related processes, enabling rapid feedback on issues and status. The scorecard provides a single snapshot view for DHS SLM, eliminating the need to access multiple tools, Web sites, and hardcopy information to obtain the information needed to understand the health of DHS individual environments. The scorecard provides a summary of key measures and reports and the ability to drill into the detailed data supporting each service level and KPI.

The scorecard will present current measurement period results with aggregated year-to-date and rolling 12-month average results of service level measurements included in the program.

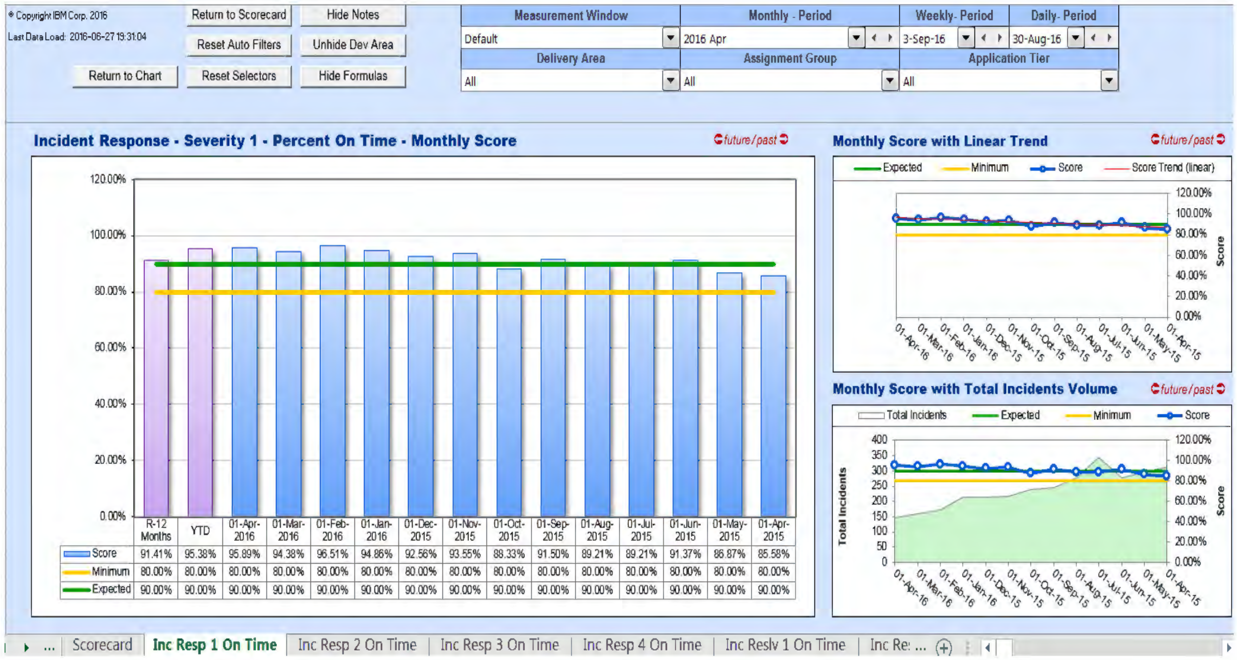
The following figure shows a sample dashboard:



#	Measurement	Window	Current Period	YTD	R-12 Months	Expected - Range		Minimum - Range	
1	Incident Response - Severity 1 - Percent On Time	Monthly	95.89%	95.38%	91.41%	90.00%	100.00%	80.00%	90.00%
2	Incident Response - Severity 2 - Percent On Time	Monthly	84.62%	91.26%	90.51%	90.00%	100.00%	80.00%	90.00%
3	Incident Response - Severity 3 - Percent On Time	Monthly	84.03%	92.88%	90.56%	90.00%	100.00%	80.00%	90.00%
4	Incident Response - Severity 4 - Percent On Time	Monthly	87.92%	92.88%	91.19%	90.00%	100.00%	80.00%	90.00%
5	Incident Resolution - Severity 1 - Percent On Time	Monthly	94.52%	93.35%	90.99%	90.00%	100.00%	80.00%	90.00%
6	Incident Resolution - Severity 2 - Percent On Time	Monthly	83.76%	91.93%	90.96%	90.00%	100.00%	80.00%	90.00%
7	Incident Resolution - Severity 3 - Percent On Time	Monthly	83.61%	92.52%	90.82%	90.00%	100.00%	80.00%	90.00%
8	Incident Resolution - Severity 4 - Percent On Time	Monthly	82.64%	91.67%	90.57%	90.00%	100.00%	80.00%	90.00%
9	Minor Enhancement - Proposal - Percent On Time	Monthly	91.25%	95.24%	90.41%	90.00%	100.00%	80.00%	90.00%
10	Minor Enhancement - Percent On Time	Monthly	92.41%	93.16%	91.14%	90.00%	100.00%	80.00%	90.00%
11	Minor Enhancement - Percent On Budget	Monthly	100.00%	97.97%	93.97%	90.00%	100.00%	80.00%	90.00%
12	Change Quality - Percent Without Severity 1 Incident	Monthly	97.50%	97.79%	96.50%	90.00%	100.00%	80.00%	90.00%
13	Application Availability	Monthly	98.65%	98.63%	97.12%	95.00%	100.00%	85.00%	95.00%

Figure 41: Service level reporting: Sample dashboard

Results for each measurement are presented in charts; the following diagram includes a sample chart:



	R-12 Months	YTD	01-Apr-2016	01-Mar-2016	01-Feb-2016	01-Jan-2016	01-Dec-2015	01-Nov-2015	01-Oct-2015	01-Sep-2015	01-Aug-2015	01-Jul-2015	01-Jun-2015	01-May-2015	01-Apr-2015
Score	91.41%	95.38%	95.89%	94.38%	96.51%	94.86%	92.56%	93.55%	88.33%	91.50%	89.21%	89.21%	91.37%	86.87%	85.58%
Minimum	80.00%	80.00%	80.00%	80.00%	80.00%	80.00%	80.00%	80.00%	80.00%	80.00%	80.00%	80.00%	80.00%	80.00%	80.00%
Expected	90.00%	90.00%	90.00%	90.00%	90.00%	90.00%	90.00%	90.00%	90.00%	90.00%	90.00%	90.00%	90.00%	90.00%	90.00%

Figure 42: Service level reporting: Sample chart

IBM will consider services, which have been documented as levels of service and measured and reported on a consistent basis, as baselines to build upon appropriate service levels for IBM's service delivery. Prior to incorporation of these service levels, a validation period will occur, where IBM will examine the existing measurement system and verify that those service levels can continue to be measured as part of IBM's services delivery.

For services that do have insufficient or no existing, documented levels of services, IBM and the State will mutually agree upon and establish service levels using a measurement period, usually six months in duration. During this measurement period, a measurement system will be established, and service levels will be determined and measured. During this measurement period, IBM will report on our performance, using standard measurement tools to monitor progress. Upon completion of the measurement period, an agreed-to set of service levels will be established with associated service level targets, supporting methodology, and reporting frequency.

Regarding the SLR O7-16 - Additional Vendor Proposed SLRs in T12 Section O7, IBM will work with the State to define the additional SLR requirement for M&O work. The IBM M&O Team is open to discussing the inclusion of the following SLRs in addition to State's SLRs:

- Enhancements delivered on budget: Tracks the number of projects completed on budget as a percentage of total projects completed.
- Defect removal efficiency: Measures the ratio of valid and unique agreed to defects found prior to production to the total number of valid and unique agreed to defects found both prior to production and in production. One of IBM's goals is to increase the removal of agreed to defects before production, and this metric provides visibility into how effectively a delivery organization is in terms of removing agreed to defects during the enhancement lifecycle.

IBM team understands that during the term of the contract there may be changes to the performance standards. We will work with the State to re-evaluate and agree on adjustments or changes to the service levels, as are appropriate.

9.0 Statement of Work

9.1 M&O Deliverables

The Vendor should provide a Statement of Work that details the work to be performed during the M&O phase. The narrative for the Statement of Work should include a detailed description of each Phase deliverable. The Statement of Work should also clearly define the approach and provide assumptions on which the Statement of Work was developed. The Vendor must NOT include any pricing or pricing assumptions in this section.

For each Deliverable, the Vendor should provide the following information:

- **Deliverable Description** – Provide an overview of the Deliverable
- **Vendor Responsibilities** – Provide a clear and concise narrative of Vendor responsibilities to perform the work for this Deliverable
- **State Responsibilities –** Provide a clear and concise narrative of what the Vendor expects from DHS to perform the work for this Deliverable
- **Deliverable Timeline** – Please include start and end dates
- **Deliverable Duration** – Total Duration of the Deliverable in working days
- **WBS ID Number** – Provide the reference to the Project WBS ID number related to this Deliverable
- **Reference** – Indicate the section, page and paragraph where referenced

Instructions: Provide a Statement of Work including each of the Deliverables in the following Table, and any additional Vendor-proposed deliverables. Each Deliverable should include at least the template in the Deliverable Response Template Table. Replicate the template for each Deliverable. Change only the cells containing “<Insert>”. Do not change any of the completed cells. Any changes to the completed cells could lead to the disqualification of the Proposal.

Table 1. List of Deliverables

Grouping	#	Deliverable/ Work Product Name	Frequency
O.1- EEF M&O Transition Planning and Services	O.1.1	EEF M&O Transition Plan	Once and updated as needed or requested by DHS
	O.1.2	EEF M&O Transition Status Report	Weekly during transition activities
	O.1.3	Application Maintenance and Operations Plan	Once
	O.1.4	Completed EEF M&O Readiness Checklist	Once

Grouping	#	Deliverable/ Work Product Name	Frequency
O.2 – Provide M&O Services, Status Reporting and Quality Assurance	O.2.1	M&O Status Report and Service Level Agreement Reporting	Monthly
O.3 – DDI to M&O Transition Services	O.3.1	IE-BM DDI team to M&O team Transition Plan	Once per release/ updated as needed or requested by DHS
	O.3.2	Updated Application Maintenance and Operations Plan	Once and updated for each release
	O.3.3	Completed Transition Readiness Checklist	Once
O.4 – Enhancements and Modifications	O.4.1	Enhancement Requirements and Cost Estimates	Once per change request
	O.4.2	Completed Enhancement Check-List	Once per release
O.5 – M&O Turnover Services	O.5.1	M&O Turnover Plan	Once and updated as needed or requested by DHS
	O.5.2	M&O Turnover Assessment Report	Monthly during transition activities

Table 2. Deliverable Response Template

ID - 2	Deliverable Response Template	
Deliverable Description	<Insert>	
Vendor Responsibilities	<Insert>	
Expectations for the State's Responsibilities	<Insert>	
	Start	End
Timeline	<Insert>	<Insert>
Duration	<Insert>	
WBS ID#(s)	<Insert>	
Reference (Section, Page Paragraph)	<Insert>	

The following provides our comprehensive standard SOW for M&O services. It follows the five task groupings specified by the State, and moreover provides the next level of detail by defining the ongoing activities in separate tasks. A specific listing of the tasks and activities follow, and the deliverables produced during each are identified. As this is a sample SOW, we look forward to working with DHS to refine this and tailor it specifically to the EEF and IE-BM M&O support services.

Task one: Project management

IBM DPE

IBM will designate a DPE, who will manage the quality of the relationships with IBM, manage IBM support personnel and IBM staffing requirements, and provide ongoing project management for the IBM responsibilities in this SOW. The purpose of the project management activity is to provide technical direction and control of IBM support personnel and to provide a framework for project planning, communications, reporting, procedural, and contractual activity. The DPE will perform the following tasks:

- Review the SOW and the contractual responsibilities of both parties with the State Project Manager.
- Serve as the IBM point of contact to the State during the execution of this SOW.
- Coordinate the establishment of the project management environment, including reporting tools, monthly reports, and governance and communication protocols.
- Review project tasks, schedules, and resources and make changes or additions, as appropriate
- Measure and evaluate progress against IBM project plans, if applicable, with the State Project Manager.
- Establish documentation and procedural standards for deliverables.
- Administer the Project Change Control Procedure in conjunction with the State Project Manager.
- Monitor resolution of service incidents.
- Perform problem management, and maintain and communicate escalation procedures.
- Track service incidents and SRs for analysis and reporting.
- Maintain project communications through the State Project Manager.
- Conduct regular monthly status meetings with the State Project Manager.
- Create and deliver monthly status reports.
- Resolve deviations in the SOW in conjunction with the State Project Manager.
- Coordinate and manage the in-scope activities of IBM support personnel.
- Review the IBM standard invoice format and billing procedure to be used on the project, with the State Project Manager.
- Work with the State Project Manager to address and resolve IBM resource issues.

DHS Project Manager

Prior to the start of this project, the State will designate a person called the State Project Manager, who will be the focal point for IBM communications relative to this project and will have the authority to act on behalf of the State in matters regarding this project. The State Project Manager has the following responsibilities per the Plan:

- Identify a State support team, who will be responsible for providing assistance to the IBM support personnel during the contract phases and for approval during the duration of the contract. For example, for severity level one service incidents, the State needs to be immediately available to the IBM support personnel until the service incident is resolved or a work-around has been identified, and for SR, the State needs to provide assistance in defining and clarifying requirements.
- Make SMAs available on a timely basis to resolve or answer questions relevant to EEF and IE-BM business processes, open service incidents, and SR.
- Maintain overall project schedules to comply with the SOW.
- Provide sign-off on project deliverables.
- Administer the Project Change Control Procedure, with the DPE.
- Participate in project status meetings.
- Facilitate DHS functional and technical SMAs are available as required by the IBM team during the transition phase.
- Facilitate that the State's user community reports service incidents and SRs through the tools and processes defined during the transition period. Phone calls or e-mails will not be acceptable forms for the reporting of incidents or requests.
- Perform the initial analysis of service incidents and SR and assign them to the appropriate support team.
- Determine State membership in the governance groups and committees (project steering committee)
- Conduct governance meetings (project steering committee meetings), prioritizing the work efforts in conjunction with the IBM Project Manager.
- Resolve deviations from the SOW in conjunction with the IBM DPE.
- Help to resolve project issues and escalate issues within the State organization, as necessary.
- Verify that the tasks assigned to State are performed according to the agreed upon SOW.
- Resolve project management and project coordination issues, as required.
- Facilitate access to the existing EEF system and technical infrastructure.
- Authorize tasks that impact target availability in a timely manner.
- Authorize test of vendor-supplied software patches.
- Submit written approval for work to commence, including services purchased, where this applies.
- Empower State staff to make necessary decisions for the State.
- Review with the IBM DPE the State's invoice or billing requirements. Such requirements that deviate from IBM's standard invoice format or billing procedures may have an effect on price.

- Manage and be responsible for the State and Third Party personnel for this project.
- Serve as the single interface between IBM and the State departments and Third Parties participating in the project.
- Obtain and provide information, data, and decisions within three working days of IBM's request unless State and IBM agree in writing to a different response time. Review deliverables submitted by IBM in accordance with the Deliverables Acceptance Procedure (defined in our response for Template 11).

Deliverable document

ID - 2	Deliverable Response Template	
Deliverable Description	O.2.1 M&O Status Report and Service Level Agreement	
Vendor Responsibilities	Please refer to the details provided in Task 1	
Expectations for the State's Responsibilities	Please refer to the details provided in Task 1	
	Start	End
Timeline	Jan 2018	Dec 2021 (May be extended by DHS)
Duration	36 Months (May be extended by DHS)	
WBS ID#(s)	TBD	
Reference (Section, Page Paragraph)	Task 1	

Task two: Transition services

Definition of the support processes begins with the start of the transition phase. During this phase, service levels and measurement criteria will be confirmed, and help desk processes and procedures will be established to provide a smooth integration with the State business operations. This work may be completed with a combination of onsite and remote support personnel with the allocation of resources being defined before this phase begins.

The criteria and readiness to transition to the Steady State phase is assessed throughout the transition phase. The transition phase will continue until the volume of service incidents and support effort has stabilized. In the event that stabilization has not occurred by the estimated transition end date, the State and IBM may jointly agree to extend the transition phase.

IBM responsibilities

IBM will be primarily responsible for developing and managing the plan for updating the system support and management processes for the EEF system, if necessary, and transferring application knowledge from State employees and resources to the IBM support personnel. IBM will support the following actions:

- Develop and maintain the transition plan and associated documentation with the State's assistance.

- Establish and implement a project management system and control structure, including processes for managing transition activities, milestones, support resources, and deliverables status, issues, risks, changes, and quality.
- Manage the transition including planning, directing, and monitoring transition activities and assigned resources, according to the agreed schedule and processes.
- Identify deviations from the transition plan and business or technical issues that may impact the transition and address and resolve such issues pertaining to IBM support personnel or responsibilities.
- Develop the transition meetings (planning, review, status) schedule with the State, including the frequency and location for such meetings.
- Coordinate and conduct transition meetings in accordance with the established schedule.
- Provide the State with weekly written status reports, which include information such as schedule status, transition progress, issue identification, and related action plans.

As each application completes transition, IBM will perform the following tasks:

- Demonstrate the completion of the transition of the individual application.
- Commence steady state billing for that application.

Assume management and ongoing support for IE-BM modules

Where IBM is the implementation provider for the design and build project, and IBM is assuming the management and ongoing support responsibilities for the project, IBM will complete the following tasks:

- Work together (IBM implementation team and the IBM ongoing AMS support teams) for a minimum of 30 days for Hyper-Care support after go-live for the IE-BM phases. During this time, the IBM implementation team will provide support for the State's IE-BM application.
- Validate that application programs are written in a currently supported language and source code is available and the system has run in production for at 30 days and has the following characteristics:
  - Batch window processing completes within required, documented timeframes.
  - Online availability is maintained within required, documented timeframes.
  - Online response time is maintained within required, documented timeframes.
- Review change requests that have occurred during the implementation phase with the State and make appropriate modifications, including price, to this SOW through the Project Change Procedure.
- Validate that the technical and operational documentation related to the implementation is completed.

DHS responsibilities

DHS will support the following actions:

- Serve as the interface between the transition team and State's employees and subcontractors participating in the transition to define State 's business and technical requirements for transition and to validate that the transition plan meets such requirement.;
- Act as a central communication and policy setting liaison to the business area management and user communities across the State organization.
- Communicate the necessary contract and policy requirements as needed to the business area management and user communities to facilitate a common understanding of the new roles and responsibilities resulting from the IBM and State SOW.
- Develop and implement, in conjunction with IBM, a communication plan to provide the technical, procedural and cultural change that will need to occur during the transition phase. The State and IBM will jointly project manage the transition project.
- Manage changes proposed by IBM or State to the project plan, requirements, dependencies, resources assignment and availability, roles and responsibilities, project objectives, scope or completion criteria through formal Change Control Procedure.

IBM and State Transition Project Managers will evaluate proposed changes for impact on schedule, cost, and quality prior to approval.

If specifications in the document are incorrect or changed, the transition time line may be delayed. DHS has the following additional responsibilities:

- Appoint a dedicated Transition Manager to work with the IBM AMS management team.
- Be involved in the identification of reporting requirements to validate the current reporting processes.
- Support the new or changed business area management and user community roles and responsibilities that result from IBM's implementation of new AMS and project management procedures.
- Assist IBM in the development and maintenance of the detailed transition plan and associated documentation.
- Review and approve the transition deliverables.
- Provide a single point of contact to set-up system and remote access and to resolve system or remote access issues.
- Provide IBM's employees and subcontractors with access (physical and logical) to the facilities and systems affected as a result of the transition or required by IBM to provide the services. Provide access for the initial resources within two weeks of the start of transition with access provided per the timeframe in the transition plan. Delays in providing access may delay the schedule. Any impact to schedule, scope, or price and will be addressed through the Project Change Control Procedure.
- Assign State's resources and manage the completion of the State–owned transition activities according to the agreed schedule and processes.
- Implement changes consistent with the change control process.
- Obtain and provide current information, data, and documentation related to the transition such as third-party supplier and vendor information, facility data, inventory data, existing operational processes and procedures, systems documentation, and configuration

documentation, decisions and approvals, within the agreed time period, which will be within three business days of IBM's request, unless otherwise mutually agreed.

- Assist IBM in identifying, addressing, and resolving deviations from the transition plan and any business or technical issues that may impact the transition and address and resolve such issues pertaining to State staff or State responsibilities.
- Develop the transition meetings (planning, review and status) schedule with IBM, including the frequency and location, and attend such meetings in accordance with the established schedule.
- Provide access to the tools and systems required for IBM to delivery services.
- Identify and provide State SMAs to assist IBM in the phases of the AT KT process. IBM's performance and the success of the transition is predicated upon the State responsibilities identified in the transition project plan being fulfilled by State. Delays in performance of these responsibilities may result in additional cost or delay of the completion of transition.

The State acknowledges that IBM will be using pre-existing IBM proprietary tools during this engagement to perform the IBM responsibilities. Upon completion of the services, the IBM tools and any installed copies of the IBM tools will be removed from State's facilities. State shall have no right to receive, access, retain, or make use of the IBM tools either before or after completion of the services. No right is granted to State to make any copies of the IBM tools in any form. State shall not reverse assemble or reverse compile the IBM tools in whole or part. No license to State under any trademark, patent, copyright, and mask work protection right or any other intellectual property right is either granted or implied by the use of the IBM tools at State's facilities.

Deliverable document

ID - 2	Deliverable Response Template	
Deliverable Description	O.1.1 EEF M&O Transition Plan	
Vendor Responsibilities	Please refer to the details provided in Task 2	
Expectations for the State's Responsibilities	Please refer to the details provided in Task 2	
	Start	End
Timeline	Jan 2018	Mar 2018
Duration	2 Weeks	
WBS ID#(s)	TBD	
Reference (Section, Page Paragraph)	Task 2	

ID - 2	Deliverable Response Template
Deliverable Description	O.1.2 EEF M&O Transition Status Report
Vendor Responsibilities	Please refer to the details provided in Task 2
Expectations for the State's Responsibilities	Please refer to the details provided in Task 2

	Start	End
Timeline	Jan 2018	Mar 2018
Duration	12 Weeks	
WBS ID#(s)	TBD	
Reference (Section, Page Paragraph)	Task 2	

ID - 2	Deliverable Response Template	
Deliverable Description	O.1.3 Application Maintenance and Operations Plan	
Vendor Responsibilities	Please refer to the details provided in Task 2	
Expectations for the State's Responsibilities	Please refer to the details provided in Task 2	
	Start	End
Timeline	Jan 2018	Mar 2018
Duration	12 Weeks	
WBS ID#(s)	TBD	
Reference (Section, Page Paragraph)	Task 2	

ID - 2	Deliverable Response Template	
Deliverable Description	O.1.4 Completed EEF M&O Readiness Checklist	
Vendor Responsibilities	Please refer to the details provided in Task 2	
Expectations for the State's Responsibilities	Please refer to the details provided in Task 2	
	Start	End
Timeline	Jan 2018	Mar 2018
Duration	12 Weeks	
WBS ID#(s)	TBD	
Reference (Section, Page Paragraph)	Task 2	

ID - 2	Deliverable Response Template	
Deliverable Description	O.3.1 IE-BM DDI team to M&O team Transition Plan	
Vendor Responsibilities	Please refer to the details provided in Task 2	
Expectations for the State's Responsibilities	Please refer to the details provided in Task 2; a subset of these will apply for DDI Transition	
	Start	End

Timeline	Please See Section 3 for Estimated Release 1-5 Transition Schedules	Please See Section 3 for Estimated Release 1-5 Transition Schedules
Duration	7-8 Weeks, based on Release	
WBS ID#(s)	TBD	
Reference (Section, Page Paragraph)	Task 2	

ID - 2	Deliverable Response Template	
Deliverable Description	O.3.2 Updated Application Maintenance and Operations Plan	
Vendor Responsibilities	Please refer to the details provided in Task 2	
Expectations for the State's Responsibilities	Please refer to the details provided in Task 2; a subset of these will apply for DDI Transition	
	Start	End
Timeline	Please See Section 3 for Estimated Release 1-5 Transition Schedules	Please See Section 3 for Estimated Release 1-5 Transition Schedules
Duration	7-8 Weeks, based on Release	
WBS ID#(s)	TBD	
Reference (Section, Page Paragraph)	Task 2	

ID - 2	Deliverable Response Template	
Deliverable Description	O.3.3 Completed Transition Readiness Checklist	
Vendor Responsibilities	Please refer to the details provided in Task 2	
Expectations for the State's Responsibilities	Please refer to the details provided in Task 2; a subset of these will apply for DDI Transition	
	Start	End
Timeline	Please See Section 3 for Estimated Release 1-5 Transition Schedules	Please See Section 3 for Estimated Release 1-5 Transition Schedules
Duration	7-8 Weeks, based on Release	
WBS ID#(s)	TBD	
Reference (Section, Page Paragraph)	Task 2	

Task three: M&O services

IBM responsibilities

Troubleshoot and resolve (Level 2/3 application support)

- Confirm initial Severity Level per the DHS Service Request Priority definitions specified in the table below:

Urgency	Impact			
	State-Wide	Location	Multiple Users	Single User
A full outage of multiple services or all services and/or noncompliance with regulations	Critical	Critical	High	High
An issue completely affecting a service, no workaround available	Critical	High	High	Medium
An issue affecting a service; workaround is available	High	Medium	Medium	Medium
An issue that has no impact to the availability of the affected service; redundancy is available	Medium	Low	Low	Low

- Gather required information for service incident handling to determine cause of the service incident.
- Perform problem diagnosis and determine cause of problem or issue.
- Adjust service incident Severity Level, if required.
- Perform problem management and escalation in accordance with the call flow process that will be confirmed with State during the transition phase, including escalation to application software supplier, if required.
- Determine viable resolution options.
- Determine the desired resolution in conjunction with the State support team.
- Apply the desired resolution or corrective action to the State development system.
- Unit test the resolution in the State development system.
- Update the relevant system, configuration, or process documentation.
- Resolve the service incident or effectively transfer the service incident to the appropriate area of support.
- Document and promptly notify State of emergency changes. This notification may not be later than one day following such change.
- Escalate the service incident to the IBM DPE, if appropriate.

- Update the call tracking system for the State.

Support levels

Service incidents and SRs will be treated in Severity Level order and within the same Severity Level, in the order received, unless directed otherwise by the State Project Manager.

The following defines the levels of support that IBM will provide:

Table 25: Service levels

Support levels	Description
Support level 2	Diagnosis and resolution of application breaks, provided under troubleshoot and resolve.
Support level 3	Diagnosis and resolution of complex problems which may require in depth investigation, research, the assistance of specialists, and the involvement of the software vendor. IBM will enlist the services across a broad range of resources including intellectual capital, knowledge networks, research and development, and the software vendor's technical support, provided under troubleshoot and resolve.

- Initial service levels and measurement period: The service levels and performance measures in this SOW represent the agreement between IBM and DHS as to the services that will be measured and the criteria that will be used for evaluation as of the service level commencement date for a particular service level. Service levels will be reviewed during the baseline period during which actual performance and results will be compared with the specified measurement criteria. Where the service level indicates that the measurement criteria will be determined after the commencement date of the services, the baseline period will be used to establish the measurement criteria and validate it.

  – IBM shall commence reporting of the service levels on the service level commencement date, which corresponds to the end of the baseline period.

  – There will be a six-month baseline period beginning after the transition period. During this time, the initial service levels will be reviewed and confirmed. The IBM support experience during the baseline period will be used to establish the ongoing Steady State service levels.

  – The measuring tools and methodologies shall be mutually agreed upon by IBM and DHS during the transition period prior to the start of the baseline period.

  – During the baseline period, IBM will use the agreed upon measurement tools to monitor the performance of the service levels to serve as input for verifying the initial service level targets.

  – Upon completion of the baseline period, Steady State service levels will be established using the support experience and the information captured during the baseline period.

- New or changing service levels:

- As services and technologies change, the service levels may need to change to reflect these improvements or changes. When new service levels or changes to existing service levels other than the measurement criteria are deemed necessary, these will be done using the Project Change Request Procedure.

- Each change will then go through a baseline period. A minimum of six months of measurement data is required.

- Tools for measuring new service levels and changes to tools for measuring existing service levels will be implemented in accordance with the Project Change Request Procedure.

- If a service level measurement tool changes, the parties may, by written agreement, adjust the service level measurements as necessary to account for any increased or decreased sensitivity in the new measuring tool. However, it is not anticipated that changes in the monitoring tools will drive changes in service levels; rather, the need to collect and accurately reflect the performance data should drive the development or change in monitoring tools.

- The State shall be financially responsible for any increases in IBM's costs, resulting from the State's addition of new service levels.

- Responsibility for coordinating and resolving disagreements regarding the provision of the services and the attainment of the service levels rests with the management committee.

- The review and adjustment of service levels procedure will be used to perform periodic updates to the metrics to reflect changes in business conditions or support requirements. Changes to the service levels cannot be made more than once per year.

IBM will provide services, in accordance with the agreed upon service levels, and IBM will identify root causes, correct problems, and attempt to minimize recurrences of missed service levels for which IBM is exclusively responsible.

Service level targets

- Service level criteria: The severity levels described below will be used to categorize service incidents from the DHS user community and apply them exclusively to the scope of services provided by IBM. Any service level that is impacted by involvement of the State's team, such as programs modified by staff from both DHS and IBM, will not be counted negatively toward IBM relative to the measurements

  The severity level will be assigned initially by the Level 1 call center resource(s). It will be confirmed by the assigned IBM application support personnel or the IBM DPE.

- Application break and fix service incidents:

  - Break and fix methodology: Incident-based method. This service level calculates the performance of each ticket individually and the measurement is based on the number of tickets which fall within the specified service level. Monthly target KPI percentages are used to provide an allowance for a certain number of tickets, which do not meet the service level; to provide a sample size, a minimum of at four incidents per month are required for the service levels to apply.

Establishment of service levels

This procedure is used to establish the baseline measurement criteria for a particular service level or to update the measurement criteria of an existing service level. Baseline measurement criteria shall be established based on actual performance during the baseline period, using analytical methods and processes as may be appropriate for a specific service level.

In the event that a service level cannot be measured without material additional expense by IBM, IBM will provide the necessary explanation and the appropriate PCR information for DHS approval. If DHS chooses not to approve the PCR, IBM will not be required to provide the measurement or be subject to the provisions of the associated service level.

- Initial values: The initial measurement criteria will be the values set as the target for each of the service levels.
- Baseline period: During the six-month baseline period, IBM will use the agreed upon measurement tools to monitor the performance levels for the ongoing service levels to serve as input for confirming the initial service levels and establishing the ongoing steady state service levels. The initial service levels will be confirmed and new service levels established by taking into account the levels achieved by IBM during the baseline period. Should it be determined that the baseline period is not indicative of DHS's normal operating environment, DHS and IBM will mutually define another period which is representative of DHS's normal operating environment as the baseline period.
- Steady State service levels:
  - The ongoing Steady State service levels shall be determined and calculated from an analysis of the information and data obtained during the baseline period related to IBM's actual experience in delivering the in-scope services.
  - The service level target values will be established based on joint analysis and mutual agreement between IBM and DHS.
  - A particular service level target cannot exceed the value which would occur based on IBM missing one event. If it is expected that 50 service incidents will occur in a particular month, the service level target cannot exceed 98% (100% - [1/50]) where each ticket represents 2% of the total.
  - Certain calculations specified in this section assume that perfect performance of each service level is 100%. If 0% represents perfect performance for a particular service level, then such calculations shall be modified as appropriate for that service level.

IBM will begin providing services according to these newly calculated service levels as of the service level commencement date, which corresponds to the end of the baseline period. At that time, IBM will update the service levels set forth in this SOW document to reflect the new service level targets and service level measurement criteria through a change request.

Financial adjustment

- Service level credits: A service level default occurs if IBM's level of performance for a particular service level in a particular month fails to meet the specified service level target. In the event of a service level default, IBM shall provide State service level credits as defined:
  - A service level credit shall be due in the current month if a service level default occurred in the previous month.
  - The monthly service level credit per occurrence of the service level default. (The amount is to be negotiated)
  - IBM and DHS will jointly assess any additional PCRs to determine if the service level credit is applicable to the individual PCR.
  - The service level allocation matrix sets forth the information required to calculate the service level credit in the event of a service level default.
- The following will apply:
  - The service level credit shall be capped at 5% of IBM's monthly invoice amount for the services specified in this SOW. This is the At-Risk amount. IBM and the State will jointly assess additional PCRs to determine if the service level credit is applicable to the individual PCR.
  - In no event the amount of service level credits credited to DHS, with respect to all service level defaults occurring in a single month exceed, in total, the At-Risk amount.
  - The total amount of service level credits that IBM shall be obliged to credit to DHS, with respect to service level defaults occurring each month (subject to earn back), shall be reflected in the next Status Report. Although service level credits shall be tracked by the IBM support team, the credits shall be paid to DHS on a contract year basis.
  - If a single incident results in the failure of IBM to meet more than one service level target, DHS shall have the right to select one of such multiple service level defaults for which it shall be entitled to receive a service level credit under this SOW. DHS shall not be entitled to a service level credit for the other service level defaults. If an application availability service level is not achieved and a Severity 1 problem resolution service level is not achieved as a result of an application not being available, DHS will elect to receive the service level credit associated with the application availability or Severity 1 problem resolution service level, but not both.
  - Service level credits will not apply until after the Service Level commencement date.
- Earn back: IBM shall have Earn back opportunities with respect to Service Level credits as follows:
  - By the fifteenth business day of the second calendar month following the completion of the first contract year and in the same month and time period for each contract year thereafter, IBM shall provide a report to the State that will include, with respect to each critical service level for which there was a Service Level default during the preceding

contract year, for statistics on IBM monthly performance during the preceding contract year, the yearly performance average; and the total amount of service level credits imposed for service level defaults.

- If, during the preceding contract year, IBM achieved a yearly performance average for a service level, that was greater than, or equal to, the service level target in effect for such service level during the preceding contract year, then IBM shall be relieved from paying any service level credits assessed during the preceding contract year for such service level.

- If, during the preceding contract year, the State deletes a service level, then IBM shall be relieved from paying service level credits assessed during the preceding contract year for service level defaults in that service level.

- For each contract year, any service level credits that are not relieved through this earn back methodology shall be considered unrelieved service level credits. The monetary amounts associated with unrelieved service level credits shall be credited to DHS on the monthly invoice reflecting charges for the second month of the contract year immediately following the contract year in which such unrelieved service level credits occurred or if there shall be no further invoices, then IBM shall pay the amount of the unrelieved Service Level credits to DHS within fifteen business days after the end of the last month of the term.

- If the final contract year is less than twelve months long, the foregoing process shall be undertaken with respect to such shorter contract year.

Review and adjustment of service levels

On an annual basis, DHS and IBM may agree to adjust or change the service levels for a particular service. These changes should be based on a minimum of six service level monthly measurements. The DHS Project Manager and the IBM DPE shall jointly develop and agree to such changes, at which time the proposed changes will be presented to the management committee for approval.

If at any time during the term of the PCR there are events caused by the State, which IBM can demonstrate had a negative impact on the service level attainment, such as: an increase in the number of concurrently active users, a significant change in functionality of the application such as additional modules, customizations, or an increase in the number and severity of problem tickets, then DHS and IBM will re-evaluate and agree on any adjustments or changes to the Service Level as are appropriate.

Note: The above examples are not intended to be an exhaustive list of the events which could cause a significant impact on the service level attainment.

If DHS reduces the capacity or changes any of the support requirements, then the productivity and SLRs will be re-evaluated to determine the impact of the changes.

Service level reporting

Each calendar month during the term of the contract, by the fifth workday of the month, IBM shall prepare and present to DHS a report, which assesses IBM performance against the service levels during the previous calendar month.

DHS reserves the right to access, upon prior written request during reasonable business hours, IBM's records, reports, and process documentation that support the service level data collection, measurement, and reporting.

IBM will be responsible for promptly investigating failures to meet the service levels which it is required to measure and report on by:

- Initiating problem investigations to identify root causes of failure to achieve the service levels.
- Promptly reporting problems to the State which it has identified related to the ongoing delivery of support services, and which reasonably could be expected to have a material adverse effect on the State's operations or IBM's service level attainment.
- Making recommendations to the State for improvement in procedures related to the ongoing delivery of support services.

IBM will identify root causes, correct problems, and attempt to minimize recurrences of missed service levels for which IBM is responsible. The State agrees to correct problems and attempt to minimize the recurrence of problems for which the State or your subcontractors are responsible and that prevent IBM from meeting the designated service levels.

Measurement and reporting exclusions

General summary

IBM shall be excused from responsibility to meet a designated service level to the extent and for the time period that the failure to meet such designated service level was due to events or actions for which IBM does not have control or responsibility.

Service level measurements, calculations, and reports would not include any time spent waiting on activities or actions of the State or related third parties. It also would not include any time attributable to planned outages, problems caused by the State or related third parties, State prioritization of resources, data problems not caused by IBM, customization re-designs, situations where IBM and the State agreed to waive the service level measurements, or circumstances that constitute a force majeure event.

Exclusion detail

IBM shall be excused from responsibility to meet a designated service level to the extent and for the time period that the failure to meet such designated service level was due to:

- Problems determined to be caused by the actions or inaction of the State, including DHS directed actions that are correctly implemented by IBM.
- Planned outages such as scheduled maintenance or other scheduled outages which would impact the designated service levels, as agreed by the parties before such outage or impact

occurs. This may be provided through a pre-approved calendar of scheduled maintenance or outage windows.

- Problems where the provision of services was dependent on third-party service providers or third-party products not provided by IBM.
- Performance or non-performance by the State's third-party vendors and suppliers in accordance with State contracts.
- Any software defects and bugs where the software vendor or publisher has not supplied IBM with a patch to fix the defect or bug.
- Any incident related to a defect in a customization or other programming change to the application software where IBM did not provide the customization or change.
- Situations requiring a redesign of a customization where no work around is possible.
- DHS's prioritization of available resources provided by IBM or required of the State pursuant to this SOW.
- The State's failure to perform the State's obligations as set forth in this SOW and to the extent such failure affects IBM's ability to perform the services at the specified service levels. This could include a lack of availability of State resources or untimely response time of the State to respond to incidents that require your participation for identification or resolution.
- Any problem related to a change where the State failed to comply with the agreed upon contractual processes and procedures (failure to follow change management policy).
- Changes made to the State's infrastructure environment that were not communicated in accordance with the change management process:
  - Inadequate or improperly tuned hardware or system software infrastructure environments, except for those items for which IBM is responsible.
  - A problem where the State's deferred maintenance activity or the State's decision to not increase capacity against the written advice of IBM to the State's refusal to increase capacity where the State has exceeded the available capacity).
  - Hardware failures in State provided hardware.
  - Hardware failures where IBM had, prior to the failure, advised the State of the need for repairs or new components, but the State elected not to undertake the repairs or procure the new components.
  - Circumstances where the State is experiencing a severe, adverse impact related to the Services and for which the State, on an exception basis, requests that IBM respond and work to resolve outside the normal service level criteria.
  - Problems with the State's data not caused by IBM.
  - System administration activities, commands, or file transfers performed by the State or the State's representatives.

- Situations where IBM and the State mutually agreed to waive service level measurements for a period to be determined in conjunction with the implementation of new functionality, a new release or other agreed upon activity.

- Service incident counts that exceed those defined in the IBM responsibilities section in this SOW will be considered as incidents above the baseline scope will be reported but will not be included in the service level calculation.

- Circumstances that constitute a force majeure event.

Information security management

IBM will provide ongoing information security management for the activities defined in this SOW. The purpose of this activity is to provide mutually agreed upon understanding of security measures to protect information under this SOW.

DHS responsibilities

Troubleshoot and resolve (Level 2/3 application support)

- Verify everyone in the State user community reports service incidents through the agreed call flow process.
- Provide notification through the Project Change Control Procedure 30 days in advance of events that may result in an increase in service incidents and facilitate that an appropriate training plan is in place to support requirements during implementation.
- Document and promptly notify IBM of any emergency changes implemented by DHS to the EEF or IE-BM environment. This notification may not be later than one business day following such change.
- Provide documentation for changes to the State's environment. Until IBM receives such documentation, the changes will not be supported by IBM.
- Participate in determining the desired resolution in conjunction with IBM.
- Develop user test scenarios and test cases.
- Conduct UAT.
- Develop and conduct user training.

DHS service level responsibilities

- Provide notification through the change control process 30 days in advance of any events that may impact IBM's ability to meet the designated SLRs.
- Document and promptly notify IBM of any emergency changes implemented by DHS to the EEF or IE-BM environments. This notification may not be later than one business day following such change.
- Agree to correct problems and attempt to minimize the recurrence of problems for which the State or your subcontractors are responsible and that prevent IBM from meeting the service levels.

DBA support

State will provide a State DBA throughout the duration of the contract for the M&O support. This State DBA will possess knowledge of how each selected database for the EEF System is designed, tuned, backed up, restored, and copied. State will:

- Provide technical information about the in-scope database.
- Copy and install the in-scope databases into the EEF and IE-BM environments.
- Maintain the in-scope database environments to support the scope outlined in this SOW;
- Develop and implement access security for the application databases.
- Provide database assistance to the M&O support personnel.

System access and connectivity

- DHS will provide an infrastructure and application environment with sufficient levels of connectivity, capacity, and performance to enable IBM to provide the services in this SOW and to meet the specified service levels. The infrastructure should provide for an adequate number of design, development, test, and production environments to support the entire application lifecycle of the EEF or IE-BM system.
- Provide necessary system connectivity, with password security, for the support personnel, DBAs, and other IBM support resources to access the State's EEF and IE-BM development, test, QA, and production systems, and to access other State network-based resources as required including system documentation. The IBM support resources may be located both domestically and globally.
- Provide secure remote communication lines for the support personnel and other IBM support resources to be able to connect to the State's systems. State will be responsible for the cost of the communications line. The IBM resources may be located both domestically and globally.
- Provide online access to the EEF and IE-BM business process documentation and user training guides.
- Provide the IBM DPE with current electronic lists of their designated personnel (help desks within each functional area, individuals to be notified in situations where escalation is necessary).
- Facilitate that all of the State user community adheres to the call flow process confirmed during the transition phase.
- Provide documentation for changes to the State's application environment. Until the IBM DPE receives such documentation, IBM will not support the changes.
- Provide the documentation of the current business process and identify those which are considered critical.
- Retain responsibility for formal State corporate policies and procedures, and for associated documentation and, provide copies of such documentation to the IBM DPE.
- Maintain currency on all software licenses necessary to execute this SOW. IBM will not be responsible for the ownership or management of any application software licenses, including licenses for the IBM staff to perform their responsibilities in this SOW.

- Retain a current copy of the licenses that are associated with the support for the EEF system.
- Provide EEF and IE-BM online support connectivity and IDs.
- Provide connectivity to all in scope third-party software applications.

Deliverable documents

None.

Task four: Enhancements and modifications

The enhancements and modifications support service provides for new enhancements or modification for custom development updates, additions, and deletions within existing modules and functionality that are already in production.

IBM responsibilities

IBM will provide support to assist DHS with enhancements and modification of your existing production EEF or IE-BM system over the life of the contract.

- Accept Enhancement Requests from the process identified during EEF transition.
- Review and document the Enhancement requirements.
- Prepare an estimate for each submitted Enhancement.
- Determine the impact on system performance and batch schedule, if appropriate.
- Submit the Enhancement Requirements and Cost Estimates for DHS review
- Obtain DHS approval to proceed with development.
- Develop solution design and scope based on requirements.
- Develop and change code or configuration based on agreed-to design.
- Apply code or configuration in the development system.
- Perform testing as defined during the development of the testing guidelines which is completed during the transition phase.
- Complete executable program documentation.
- Submit the Completed Enhancement Check-List for DHS review
- Obtain user acceptance.
- Validate that user training is developed or modified, as required.

DHS responsibilities

- Approve for submission all work activities passed to IBM.
- Develop and deliver requirements through SR.
- Provide approval to proceed with development based on estimates and impacts.

- Provide DHS primary contact for each request.
- Provide data for unit testing to IBM support personnel.
- Identify and develop user test scenarios and test cases.
- Identify, develop, and conduct required integration testing.
- Conduct UAT.
- Develop and conduct user training.
- Provide written authorization to move code objects into production.
- Coordinate the installation of solution into the production environment.
- Approve completion of the Enhancement.

Deliverable documents

ID - 2	Deliverable Response Template	
Deliverable Description	O.4.1 Enhancement Requirements and Cost Estimates	
Vendor Responsibilities	Please refer to the details provided in Task 4	
Expectations for the State's Responsibilities	Please refer to the details provided in Task 4	
	Start	End
Timeline	TBD	TBD
Duration	TBD	
WBS ID#(s)	TBD	
Reference (Section, Page Paragraph)	Task 4	

ID - 2	Deliverable Response Template	
Deliverable Description	O.4.2 Completed Enhancement Check-List	
Vendor Responsibilities	Please refer to the details provided in Task 4	
Expectations for the State's Responsibilities	Please refer to the details provided in Task 4	
	Start	End
Timeline	TBD	TBD
Duration	TBD	
WBS ID#(s)	TBD	

Reference (Section, Page Paragraph)	Task 4

Task five: M&O turnover services

IBM responsibilities

Transition initiation and planning

The scope of the transition planning and initiation activity will involve the preparation and planning required to successfully executing the transition project. The following major tasks are included under this transition initiation and planning activity:

- Assemble the transition project team.
- Establish transition interfaces (enable people, technology, service delivery, service management, program management).
- Develop and update contact lists and organization charts.
- Develop reverse transition proposal.
- Establish project management processes and templates.
- Define the Project Control Book.
- Develop a detailed Reverse Transition Plan Document.
- Establish and implement a transition communication plan.
- Plan and execute kick-off meetings.

Execute: Transfer services

This phase includes the services which need to be transferred to the DHS and State or your identified incumbent vendor. This phase involves in transferring of the below mentioned services:

- Operational processes: Major tasks involved in this activity:
  - Identify and document the data to be transitioned and create a common process with IBM and DHS and incumbent vendor business units within the scope of the reverse transition.
  - Transfer operational process through change management, service request management, and problem management processes.
  - Hand over the current procedure manuals to the DHS or identified incumbent vendor team.
- Agile based KT with each KT comprising of components delivered in number of sprints based on application complexity. Each sprint in this activity focusses on the common process, functional and technical knowledge is transferred to the DHS or identified incumbent team. This activity is done with the below three phases:
  - Plan Phase

  - Learn Phase
  - Perform Phase

For the three sub-phases, the entry and exit criteria needs be followed as agreed in the kick-off meeting.

- Redeployment of Assets: This activity involves in identifying and transitioning of the software and hardware assets. Reviewing and analyzing of the infrastructure and software assets need to be done along with the required licenses. SLM plan has to be developed and should include the plan for transfer of assets and licenses. Details of installation and removal of software and hardware owned by IBM need to be reviewed as appropriate.
- Redeployment of human resources. Below are the major tasks in this activity:
  - Conduct “all hands” meeting with IBM employees to announce account termination.
  - Review the overall Reverse Transition Communication Plan with the Transition Manager and obtain necessary approvals.
  - Develop and distribute memo to the affected employees on the delivery team.
  - Establish procedures for daily monitoring, response, escalation and reporting the feedback.

Execute: Close services

In this phase, the management and workplace services are closed and communicated to the key stakeholders. The labor claiming, governance process, and DOUs are to be closed and notification should be sent to the stakeholders. Connectivity to the IBM internal network should be closed and the customer environment should be disconnected. The contract should be jointly verified by IBM and the DHS and State before closing the customer contract and the closing date needs to be communicated to the stakeholders.

Controlling phase

The scope of this phase is to control and monitor the recurring and on-going activities in the reverse transition. Recurring activities include the review meetings, creating status reports, and conducting the review meetings and reverse TCB meetings. On-going activities include change, risk, and issue management processes. These involve identifying the new requirements, new risks and issues, and actions for those. These need to be updated in RICA worksheet. Assistance to the audits needs to be provided and coordination with the DPE is required in identifying the audit coordinator.

Close

This phase involves in the creation of the Reverse Transition Project Review Report and to conduct the survey for the customer satisfaction. The report needs to be updated with the feedback results. The lessons learned report should also be published with the details of good aspects and the areas to be improved. Finally, the Project Control Book needs to be closed, once the open risks, issues, changes are closed or transferred, as appropriate. The project records need to be archived and the assets and people need to be redeployed.

DHS responsibilities

- Facilitate transition of application and domain.

- Facilitate that the accesses and facilities are provided to DHS and identified vendor team.
- Escalation point for application management issues.
- Conduct quality reviews.
- Give acceptance to the completion of transition milestones.

Deliverable documents

ID - 2	Deliverable Response Template	
Deliverable Description	O.5.1 M&O Turnover Plan	
Vendor Responsibilities	Please refer to the details provided in Task 2	
Expectations for the State's Responsibilities	Please refer to the details provided in Task 2	
	Start	End
Timeline	TBD	TBD
Duration	Estimated at 2 Weeks	
WBS ID#(s)	TBD	
Reference (Section, Page Paragraph)	Task 5	

ID - 2	Deliverable Response Template	
Deliverable Description	O.5.2 M&O Turnover Assessment Report	
Vendor Responsibilities	Please refer to the details provided in Task 2	
Expectations for the State's Responsibilities	Please refer to the details provided in Task 2	
	Start	End
Timeline	TBD	TBD
Duration	Estimated at 2 Months	
WBS ID#(s)	TBD	
Reference (Section, Page Paragraph)	Task 5	

9.2 Deliverables Expectations Document (DED)

The awarded Vendor will be required to prepare all deliverables based on a DED that will be written by the Vendor and approved by DHS with guidance from the QA/IV&V vendor prior to the Vendor starting any work on the Deliverable. Once approved by DHS, the DED will be a tool used to monitor the Vendor's work on the deliverable and to discuss the Vendor's successful delivery of the Deliverable as defined by the deliverable acceptance criteria.

No work may be performed on any deliverable until the associated DED has been approved in writing by DHS. As each Project Deliverable is submitted, the Vendor must include a copy of the DED as the cover sheet.

Submission of DEDs for these deliverables will be evaluated as part of the Vendor's Proposal. But submission with a Proposal, or issuance of a Contract does not constitute acceptance of the DED.

Instructions: Provide DEDs for the following deliverables (see the RFP document for additional details), using the template in the DED Template Table below. Replicate the template for each DED submitted. Change only the cells containing "<Insert>". Do not change any of the completed cells. Any changes to the completed cells could lead to the disqualification of the Proposal.

Table 3. Deliverables For Which The Vendor Should Complete A DED Within The Proposal

Deliverable #	Name of Deliverable
O.1.1	EEF M&O Transition Plan
O.1.3	Application Maintenance and Operations Plan
O.2.1	M&O Status Report and Service Level Agreement Reporting
O.4.1	Enhancement Requirements and Cost Estimates
O.5.1	M&O Turnover Plan

Table 4. DED Template

Project Deliverable Expectations Document (DED)	
Project Deliverable Number:	**Title of Deliverable:**
<Insert>	<Insert>
Proposal Reference:	**Contract Reference:**
<Insert>	<Leave Blank>
Frequency:	**Draft Submission Due:**
<Insert>	<Leave Blank>
State's Draft Review and Comment Period:	**Final Submission Due:**
<Leave Blank>	<Leave Blank>
Approval Required:	**Distribution:**
<Leave Blank>	<Leave Blank>
Vendor:	
Prepared by:	**Date Submitted:**
<Leave Blank>	<Leave Blank>
Date Submitted 2:	**Date Submitted 3:**
<Leave Bank>	<Leave Blank>

Phone Number:	**FAX:**
<Leave Blank>	<Leave Blank>
Email:	
<Leave Blank>	
Deliverable Acceptance Criteria – To be reviewed by QA Provider and DHS and Approved by the Project Director	
<Insert Proposed Format and Content Description for Each Required DED>	
DHS Approval/Comments	
Approved by:	**Date:**
<Leave Blank>	<Leave Blank>
Signature: <Leave Blank>	
Comments: <Leave Blank>	

The IBM M&O Team will use Deliverable Expectations Documents (DEDs) to gain mutual agreement and elaborate on the deliverables specified in the SOW. Per Table three, above, the following deliverables are included:

- O.1.1 EEF M&O Transition Plan.
- O.1.3 Application M&O Plan.
- O.2.1 M&O Status Report and Service Level Agreement Reporting.
- O.4.1 Enhancement Requirements and Cost Estimates.
- O.5.1 M&O Turnover Plan.

IBM will create a DED for each deliverable 20 working days prior to the delivery due date of each deliverable and submit it to the State for approval. Comments and edits will be due within ten working days of submittal. The DED documents will follow the same organization of the deliverables outlined in the SOW with mutually agreed upon clarifications and changes. The DED will contain the following sections:

1. Title Page.
2. Revision History.
3. Distribution List.
4. Document Location.
5. Document References.
6. Deliverable Description extracted from the SOW with elaborations as needed for clarity and mutual agreement.
7. Deliverable Assumptions.
8. Deliverable Constraints.
9. Deliverable Acceptance Criteria.
10. Comment and Approval Block.

The IBM M&O Lead will create a DED document based upon the format derived from WWPMM and acceptable to the DHS project executive with approval authority for the DEDs.

Project Deliverable Expectations Document (DED)	
Project Deliverable Number:	**Title of Deliverable:**
O.1.1	EEF M&O Transition Plan
Proposal Reference:	**Contract Reference:**
O.1-EEF M&O Transition Planning and Services	<Leave Blank>
Frequency:	**Draft Submission Due:**
Once and updated as needed or requested by DHS	<Leave Blank>
State’s Draft Review and Comment Period:	**Final Submission Due:**
<Leave Blank>	<Leave Blank>
Approval Required:	**Distribution:**
<Leave Blank>	<Leave Blank>
Vendor:	
Prepared by:	**Date Submitted:**
<Leave Blank>	<Leave Blank>
Date Submitted 2:	**Date Submitted 3:**
<Leave Bank>	<Leave Blank>
Phone Number:	**FAX:**
<Leave Blank>	<Leave Blank>
Email:	
<Leave Blank>	
Deliverable Acceptance Criteria – To be reviewed by QA Provider and DHS and Approved by the Project Director	

The EEF solution M&O transition plan captures the activities that IBM will perform to establish the EEF solution support organization and migrate the M&O processes and tools to the vendor. The Plan will include a schedule to complete the tasks prior to the end of the incumbent vendor's contract.

Scope of this deliverable includes:

- Documentation of the M&O Team's proposed target state including:
  - Proposed Vendor staff.
  - Roles and responsibilities related to the EEF solution support and operations.
  - Proposed list of activities and processes to support the activities.
  - Acquisition, transition, and need for tools.
  - Training plans to verify staff gain the required knowledge in alignment with the incumbent vendor's requirement statement outlining the technical resources and requisite knowledge, skills, and experiences required to transition M&O activities.
  - Plan for coordinating roles and responsibilities between the vendor and the ISS vendor.
  - Plan for developing the EEF Solution Design Assessment Report.
  - Approvals for plans by DHS and commitment to supply resources
    - Note: It is the responsibility of DHS to verify resources from DHS and third-party vendors is sufficient.
  - Staffing of target organizations and ongoing support through the duration of the contract.
  - Security and confidentiality plan.
  - Inventory and plan for IE-BM solution hardware and software, documentation, supplies, facilities, and other resources within the contract.
  - Plan for migrating the required documentation to the vendor.
  - Plan to transition for the applicable development tools, processes and procedures, and management tools (security management, systems management).
- This deliverable will include measureable progress milestones and check-points, so DHS can quantify the transition risk.
- This deliverable shall also include the assumed level of support required from DHS and the incumbent vendor.
- The EEF solution M&O transition plan will include a readiness checklist, which captures the activities that will be completed prior to completing the transition of EEF solution M&O activities from the incumbent vendor, grouped by service to allow for incremental transition.

DHS Approval/Comments	
Approved by:	**Date:**
<Leave Blank>	<Leave Blank>
Signature: <Leave Blank>	
Comments: <Leave Blank>	

Project Deliverable Expectations Document (DED)	
Project Deliverable Number:	**Title of Deliverable:**
O.1.3	Application Maintenance and Operations Plan

Proposal Reference:	**Contract Reference:**
O.1- EEF M&O Transition Planning and Services	<Leave Blank>
Frequency:	**Draft Submission Due:**
Once	<Leave Blank>
State's Draft Review and Comment Period:	**Final Submission Due:**
<Leave Blank>	<Leave Blank>
Approval Required:	**Distribution:**
<Leave Blank>	<Leave Blank>
Vendor:	
Prepared by:	**Date Submitted:**
<Leave Blank>	<Leave Blank>
Date Submitted 2:	**Date Submitted 3:**
<Leave Bank>	<Leave Blank>
Phone Number:	**FAX:**
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Email:	
<Leave Blank>	
Deliverable Acceptance Criteria – To be reviewed by QA Provider and DHS and Approved by the Project Director	

The application M&O plan describes the establishment of a support organization and the processes and tools to be managed and staffed by the IBM M&O team. Plans for the following services to be included in this deliverable:

- System administration and operations.
- Help desk and incident and problem management.
- RCA.
- System monitoring.
- User account management.
- Security administration.
- Database administration.
- Break and fix.
- Change and release management.
- Training (initial and ongoing) of M&O and State staff.
- CM.
- CM plan establishes a consistent method for formally identifying and controlling project configuration items. Project configuration items include items such as software and deliverables and other project artifacts. The intent of this plan is to facilitate the protection of configuration items and communicate changes that have been made to them. The scope of this Plan will include:
  - Processes to track software installed and the combination of hardware and software residing on each component of equipment.
  - Tools used to manage software configuration management, standards, and processes.
- Standards and processes to describe the IBM M&O team's approach to concurrent development code streams needed.
- Performance management.
- Capacity planning and management.
- Technology refresh and replenishment services.
- DR services.
- Data retention and archiving.

Scope of this deliverable includes documentation of the IBM M&O team's proposed target state including:

- Proposed the IBM M&O team staff.
- Roles and responsibilities related to IE-BM support and operations.
- Proposed list of activities and processes to support the activities.
- Acquisition and need for tools.
- Plan for coordinating roles and responsibilities.
- Approvals for plans by DHS and commitment to supply resources,
- Staffing of target organizations and ongoing support through the duration of the contract.

DHS Approval/Comments	
Approved by:	**Date:**
<Leave Blank>	<Leave Blank>
Signature: <Leave Blank>	

Comments: <Leave Blank>

Project Deliverable Expectations Document (DED)	
Project Deliverable Number:	**Title of Deliverable:**
O.2.1	M&O Status Report and Service Level Agreement Reporting
Proposal Reference:	**Contract Reference:**
O.2 – Provide M&O Services, Status Reporting and Quality Assurance	<Leave Blank>
Frequency:	**Draft Submission Due:**
Monthly	<Leave Blank>
State's Draft Review and Comment Period:	**Final Submission Due:**
<Leave Blank>	<Leave Blank>
Approval Required:	**Distribution:**
<Leave Blank>	<Leave Blank>
Vendor:	
Prepared by:	**Date Submitted:**
<Leave Blank>	<Leave Blank>
Date Submitted 2:	**Date Submitted 3:**
<Leave Bank>	<Leave Blank>
Phone Number:	**FAX:**
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Email:	
<Leave Blank>	
Deliverable Acceptance Criteria – To be reviewed by QA Provider and DHS and Approved by the Project Director	

This deliverable is documentation to confirm that the system M&O reporting activities and the implementation of reporting and reporting tools and processes are complete, as described in the system M&O plan. This deliverable will consist of:

- M&O reports (weekly): The maintenance requests that occur during the M&O period will be documented and communicated with DHS within a reasonable, agreed upon timeframe, on a regular basis. The maintenance report will contain the description of the maintenance request, resolution status, and the proposed course of action for remedying open maintenance requests.
- Service level reporting (monthly): Periodic report that details the SLRs in-scope for that reporting period. This will consist of:
  - A relevant history of the SLRs reported on in previous reporting periods.
  - SLRs in-scope for the current reporting period.
  - Progress on corrective action plans established in the last reporting period or since that time.
  - New corrective action plans established due to the current reporting period.
- Service level improvement plan (once with as needed updates): In case of deficiencies, the IBM M&O team shall develop an improvement plan to achieve agreed upon service levels.
- Service level improvement plan progress updates (monthly): The IBM M&O team shall provide monthly progress updates against improvement plans.
- System incident reports (weekly): Incidents that occur during the base and optional extension M&O periods will be documented and communicated with DHS on a regular basis. The system incident report will contain the severity of the incident, a description of the incident, incident resolution status, RCA, and the proposed course of action for remedying the open incidents.
- Configuration management documentation (monthly): Software configuration management is the identification and maintenance of system software components and the relationships and dependencies among them. The IBM M&O team is required to provide a monthly list of changes and reference the various change and configuration management documents.

Note: The M&O Status Report will encompass the M&O activities for both the EEF solution and the IE-BM solution.

DHS Approval/Comments	
Approved by:	**Date:**
<Leave Blank>	<Leave Blank>
Signature: <Leave Blank>	
Comments: <Leave Blank>	

Project Deliverable Expectations Document (DED)	
Project Deliverable Number:	**Title of Deliverable:**
O.4.1	Enhancement Requirements and Cost Estimates

Proposal Reference:	**Contract Reference:**
O.4 – Enhancements and Modifications	<Leave Blank>
Frequency:	**Draft Submission Due:**
Once per change request	<Leave Blank>
State's Draft Review and Comment Period:	**Final Submission Due:**
<Leave Blank>	<Leave Blank>
Approval Required:	**Distribution:**
<Leave Blank>	<Leave Blank>
Vendor:	
Prepared by:	**Date Submitted:**
<Leave Blank>	<Leave Blank>
Date Submitted 2:	**Date Submitted 3:**
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Phone Number:	**FAX:**
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Email:	
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Deliverable Acceptance Criteria – To be reviewed by QA Provider and DHS and Approved by the Project Director

For each agreed upon release, the IBM M&O team shall produce the following documentation:

- Release requirements and scope including list of requested changes.
- Development plan including:
  - Documentation (updates to specification or new specs).
  - Testing plans.
  - Change management and training plans.
  - Infrastructure impact.
  - Staffing plan.
- Acceptance criteria check list including items such as:
  - Testing results and passed UAT.
  - Updated documentation.
  - Updated operations plan.
- Interim deliverables.
- Function point and cost estimates.
- Release check list.

DHS Approval/Comments	
Approved by:	**Date:**
<Leave Blank>	<Leave Blank>

Signature: <Leave Blank>
Comments: <Leave Blank>

Project Deliverable Expectations Document (DED)	
Project Deliverable Number:	**Title of Deliverable:**
O.5.1	M&O Turnover Plan
Proposal Reference:	**Contract Reference:**
O.5 – M&O Turnover Services	<Leave Blank>
Frequency:	**Draft Submission Due:**
Once and updated as needed or requested by DHS	<Leave Blank>
State's Draft Review and Comment Period:	**Final Submission Due:**
<Leave Blank>	<Leave Blank>
Approval Required:	**Distribution:**
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Vendor:	
Prepared by:	**Date Submitted:**
<Leave Blank>	<Leave Blank>
Date Submitted 2:	**Date Submitted 3:**
<Leave Bank>	<Leave Blank>
Phone Number:	**FAX:**
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Email:	
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Deliverable Acceptance Criteria – To be reviewed by QA Provider and DHS and Approved by the Project Director	
The plan will consist of the following elements: • The activities needed to transition services to another provider, including roles and responsibilities throughout the transition. • The coordination means, tools, and artifacts to be used by the associated parties. • The staffing transition plan including the methods for facilitating the IBM M&O team will provide adequate staffing until the other provider is prepared to take ownership. • Process for monthly IBM M&O team assessments of the activities critical to the M&O transition and completion of IBM M&O activities.	
DHS Approval/Comments	
Approved by:	**Date:**
<Leave Blank>	<Leave Blank>
Signature: <Leave Blank>	

Comments: <Leave Blank>

10.0 Value Added Services and Benefits

The Vendor may describe any services or deliverables that are not required by the RFP, and thus at no additional cost to DHS, but that the Vendor proposes to provide that will add value to the Phase and further differentiate the Vendor from other bidders. The Vendor is not required to propose value-added benefits, but inclusion of such services may impact the Vendor's overall evaluation.

Instructions: Please describe any value added services or deliverables the Vendor is including as part of its Proposal that is at no additional cost to DHS.

The State of Arkansas DHS is seeking a vendor to implement and manage a Federally-compliant IE-BM solution. IBM understands DHS has already made a significant investment in implementing an eligibility determination solution that supports MAGI Medicaid using IBM's Cúram platform's HCR module. A key component of this engagement will be the M&O of the existing EEF solution and M&O of the final IE-BM solution.

The IBM M&O solution brings unique value-added capabilities and services that will be provided at no additional charge to the State and will assist in allowing DHS to meet its' stated objectives for the IE-BM project.

The important value add this team will bring to the State is the combined experience and knowledge of IBM and Northrop Grumman. Together, we have the following unique set of capabilities:

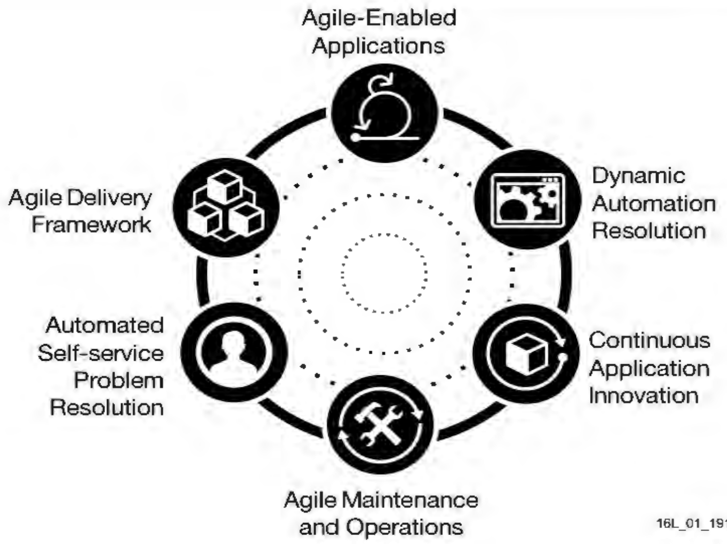
- IBM Cúram produce experience.
- Northrop Grumman's understanding of the State's environment based on supporting the ISS contract.
- Recent successful experience in implementing and taking over Cúram projects in the County of San Diego, State of Missouri, and State of South Carolina.

The IBM M&O solution will bring a number of unique, value added services and capabilities to our everyday applications delivery. We will implement an Agile-enabled service delivery model that incorporates the principles of Agile development to transition, M&O, and related enhancement scope. The result will be a more innovative and efficient solution that will assist the State meet your objectives of increased customer satisfaction, decreased risk, improved effectiveness, and lower TCO. We will streamline M&O and reduce the resources required to support it to allow the State to redirect the savings to other projects that bring value to your citizens.

The IBM team will accomplish your objectives through the following value-added capabilities and services:

Dynamic Automation (DA)

The ability to automate detection of repetitive application events and associated remediation by a "virtual engineer". DA will provide the capability to emulate human execution of repetitive processes. It will be used to automatically resolve incidents, alerts, and scheduled events, and



data and analytical tasks including restarts, application recycles, password resets, data integration, health checks, reporting, and analytics. This increases the capacity of the IBM application M&O team to focus on and resolve more critical tickets. This will bring increased satisfaction to State users and free up resources and money for enhancement work.

DA includes the following elements:

- Handling a DB2 start and stop process, which includes restarting approximately 1000 batch jobs.
- Weekly task currently handled manually, with a high risk of human error.
- DA to save 2.5k hours of effort, or $35,000 each month and eliminate the risk of error.

Table 26: DA use cases

Category	ITIL process	Example
Proactive maintenance		
Application monitoring	Alert and event management: Early detection of incidents, analysis and problem remediation to reduce user impact.	Alert: High file system usage (such as > 90% used).
Preventive manual maintenance	Proactive problem management to avoid incidents.	Check log file three times daily for successful PO batch job run
Scheduled maintenance	Proactive problem management to avoid incidents.	Recycle application and database every Saturday.
Reactive maintenance		
Problem ticket resolution (L1/L2)	Reactive incident and problem management.	Order not fulfilled from a retail system. Known RCA > queue failure.
Service request (SR)	SR fulfillment, addressing common user requests for non-incident support.	Check available disk space in database server and generate report upon specific customer requests.

Cognitive Watson

Automated self-service problem resolution can increase the productivity, efficiency, and effectiveness of knowledge of workers by providing fast and accurate answers to their questions, sometimes before they have even asked the question. Our solution for the State is based on our IBM Watson Cognitive Computing technology.

IBM plans on utilizing Cognitive Watson to assimilate, understand, and analyze a large body of information from multiple sources to help make smart and standardized decisions for the State. This will be applied in the application M&O in determining the resolution of Level 2 tickets in a more expedient and accurate manner. In other accounts, we are seeing a 25% reduction in applications M&O functional resource support needed. This is achieved by avoiding 80% Level 1 functional tickets and 50% of Level 2 functional tickets. We are also seeing a 15% reduction in M&O technical resource support needed for ticket resolution.

Our IBM Team will use a Watson-powered virtual support agent and interface called Cognitive Assistant to directly support State application users. Components of the solution include:

- **iCurate**: A tool that allows SMAs to build and manage content within Cognitive Assistant.
- **iAssist**: A simple user interface that allows users to ask questions and get immediate, appropriate responses from the cognitive solution.
- **Natural Language Classifier (NLC)**: A Watson service capable of natural language processing and learning.
- **Retrieve and Rank**: A Watson service that works alongside NLC to provide relevant answers to users.
- **Watson Knowledge Base**: A database that stores and organizes curated question-answer pairs and other data loaded through iCurate.

Furthermore, Watson can integrate with the JIRA system and analyze the inbound tickets. If DHS approves the integration, the State will receive the following key benefits:

- Users will get direct, self-service answers and insights, thus reducing creation of expensive trouble tickets.
- System status alerts and outage information will be updated and communicated at machine speed, with contextual analysis applied to facilitate that the right people have the right information at the right time

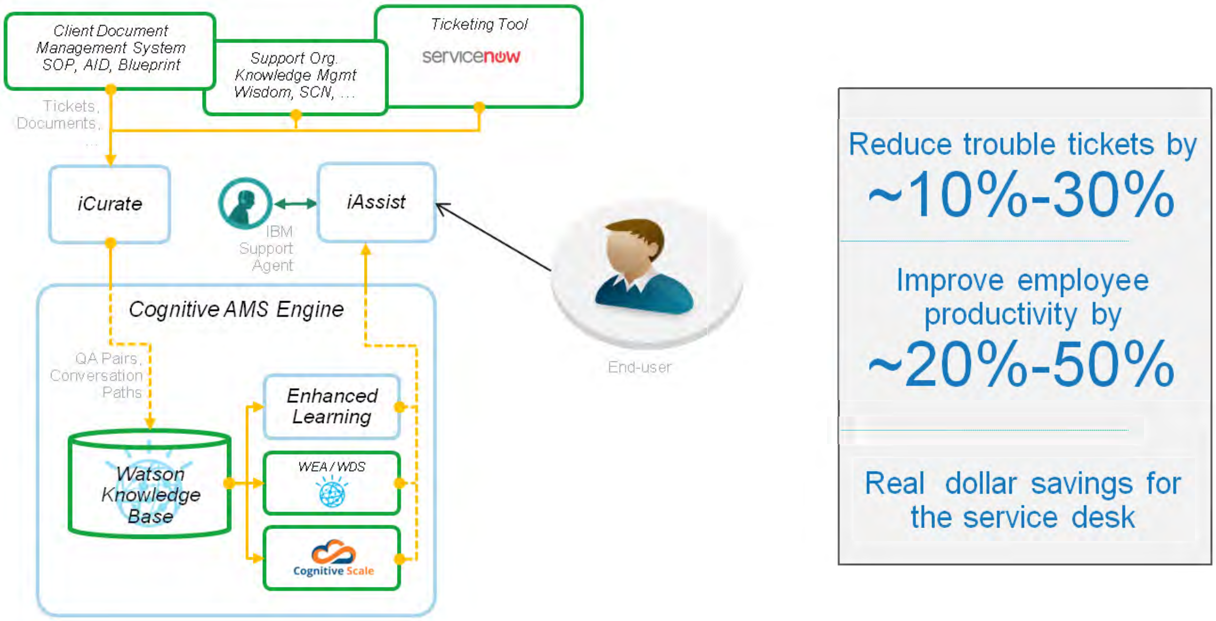


Figure 43: Watson Cognitive automation tools

Watson Cognitive automation tools will enable assistance that continues to improve for end-users. Both employee and enterprise productivity will improve when people and processes are freed from unanticipated hindrances and roadblocks.

Agile M&O

A proven method to prioritize and quickly resolve application maintenance issues. Agile M&O applies the rapid iteration cycles of agile software delivery to the time-sensitive requirements of application maintenance and works equally well for day-to-day maintenance needs and for resolving ticket backlogs. It uses Agile-style speed and efficiency to reduce existing maintenance backlogs and keep up with new tickets as they come in. Agile M&O will help facilitate that the priority maintenance issues are addressed first and that the IBM team uses the resources with the best skills for the job. This will allow us to reduce the cost of maintaining applications by putting the proper personnel on important issues. Less critical issues are monitored to verify their priority ranking remains steady and then addressed when appropriate experts are available. The result is more efficient application maintenance, which frees up resources for high priority projects such as new application development.

IBM will be able to improve productivity and reduce costs year-to-year by implementing the following unique value-add capabilities for the State of Arkansas:

- Apply our leading practices for M&O refined over hundreds of similar engagements.
- Implement our leading processes and procedures to work more efficiently and productively.
- Apply our automation capabilities to reduce tickets requiring manual efforts and to provide a knowledge base, so more tickets can be resolved at first call or at a lower level of service.

10.1 Lessons Learned

DHS learns from the experiences of others. The Vendor should describe what it sees as the success factors and primary challenges in managing and operating similar systems and Multi-Vendor environments.

Instructions: Please describe any "lessons learned" from the Vendor's relevant experience and how those lessons learned will impact the Vendor's approach to this Project.

One of the important strengths IBM will bring to this project is the "lessons learned" from our experience in similar environments. In 2015, the State of Missouri awarded a contract to IBM to assume the Lead Systems Integrator role to complete the implementation and assume maintenance and operations of the State of Missouri Health Insurance Exchange (MEDES).

In 2016, the State of South Carolina awarded a contract to IBM to assume the Lead Systems Integrator role to complete the implementation and assume maintenance and operations of the State of South Carolina Member Management Replacement Project (MMRP).

In both engagements, we transitioned from incumbent vendors, and both systems were based on Cúram. IBM has successfully transitioned both systems and learned and applied valuable lessons learned, including the following:

- Establish a strong project governance structure that enables communication between IBM and the State to foster collaboration and communication.
- Receive commitment from the State to participate to provide critical input on processes, operations, policy, and decision making.
- Manage the engagement with an agreed upon schedule.
- Incorporate Agile delivery model to improve productivity and schedule flexibility.
- Establish a strong change management process.

10.2 Issues, Challenges and Potential Risks

DHS is interested in any information that may help to identify issues, clarify the requirements, reduce risk of the procurement, and identify issues and challenges of managing and implementing the proposed System.

Instructions: Describe the primary concerns, risks, issues and recommendations for DHS as it proceeds with this Project.

As mentioned previously, IBM has recently taken over challenged projects in the State of Missouri and the State of South Carolina that have many similarities to the project described in this RFP. IBM's recent experiences have reinforced the following recommendations to address potential concerns, risks, and issues:

- Establish communication plan: We recommend establishing a formal communication plan with DHS that clearly provides a RACI matrix on the various jobs being executed. A RACI matrix is a chart or list of deliverables with assignments:

- R: Responsible - The person doing the work.
- A: Accountable - Stakeholders that owns the requirement and is accountable for the success.
- C: Consulted - Stakeholders that are consulted.
- I: Informed - Stakeholders that need to be informed but not really expected to provide input.

This RACI is particularly critical during the transition to facilitate a seamless handoff of service delivery. It needs to include the responsibilities associated with transitioning to a new M&O vendor. No details are too small particularly when the day comes to make the transition to a new vendor. Basic, everyday issues such as user access, laptops, networks, passwords, software licenses cannot be neglected and need to be addressed to eliminate the risk of disruptions in service. In addition, delivery metrics, tooling, processes, and methods should be mutually agreed to prior to the transition to the new M&O vendor.

- **Use an industry-standard incident and problem management process:** IBM recommends implementing an industry-standard incident and problem management process to streamline the incident and problem resolution process. We will work with DHS during the transition phase to implement these processes. A plan to address and prioritize open and/or backlog of incidents needs to put in place.
- **Use an industry-standard release management process:** IBM recommends implementing an industry-standard release management process to streamline the release management activities. We will work with DHS during the transition phase to streamline the release activities that are coordinated between DDI and O&M teams, allowing the relevant stakeholders to remain informed. A plan to address and prioritize in-flight projects needs to be put in place.

Develop and maintain application documentation: IBM recommends developing an AID, an ASCP document, and an OSCP document during the transition phase. A plan to address and prioritize existing incomplete documentation and establishing documentation independence from the legacy vendor needs to put in place.

11.0 Maintenance and Operations Approach Assumptions

Instructions: Document all assumptions related to this Response Template in the following Table. Add rows as necessary. Do not change any of the completed cells. Any changes to the completed cells could lead to the disqualification of the Proposal.

Table 5. Maintenance and Operations Requirements Assumptions

ITEM #	REFERENCE (Section, Page, Paragraph)	DESCRIPTION	RATIONALE
1.	Sec1.0	Transition solution is based on availability, comprehensiveness and accuracy of existing documentation, processes, tools, and templates for Design, Build and Implementation	Non availability, lack of completeness or inaccuracy of existing documentation, processes, tools, and templates from the Design, Build and Implementation perspectives may cause a delay in transition.
2.	Sec1.0	Transition solution is based on availability of SMEs or backup as per the transition plan	Non availability of SMEs or backup as per the transition plan will cause potential delay in transition kick start.
3.	Sec1.0	The State will be responsible for the successful execution of Transition.	1) The State owns the contractual or organizational relationships with the Incumbent vendor and other third parties involved. 2) The State owns the EEF code, tooling and associated assets.
4.	Sec1.0	Transition solution is based on incumbent vendors and Third parties/external vendors or contractors would provide the required on-time support as per the transition plan	Non availability of on-time support of incumbent vendors and Third parties/external vendors or contractors will cause potential delay in transition kick start.

ITEM #	REFERENCE (Section, Page, Paragraph)	DESCRIPTION	RATIONALE
5.	Sec1.0	Access to software systems would be provide to the transition team before the start of transition phase	Non availability of access of systems and applications will cause potential delay in transition kick start.
6.	Sec1.0	The data to support the Performance related Service Levels will be available and the State has automated tooling for the measurement and collection of the data.	The lack of data may preclude the Service Levels from being calculated.
7.	Sec1.0	DHS will ensure that the current M&O vendor team will fix all the defects, hot fixes, and wrap them up with a report on fixed known issues.	It is best practice that the current M&O vendor complete all in-flight activity prior to
8.	Section 1.0, 2.0, 3.0, 4.0	Proprietary IBM tools that are used for transition, automation and program management will be owned by IBM and will not be licensed to the State	IBM has several unique tools (CDT, Cog Assist) which are available internally and the proposed M&O team will utilize to provide efficiencies. These tools are typically neither licensed nor made available externally.
9.	Section 1.0, 2.0, 3.0, 4.0	Gaps in processes, procedures or tooling identified by the IBM team will be addressed using the Change Control process.	In the course of providing Transition, M&O or Enhancements services, the IBM team may identify Gaps and will bring these to the State's attention and may utilize the Change Control Process.
10.	Section 2.0	The State will continue to provide the Level 1 Help Desk for the EEF or IE-BM systems	Level 1 Help Desk is outside of the scope required in the IE-BM RFP.
11.	Section 2.0	IBM team will get necessary support from third party vendors for problem management.	Lack of support from associated third parties may delay or preclude problem resolution

ITEM #	REFERENCE (Section, Page, Paragraph)	DESCRIPTION	RATIONALE
12.	Section 2.0	IBM team will get adequate support from DHS, DIS, Third party vendors for resolving any physical DBA issues	Support from DIS or third parties is needed to quickly respond and resolve Database issues
13.	Section 2.0	To assist the State on security and audit related activities successfully, the State will ensure the IBM team has access to necessary data for administering security to users and maintaining audit reports	Delay in providing supporting documents for System or security audits
14.	Section 2.0	For Critical service requests outside of regular business hours, the IBM team resources will be available and utilize an on-call model.	The State's JIRA data indicates that the current Cúram-based system is stable, and staffed 24x7 support is not needed.
15.	Section 4.0	DHS will collaborate with IBM on a rolling 30/60/90 day forecast for Enhancements.	Lead time will be needed to identify the appropriately skilled staff for enhancements. Uniquely skilled resources may take 6-8 weeks to staff.
16.	Section 4.0	Regulatory or Legislative changes needed for EEF or the IE-BM Releases in Steady State will be handled as Enhancements	The M&O Team will not be staffed to implement enhancements or modifications to EEF or IE-BM
17.	Section 4.0	The State will ensure that the appropriate stake holders support and participate in a timely manner for enhancement functional details and any requirement clarifications.	Delay will impact the submission of the Enhancement Requirements and Cost Estimates deliverable
18.	Section 5.0	The State will support and participate in the development of the M&O Turnover Plan, and ensure that involved third parties will also support and participate	The input and participation of the State and/or other vendors will be required to complete the Turnover Plan.
19.	Section 5.0	The State will be responsible for the execution of the M&O Turnover	The State owns the contractual or organizational relationships with the

ITEM #	REFERENCE (Section, Page, Paragraph)	DESCRIPTION	RATIONALE
			Incumbent vendor and other third parties involved.
20.	Section 7.0	Licenses, Tools & As-is Documentation: The state will provide Software Licenses and Tools required for middleware support. The State will provide any necessary as-is information and documentation regarding State of AR systems to support GBS Services.	This provides the re-use of already acquired software by the State.
21.	Section 7.0	The state will supply a final server inventory and storage requirements and utilization data during the Discovery and Validation phases. Migrations are assumed to be from existing AIX environment to Red Hat Linux in IBM Soft-Layer. Fifteen (15) Applications running on ten (10) WAS LPARs are assumed of which five (5) are Production and ten (10) Non-Production. 10 Production and thirty four (34) Non-Production Applications are estimated from the information provided.	The proposed solution design is based on the inventory provided in the RFP packet. This step validates the as-is sizing and utilization
22.	Section 7.0	A total of twenty five (25) DB2 servers with no more than three (3) Databases are assumed for this solution. Total Database sizes are assumed to be at 2.6Tera Bytes for Prod and 1 TB is assumed for Non-Production.	The proposed solution design is based on the inventory provided in the RFP packet. This steps validates our understanding of the as-is sizing and utilization for databases.
23.	Section 7.0	No Custom Applications are included in the current cost and analysis. WAS Applications will be moved with no in-app logic changes.	The proposed design is based on our understanding of system inventory.
24.	Section 7.0	The state will participate in planning sessions and complete the Application Assessment Questionnaires during the Macro Phase. The state will provide the resources to support the validation and planning activities.	This will help state validate that requirements are adequately addressed in the target cloud design.

ITEM #	REFERENCE (Section, Page, Paragraph)	DESCRIPTION	RATIONALE
25.	Section 7.0	Data Migration & Cleansing: No application data migration and cleansing activities have been included as a part of this effort. Any data migration needs will be handled through the change management process.	No data migration and cleansing requirements were provided as a part of the RFP.
26.	Section 7.0	Application owner will perform baseline testing on source servers before migration cutover and the same test cases will be performed at the target end during UAT.	State resources will validate that the application functionality works in the target environment
27.	Section 7.0	Level 1 Helpdesk Support; ticketing System/Tools will be State of AR's responsibility; provide access to State of AR ticketing system. Triage incidents before assigning it to cloud infrastructure and middleware teams and avoid transferring incorrect tickets and.	State is responsible for Level-1 help desk and tools and integration support for the help desk.
28.	Section 7.0	The State will provide help desk and reporting tool access to gain insights to the middleware related tickets and be able to provide SLO reporting on a regular basis. The State is responsible for all Help Desk related tool integration. This includes, integration of Monitoring and Job Scheduling events with existing Ticketing system Vendor SLA Management.	State is responsible for Level-1 help desk and tools and integration support for the help desk.
29.	Section 7.0	Provide all necessary system connectivity, with password security for IBM resources to access State of AR systems as needed.	State is responsible for system connectivity to the cloud.
30.	Section 7.0	Application functional changes will be out of scope. If a need for application change is identified during validation, it will be handled through the change management process.	There are no requirements for application component changes for the cloud option in the RFP.
31.	Section 7.0	Licenses, Tools & As-is Documentation: The state will provide Software Licenses and Tools required for middleware support. The State will provide any necessary as-is information and	This provides the re-use of already acquired software by the State.

ITEM #	REFERENCE (Section, Page, Paragraph)	DESCRIPTION	RATIONALE
		documentation regarding State of AR systems to support GBS Services.	
32	Section 8.0	For EEF application, IBM will establish a SLR measurement baseline period of 6 months post transition.	Allows IBM team to monitor the SLR performance, as there is no data that the SLRs can be measured or achieved.
33.	Section 8.0	SLRs (e.g. Response Time and Resolution Time) are applied once an individual ticket has been assigned to the IBM team.	The ITSM provides the time stamp for when the IBM Team was notified of an incident.
34.	Section 8.0	Prior to implementing Liquidated Damages for missed SLR, the IBM team will work with State to benchmark and finalize the SLR's and determine how each will be measured.	Both parties will collaborate to finalize SLRs and mutually agree to the capture of the SLR metrics and measurements.

Appendix A: Steady State Readiness Checklist

Steady State Readiness Checklist							
Application Logical Grouping	**Overall Staus**	**US Benefits**	**US HR**	**US Payroll**	**US Sal Review**	Comments *(Any exceptions, gaps etc must be documented with an action item in RAID esp. when the status is not Green). Also include references to*	RAID Updated Y/N/(n/a)
Overall GO/ NO-GO Status -IBM view	**GO**	**GO**	**GO**	**GO**	**GO**		
Network							
Network (NW) connectivity established. (Physical Link and/or Last mile connectivity completed)	G	B	B	B	B		
Application access granted. (Team have access to all necessary resources (access, application, software, tools, databases, etc.)	G	B	B	B	B	Remedy,Viewpoint for some	Y
Connectivity Response time (Team is getting the required NW response time)	G	B	B	B	B		
Infrastructure							
Hardware Installed (Team has all the required hardware procured & installed)	G	B	B	B	B		
Software Installed (Team has all the required Software procured & installed)	Y	B	B	B	B	All softwares are in citrix environment.SVN is in progress	Y
Licenses available (Team has all associated licenses procured/transferred)	G	B	B	B	B		
Office Space (Team is equipped with standard office space, Phone, PC/Laptop, Headphone, Meeting Rooms)	G	B	B	B	B		
On call Support Infrastructure ready (Team have Mobile Phone, Laptop, home connectivity, International dialing facility, Conference call facility)	G	B	B	B	B	A TFN with Hunting Option is being worked on	N/A
Governance,Communication and Processes							
Scope confirmed.	G	B	B	B	B	PCR to be raised for Mezuro and technology change from	Y
Delivery communication plan reporting and escalations defined & established	G	B	B	B	B		
Steady State operation procedures were identified, documented and communicated to all parties (Include both standard business hours and off hour business support process)	G	Y	Y	Y	Y		
On Call Support Structure							
Delivery team identified a Primary and Secondary contact person for each in scope Application	G	B	B	B	B		
Has On call support timing (Onsite/Remote) for each application clearly defined and agreed	G	Y	Y	Y	Y		
Does the team(Onsite/Remote) have Access (Read/Update) to	G	Y	Y	Y	Y	Few left for Remedy	

Does the Onsite Support team have the required logistics Laptops,Cell Phones,Required Software (if Applicable),VPN	G	B	B	B	B		
Does the Remote Support team have the required logistics Laptops, Required Software (if Applicable), Cell Phones, VPN Connectivity	G	B	B	B	B		
Has the Ticketing Alert System tested for Support Team for Application/Group with IBM group	Y	B	B	B	B	Group created,testing to be done	N/A
Does the On call support team have the required Application user id/Access so that the team can view production	G	B	B	B	B		
Enhancements/Change request							
Is the team aware of the Vodafone SME for the respective applications who will priorities work and will perform user acceptance	G	B	B	B	B		
Staffing							
100% Team staff is in place	G	B	B	B	B		
100% Onsite staff is in place	G	B	B	B	B		
Team lead/application Lead are identified.	G	B	B	B	B		
Transition Cut Over							
KT completed as per the Sprints planned	Y	B	B	B	B	Pending ones are reported in	Y
Hands-on activities completed	Y	B	B	B	B	Pending ones are reported in	Y
KT Assessment Criteria met	G	B	B	B	B	In Progress	
Playback Sessions completed	G	B	B	B	B	In Progress	
(AKW) Application KnowledgeWikipedia are completed	G	B	B	B	B	In Progress	
Sprint Completion Report Signed-off.	G	Y	Y	Y	Y	In Progress	
Client in agreement to Steady State	G	G	G	G	G		
Risk/Issues							
Are there any outstanding critical risks or issues. (If any, please identify in the remarks section)	Y	B	B	B	B	Reported in Daily Dashboard,RAID Log	Y
Are there any outstanding Knowledge Transfer gaps. (If any, identify the Action plan to bridge identified KT gaps)	Y	B	B	B	B	Reported in Daily Dashboard,RAID Log	Y

Status Legend :
Green - All critical requirements are in place
Yellow - Most of critical requirements are in place and some are in
Red - one or more critical requirements are not in place
Blue - Closed

Appendix B: Entry Criteria Checklist

Sample Document Only

AMS Support Turnover Acceptance Criteria Form

Note: When initially completed, this checklist is intended to depict the state the system should be in when turned over to the AMS team, with the understanding that all the tasks are not yet complete and some may not have even begun. This initial pass should highlight any gaps that are not currently in scope or that the implementation team does not have in plan, so the AMS team can plan and solution accordingly. This checklist can then be used as the project progresses to ensure all in-scope items are addressed prior to the turnover to AMS.

The checklist also serves as the cornerstone for the DOU that should be created between the Design/Build team and AMS if this is a total IBM solution. Otherwise it becomes the foundation for the SOW with the client. See snap in language at Snap-In Language

Project Name:

Application:

Acceptance Criteria

* - F/T/B - Functional/Technical/Both

- Risk – Factor on scale of 1 – 9 with 9 being highest –to line these np with GS Risk ratings 1 – 9.
- Ensure that a kick off meeting is scheduled prior to cut over, at least 15 days. This will set expectations properly as we move into cnt over and hyper care / post go live, prior to declaring steady state.

BUSINESS REQUIREMENTS	F/T/B	Yes/No	Risk	Start Date	End date	Risk Mitigation or date to finalize information
1. Users agreed to the functionality delivered. Users reviewed and approved the deliverables during each stage. Users agreed that the system delivers an agreed upon threshold of the requirements, including both functional and non-functional, to which they agreed with the project team.	B	[ ]	[ ]			
2. Key reports, as defined by the business, produce the correct results.	F	[ ]	[ ]			
3. Conversion of historical data that has been agreed upon is loaded into the new system and verified by the business. Post implementation data clean up activities are complete.	F	[ ]	[ ]			
4. All interface applications have been tested, reviewed, and approved by the business.	B	[ ]	[ ]			

* F/T/B – Fnnctional/Technical/Both

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5. The batch 'window' completes in a timely manner. • The nightly batch cycle will be completed by _TBD a.m. TBD%_ of the time for a period of one month allowing enough time to resolve any problems. • The feed to external sources must complete by __TBD a.m/p.m. TBD% of the time for a period of one month to support transition	B	[ ]	[ ]			
6. System identifies and processes ad-hoc feeds within _TBD_ minutes of receipt, _TBD%_ of the time for a one-month period.	B	[ ]	[ ]			
7. System customizations/enhancements are documented and *client* expectations concerning customizations/enhancements are set appropriately. The goal is to have no project-related Severity 5's (enhancements) outstanding when support is turned over to PAS/AMS. Any Severity 5's, if existing, will follow the standard work prioritization and work assignment processes.	B	[ ]	[ ]			
STABILITY						
1. In-house written program were written in supported software using the latest compiler or equivalent software program	T	[ ]	[ ]			
2. System, Integration, Regression and User Acceptance Testing is complete to the users' satisfaction. Signoff has occurred with an "acceptable" level of testing and outstanding issues.	B	[ ]	[ ]			
3. The system runs successfully as a "production system" for two months or agreed to terms to be outlined in risk mitigation section before turnover to AMS. Success criteria are: • Batch window completing within acceptable timeframes • Online availability is maintained within acceptable timeframes • Online response time is maintained within acceptable timeframes • Batch job abnormal termination within acceptable limits The criteria will be reviewed at the end of this period by the project team, AMS and production support to confirm acceptance of support by AMS.	T	[ ]	[ ]			

* F/T/B = Functional/Technical/Both

Sample Document Only

4. During the week prior to AMS Transition, changes to the "to be" production application must adhere to the following criteria: • The number of batch program migrations into production will be less than *TBD* programs. • The number of on-line migrations into production will be less than *TBD* programs. • The rate of procedure/script changes will be less than *TDB.* **Exceeding these criteria would require review and may result in changes to the resource effort to address the potential increase in support requirements**	T	[ ]	[ ]			
COMPLETENESS						
1. Batch/script jobs are thoroughly tested and setup in the batch job scheduler tool.	T	[ ]	[ ]			
2. There are no project-related Severity 1 or 2 requests outstanding when support is turned over to AMS. The number of severity 3 and 4 requests should be less than *TBD* and will follow the standard work prioritization and work assignment processes. Where there are Severity 2 incidents outstanding, a plan has been developed for the workaround and resolution and has been fully accepted by the client. The implementation of the resolution will be performed by the Implementation Team (or a change request raised with AMS to implement)	T	[ ]	[ ]			
3. All change requests that have occurred during the implementation phase, after the AMS contract was signed, have been reviewed and proper adjustments have been made to the AMS SOW with the client. This may require an entire solution rewrite or be as simple as a review and a no change has occurred comment.	B	[ ]	[ ]			

* F/T/B = Functional/Technical/Both

Sample Document Only

4. The stress test results were reviewed and the system was approved for executing. • Support organization reviewed and approved the system for production. • If applicable, the Disaster Recovery group reviewed and approved the system's disaster recovery plan. The plan was tested (if feasible) and test results were shared with the support organization during turnover.	 T T	[ ]	[ ]			
5. User and system documentation as well as internal system comments were completed and met standard documentation requirements. • Technical and Operations documentation has been completed. • All batch and on-line programs have been reviewed and meet documentation standards. • Documentation has been indexed and physically turned over to the PAS/AMS. Any exceptions are agreed to by AMS and there is a plan to address any gaps.	 T T B	[ ]	[ ]			
6. Training and user documentation is 100% completed. • Training on ISV (SAP, Oracle, JDE. PeopleSoft, Siebel) and applicable database/development tools has been conducted for users. *This may only apply to package applications,* • Ongoing training needs and procedures are defined by the business and are the responsibility of the business. Any exceptions are agreed to by the client and there is a plan to address any gaps.	 F F	[ ]	[ ]			

* F/T/B = Functional/Technical/Both

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7. Security guidelines for menu and data access were documented as well as the procedures for managing changes to security access. • Security matrix is developed by the Implementation Team. • The security matrix is applied by the Implementation Team. • Procedures are in place to make changes requested by the business after "go-live". Any exceptions are agreed to by AMS, *the client and the client's hosting provider* and there is a plan to address any gaps.	 T F T	[ ]	[ ]			
8. For a new implementation of upgrade, trouble shooting documentation (log of problems/solutions) was developed during UAT, Performance / High-Volume Stress Testing and was kept updated with new findings. AMS and *client hosting provider* Teams used and updated the troubleshooting documentation with the Implementation Team during the post implementation project support period. This data should be available to the AMS team in soft copy form.	T	[ ]	[ ]			
9. The knowledge transfer required for successful transition and ongoing support was completed for the AMS/PAS support staff and *client hosting provider* support staff.	B	[ ]	[ ]			
10. The knowledge transfer of business processes required for successful transition and ongoing support has been completed for the Business support resources.	B	[ ]	[ ]			
11. Accepted naming standards have been consistently followed through out the project life-cycle processes.	B	[ ]	[ ]			
12. All hardware components are in place and have been tested, and approved for production usage. • Required maintenance has been performed on critical components and no temporary workarounds are being used on these components.	T	[ ]	[ ]			

* F/T/B = Functional/Technical/Both

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13. Version control processes are in place and being strictly adhered to. Production environment is currently using latest version of all applications. Where there are outstanding code fixes/updates to be applied, a documented plan has been created and signed off during transition (does not mean all patches/fixes will be applied but there is agreement from client on the “plan”).	T	[ ]	[ ]			
14. All customizations and batch scripts have been identified and documented.	T	[ ]				
15. Complete system testing has been performed, reviewed and approved by the business. Testing included performance, and backup/restore. Performance tuning is done, and program inefficiencies are identified and fixed. The client operations team, AMS and *client hosting provider* teams agree that the system has addressed all tuning and efficiency opportunities to their satisfaction. Benchmarks have been established, approved by *the client*, and communicated to AMS and *client hosting provider*.	T	[ ]	[ ]			
16. Are the processes for managing the system defined and agreed upon? • Problem ticket management and notification process defined and agreed upon by AMS and the client. • Risk management process defined and agreed upon by AMS and the client. • Issue management process defined and agreed upon by AMS and the client. • Communication and reporting plan defined and agreed upon by AMS and the client.	B	[ ]	[ ]			

* F/T/B = Functional/Technical/Both

Sample Document Only

COMMENTS						

Signatures	
For Design/Build Team Lead Name : Date :	AMS Delivery Leader Name: Date :

* F/T/B = Functional/Technical/Both

Appendix C: Hyper-Care exit criteria checklist

	Hyper Care Exit Criteria Checklist	
Activities	**Sub-Activities**	**Status**
Application Support	AMS team is handling majority of tickets	
	Applications are stable, there is no major issue identified unresolved issue	
	Naming conventions of work products defined.	
	• There are no Severity 1 tickets open. • There are no Severity 1 tickets opened in the last 5 days leading up to the Sustain phase. • There are no Severity 1 tickets opened in the previous occurrence of any periodic processing • There are no critical Severity 2 tickets open. • Non-critical Severity 2 tickets should have a resolution plan in place.	
	Super Users identified, committed and trained for each Process Area	
	Resources who are identified to be transitioned from implementation team to support team has been identified and locked in.	
	All change requests that have occurred during the implementation phase, after the AMS contract was signed, have been reviewed and proper adjustments have been made to the AMS SOW with the client. This may require an entire solution rewrite or be as simple as a review and a no change has occurred comment.	
	Where there are Implementation related Severity 2 incidents outstanding, a plan has been developed for the workaround and resolution and has been fully accepted by the business. The implementation of the resolution will be performed by the Implementation Team (or a change request raised with AMS to implement)	
	All change requests that have occurred during the implementation phase, after the AMS contract was signed, have been reviewed and proper adjustments have been made to the AMS SOW. This may require an entire solution rewrite or be as simple as a review and a no change has occurred comment.	
	The stress test results were reviewed and the system was approved for executing.	
	All customizations and batch scripts have been identified and documented.	
	Accepted naming standards have been consistently followed through out the project system development life-cycle processes.	

	Hyper Care Exit Criteria Checklist	
Activities	**Sub-Activities**	**Status**
Business Requirements	Users agreed and approve to the functionality delivered	
	Key reports, as defined by the business, produce the correct results.	
	Conversion of historical data that has been agreed upon is loaded into the new system and verified by the business. Post implementation data clean up activities are complete.	
	All interface applications have been tested, reviewed and approved by the business.	
	The batch 'window' completes in a timely manner. * The scheduled batch jobs are known to complete within schedule and no history of chronic issues are reported * The feed from and to external sources are known to occur in a timely manner and no issues have been outstanding from hypercare period.	
	Master data conversion issues are not outstanding at current time.	
	System configuration, customizations/enhancements are clearly and satisfactorily documented and client expectations concerning configuration , customizations/enhancements are set appropriately. The goal is to have no implementation related defects / change requests outstanding when support is turned over to AMS. Any defects / Change Requests, if existing, the implementation of the resolution will be performed by the Implementation Team (or a change request raised with AMS to implement following the standard work prioritization and work assignment processes)	
	Complete system testing (performance, backup/restore, etc,.) has been performed, reviewed and approved by the business. Benchmarks have been established, approved by *the client* , and communicated to AMS and *client*	
Documentation	User and system documentation as well as internal system comments were completed and met standard documentation requirements.	
	Training and user documentation is 100% completed.	
	For a new implementation of upgrade, trouble shooting documentation (log of problems/solutions) is developed during UATand should be available to the AMS team.	
End to End	For each interface, IT&S owners are defined for BAU.	
	Contact details of 3rd party entities are available. Vendor Support process in place	
	Communication and ways of working with customer defined.	
	Communication and ways of working with Helpdesk is defined and operational.	
Governance	Release governance established.	
	Master Data governance people and processes in place and accepted	
	Transport governance process identified.	
	Project BCP is in place.	
	Support organization reviewed and approved the system for production.	
	Key stakeholders are satisfied with post go-live support, there is no open escalation.	

	Hyper Care Exit Criteria Checklist	
Activities	**Sub-Activities**	**Status**
Knowledge Transfer	KT is complete	
	The knowledge transfer required for successful transition and ongoing support is completed for the AMS team	
Policy, Process and Procedures	If applicable, the Disaster Recovery group reviewed and approved the system's disaster recovery plan. The plan was tested (if feasible) and test results were shared with the support organization	
	Support SLAs are defined and operational.	
	Problem ticket management and notification process is defined and agreed upon	
	Risk management process defined and agreed upon	
	Issue management process defined and agreed upon	
	Communication and reporting plan defined and agreed upon.	
System Stability	SAP system has attained reasonable stability and both client and IBM has mutually agreed that a stable system is being handed over to Support team.	
	Unit, Integration, Regression and User Acceptance Testing is complete to the users' satisfaction. Signoff has occurred with an "acceptable" level of testing and outstanding issues.	
	The system runs successfully as a "production system" for two months or agreed to terms to be outlined in risk mitigation section before turnover to AMS. Success criteria are: • Batch window completing within acceptable timeframes • Online availability is maintained within acceptable timeframes • Online response time is maintained within acceptable timeframes • Batch job abnormal termination within acceptable limits The criteria will be reviewed at the end of this period by the implementation team, production support team and AMS leadership to confirm acceptance of support by AMS.	
	Batch/script jobs are thoroughly tested and setup in the batch job scheduler tool	
Training	SAP training and applicable database/development tools has been conducted for users.	
	Ongoing training needs and procedures are defined by the business and are the responsibility of the business.	
Infrastructure	Infrastucture is stable, there is no major issue or any identified unresolved issue	
	All hardware components are in place and have been tested, and approved for production usage.	

Template T-14

Work Plan

Response Template RFP #: SP-17-0012

Template T-14

Work Plan

Response Template

RFP #: SP-17-0012

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1.0 Integrated Eligibility and Benefit Management (IE-BM) Engagement Work Plan

The Vendor should submit a Work Plan for the Design, Develop, and Implement (DDI) and the Maintenance and Operations (M&O) of the IE-BM Engagement. This Work Plan should demonstrate that the Vendor has a thorough understanding of all activities required to develop and deploy the IE-BM System. The Vendor should provide a schedule with the shortest duration while providing enough time to perform the activities required as outlined in the RFP and without interruption to business operations.

The Work Plan should show all key elements including details with responsibilities, timelines, durations, milestone dates, deliverables, and Vendor personnel hours by deliverables during the Transition phase, State personnel hours, and all critical dependencies for the milestones and deliverables. The Work Plan may be an attachment to the Vendor's Technical Proposal and tabbed as such in the submission as well as an electronic soft copy (Microsoft Project ® or equivalent and Adobe ® PDF) version in the Vendor's electronic submission of the Technical Proposal.

All content should be formatted for effective viewing in hard and soft copy.

Instructions: Provide a Work Plan including at least:

- High level schedule (Microsoft Project® preferred and Adobe ® PDF) including all deliverables and milestones, and timeline for phased approach, if appropriate
- A listing of what staff is assigned responsibility for each deliverable within the WBS to the level at which control will be exercised (i.e., DHS, incumbent vendor and Vendor staff)
- Major milestones and target date(s) for each
- Definition of the review processes for each milestone and deliverable and a description of how the parties will conduct communication and status review

Include or attach associated artifacts such as Gantt charts and flowcharts as appropriate.

Project Schedule Overview

The schedule proposed by the IBM team embodies the following high level timeline and workstreams using the Work Breakdown Structure (WBS) described in T-11, Approach to Managing the Project. It also incorporates delivery activities and the party responsible for delivery to achieve major milestones and target dates, including each deliverable specified in the Statement of Work (SOW).

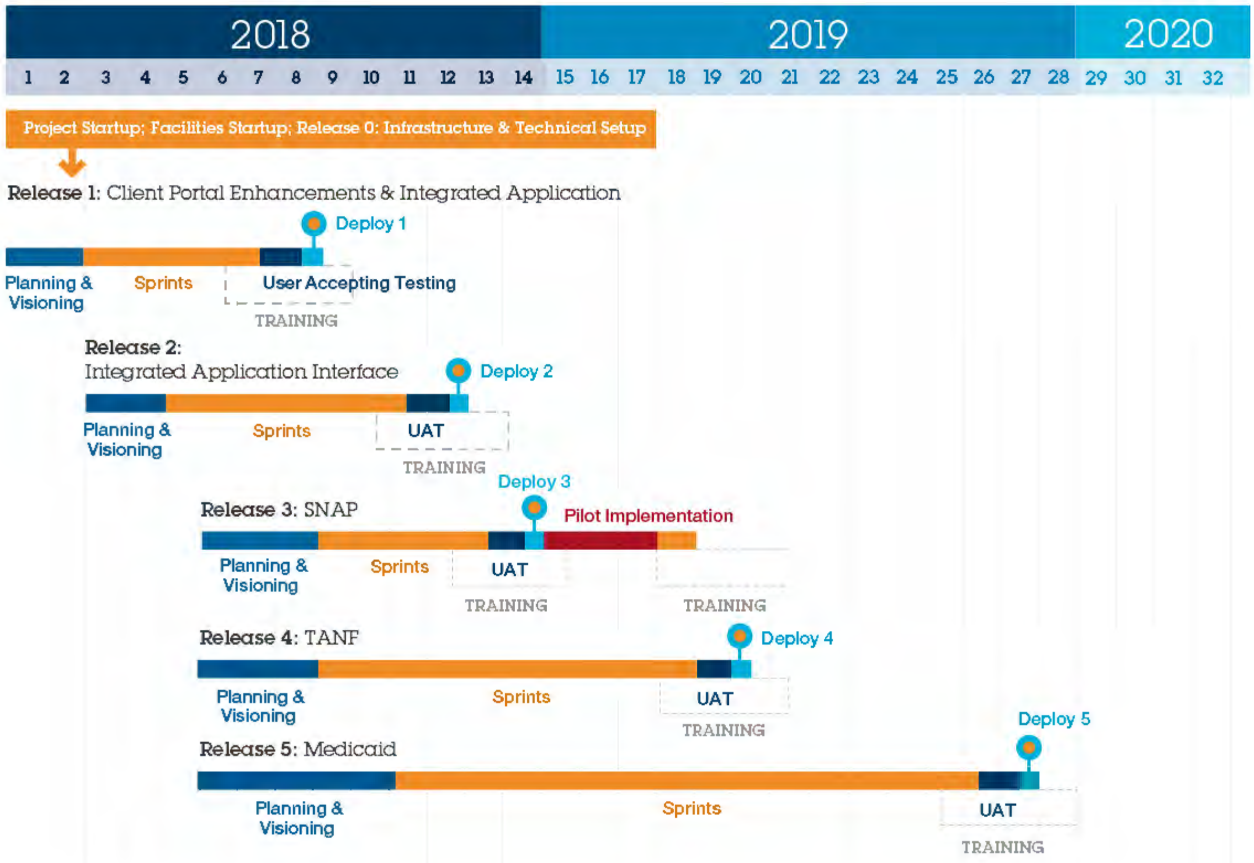

Figure 1: IE-BM Proposed Project Delivery Timeline

Project start up is performed during the first 60 days of the project to create a smooth onboarding for our combined IBM and State team. The start up period is concurrent with other project workstreams to allow project delivery to commence immediately and bring working software to the State as quickly as possible.

The project contains 5 primary workstreams, each culminating in the release of major new system functionality to production environments. These workstreams are:

1. Client portal enhancements and Integrated Application
2. Integrated application interfaces (connections to source systems and data)
3. SNAP application
4. TANF application
5. Medicaid application

The project work plan contains the implementation of the IBM Watson Agile Method described in T-11 to deliver the DDI portion of the project. As shown in Figure 1, this includes planning and visioning, iterative sprints that result in working software, and release activities such as UAT and deployment preparation prior to each release.

Proposed Review Processes

Each deliverable is produced collaboratively with the State team to provide several opportunities for input and checkpoints prior to official submission for approval. Once a deliverable is submitted the State will conduct an approval review for the deliverable. After review, the State will provide IBM with a certificate of acceptance or rejection. If rejected, the State will provide comments stating the reason(s) for the rejection. IBM will meet with the State to review comments and provide preliminary responses for correction of the issues. We will then fix the issues and resubmit the deliverable for approval. The deliverable will be inspected anew by the State to see that the comments have been successfully remediated, followed by issuance of an approval certificate. The approval process follows an up to 20-day timeline as follows for each deliverable:

- Up to 10 days, initial deliverable review by the State
- Up to 5 days, remediation of agreed to items causing rejection of the deliverable by IBM
- Up to 5 days, final deliverable review and acceptance by the State

Project Work Plan

Attachment A to this section contained at the end of the document lists the proposed IE-BM project work plan. DDI deliverables are completed with the final release estimated at the end of month 27 and training completed by the end of month 28. Elaborations to the Project Work Plan are anticipated during project start up and detailed review that will not change the overall delivery schedule; this proposal is based on delivery of each major release on the dates stated in the proposed work plan.

2.0 Assumptions

Instructions: Document all assumptions related to this Response Template in the following Table. Add rows as necessary. Do not change any of the completed cells. Any changes to the completed cells could lead to the disqualification of the Proposal.

ITEM #	REFERENCE (Section, Page, Paragraph)	DESCRIPTION	RATIONALE
1.	Project Schedule Overview Section, Page 2	The Project Work Plan is based on the proposed releases shown in Figure 1. Changes to the release timelines or addition of releases and point releases are subject to the change control process	Changes to release timelines or quantity are expected to impact deliverables, schedule and budget.
2.	Project Work Plan, All Pages	Work Breakdown Structure (WBS) levels and descriptions are proposed and may be subject to change as the Project Work Plan is further detailed and confirmed during project start up and at the beginning of each release effort.	The WBS in the Project Work Plan follows the method in T-11, Section 1.1, Project Management, Work Breakdown Structure, Page 17
3.	Project Work Plan, All Pages	The Project Work Plan will be reviewed with further details added during project start up. The Project Work Plan will be reviewed and may be revised, subject to change control, at the start of each major release cycle.	IBM expects to confirm the Project Work Plan with the State during the project start up phase.
4.	Project Work Plan, All Pages	The quantity, content, size and duration of sprints in the Project Work Plan are subject to change control during sprint planning associated with each major release identified in Figure 1 on page 2 of T-14. Planning and changes will follow guidance in the RFP, Section 3.6.5, Project Change Management.	Sprint planning is a joint activity between IBM and the State. The sprints identified in the proposed Work Plan are a representative starting point for collaborative planning efforts and detail plans and designs will be part of sprint planning.
5.	Project Work Plan, All Pages	Deliverable dates for document deliverables can be changed by mutual consent of the State and IBM program managers as long as the overall dates of releases are not negatively impacted.	Documentation deliverables are not on the critical path to produce and implement the working software. Therefore, delivery dates do not impact the overall timeline of the project.
6.	Project Work Plan, All	Specific resource roles in the Project Work Plan will be elaborated during	Specific resources assigned to tasks are not assigned at

ITEM #	REFERENCE (Section, Page, Paragraph)	DESCRIPTION	RATIONALE
	Pages	project start up and at the beginning of each release cycle.	the proposal stage of development of the Project Work Plan.
7.	Project Work Plan, Proposed Review Processes, Page 2	The review process for each deliverable is proposed to be off the critical path of the project schedule. Dependencies between deliverables are dependent on sub-tasks or tasks up to the point of submission of the deliverable.	This is necessary to facilitate ongoing project work and keep the project schedule aggressive for completion of the project.

Attachment A, Project Work Plan

ID		WBS	Task Name	Duration	Start	Finish	Predecessors	Successors	Resource Names
1		**1**	**State of Arkansas IE-BM Project Delivery**	**831 days**	**Tue 1/2/18**	**Mon 3/29/21**			
2		**1.1**	**Design, Development, and Implementation (DDI) Project**	**831 days**	**Tue 1/2/18**	**Mon 3/29/21**			
3		**1.1.1**	**Project Management and Monitoring**	**596 days**	**Tue 1/2/18**	**Thu 4/30/20**			
4		**1.1.1.1**	**Project Management Activities**	**596 days**	**Tue 1/2/18**	**Thu 4/30/20**			
5		**1.1.1.1.1**	**Start-Up PM Tasks**	**40 days**	**Tue 1/2/18**	**Wed 2/28/18**			
6		**1.1.1.1.1.1**	**Project Start-up**	**40 days**	**Tue 1/2/18**	**Wed 2/28/18**			
7		1.1.1.1.1.1.1	Project Kickoff Meeting	0 days	Tue 1/2/18	Tue 1/2/18		30SS,29SS,1	IBM PMO
8		**1.1.1.1.1.1.2**	**Complete Project Establishment Checklist**	**20 days**	**Tue 1/30/18**	**Wed 2/28/18**			
9			Submit to State	0 days	Tue 1/30/18	Tue 1/30/18	7SS+20 days	10	IBM PMO
10			State Review	10 days	Wed 1/31/18	Tue 2/13/18	9	11	State Team
11			State Comments Received	0 days	Tue 2/13/18	Tue 2/13/18	10	12	IBM PMO
12			Remediation and Integration of State Comments	5 days	Wed 2/14/18	Wed 2/21/18	11	13	IBM PMO
13			Final Review	5 days	Thu 2/22/18	Wed 2/28/18	12	14	State Team
14			Obtain final State Approval	0 days	Wed 2/28/18	Wed 2/28/18	13		IBM PMO
15		**1.1.1.1.1.1.3**	**Integrated Project Management Plan**	**20 days**	**Tue 1/2/18**	**Tue 1/30/18**			
16			Submit to State	0 days	Tue 1/2/18	Tue 1/2/18	7	17	IBM PMO
17			State Review	10 days	Tue 1/2/18	Tue 1/16/18	16	18	State Team
18			State Comments Received	0 days	Tue 1/16/18	Tue 1/16/18	17	19	IBM PMO
19			Remediation and Integration of State Comments	5 days	Wed 1/17/18	Tue 1/23/18	18	20	IBM PMO
20			Final Review	5 days	Wed 1/24/18	Tue 1/30/18	19	21	State Team
21			Obtain final State Approval	0 days	Tue 1/30/18	Tue 1/30/18	20		IBM PMO
22		**1.1.1.1.1.1.4**	**Project Schedule**	**20 days**	**Wed 1/17/18**	**Wed 2/14/18**			
23			Submit to State	0 days	Wed 1/17/18	Wed 1/17/18	158SF-30 days	24	IBM PMO
24			State Review	10 days	Wed 1/17/18	Wed 1/31/18	23	25	State Team
25			State Comments Received	0 days	Wed 1/31/18	Wed 1/31/18	24	26	IBM PMO
26			Remediation and Integration of State Comments	5 days	Wed 1/31/18	Wed 2/7/18	25	27	IBM PMO
27			Final Review	5 days	Wed 2/7/18	Wed 2/14/18	26	28	State Team
28			Obtain final State Approval	0 days	Wed 2/14/18	Wed 2/14/18	27		IBM PMO
29		**1.1.1.1.1.2**	Facilities Start-up	40 days	Tue 1/2/18	Wed 2/28/18	7SS		**IBM PMO**
30		**1.1.1.1.1.3**	Create and Maintain Project Reporting Artifacts (Weekly/Monthly Reports, Ri	596 days	Tue 1/2/18	Thu 4/30/20	7SS		IBM PMO
31		**1.1.1.1.1.4**	**Release/Project Closeout Check-List**	**395.5 days**	**Thu 9/13/18**	**Tue 3/31/20**			
32		1.1.1.1.1.4.1	Release 1 Closeout Checklist	0 days	Thu 9/13/18	Thu 9/13/18	2088		IBM PMO
33		1.1.1.1.1.4.2	Release 2 Closeout Checklist	0 days	Fri 12/21/18	Fri 12/21/18	2089		IBM PMO
34		1.1.1.1.1.4.3	Release 3 Closeout Checklist	0 days	Tue 3/5/19	Tue 3/5/19	2090		IBM PMO
35		1.1.1.1.1.4.4	Release 4 Closeout Checklist	0 days	Thu 8/29/19	Thu 8/29/19	2093		IBM PMO
36		1.1.1.1.1.4.5	Release 5 Closeout Checklist	0 days	Tue 3/31/20	Tue 3/31/20	2094		IBM PMO
37		**1.1.2**	**Planning**	**542 days**	**Tue 1/2/18**	**Thu 2/13/20**			
38		**1.1.2.1**	**Overall SDLC approach**	**20 days**	**Tue 1/2/18**	**Tue 1/30/18**			
39		1.1.2.1.1	Submit to State	0 days	Tue 1/2/18	Tue 1/2/18	7	40,146FS+3(	IBM PMO
40		1.1.2.1.2	State Review	10 days	Tue 1/2/18	Tue 1/16/18	39	41	State Team
41		1.1.2.1.3	State Comments Received	0 days	Tue 1/16/18	Tue 1/16/18	40	42	IBM PMO
42		1.1.2.1.4	Remediation and Integration of State Comments	5 days	Wed 1/17/18	Tue 1/23/18	41	43	IBM PMO
43		1.1.2.1.5	Final Review	5 days	Wed 1/24/18	Tue 1/30/18	42	44	State Team
44		1.1.2.1.6	Obtain final State Approval	0 days	Tue 1/30/18	Tue 1/30/18	43		IBM PMO
45		**1.1.2.2**	**System Architecture**	**20 days**	**Tue 1/30/18**	**Wed 2/28/18**			
46		1.1.2.2.1	Submit to State	0 days	Tue 1/30/18	Tue 1/30/18	39FS+20 days	53FS+20 day	IBM PMO
47		1.1.2.2.2	State Review	10 days	Wed 1/31/18	Tue 2/13/18	46	48	State Team
48		1.1.2.2.3	State Comments Received	0 days	Tue 2/13/18	Tue 2/13/18	47	49	IBM PMO
49		1.1.2.2.4	Remediation and Integration of State Comments	5 days	Wed 2/14/18	Wed 2/21/18	48	50	IBM PMO
50		1.1.2.2.5	Final Review	5 days	Thu 2/22/18	Wed 2/28/18	49	51	State Team

ID		WBS	Task Name	Duration	Start	Finish	Predecessors	Successors	Resource Names
51		1.1.2.2.6	Obtain final State Approval	0 days	Wed 2/28/18	Wed 2/28/18	50		IBM PMO
52		**1.1.2.3**	**System Security Plan**	**20 days**	**Wed 2/28/18**	**Wed 3/28/18**			
53		1.1.2.3.1	Submit to State	0 days	Wed 2/28/18	Wed 2/28/18	46FS+20 days	54	IBM PMO
54		1.1.2.3.2	State Review	10 days	Thu 3/1/18	Wed 3/14/18	53	55	State Team
55		1.1.2.3.3	State Comments Received	0 days	Wed 3/14/18	Wed 3/14/18	54	56	IBM PMO
56		1.1.2.3.4	Remediation and Integration of State Comments	5 days	Thu 3/15/18	Wed 3/21/18	55	57	IBM PMO
57		1.1.2.3.5	Final Review	5 days	Thu 3/22/18	Wed 3/28/18	56	58	State Team
58		1.1.2.3.6	Obtain final State Approval	0 days	Wed 3/28/18	Wed 3/28/18	57		IBM PMO
59		**1.1.2.4**	**Technology Environment Specifications and Infrastructure Plan**	**20 days**	**Wed 2/28/18**	**Wed 3/28/18**			
60		1.1.2.4.1	Submit to State	0 days	Wed 2/28/18	Wed 2/28/18	46FS+20 days	61	IBM PMO
61		1.1.2.4.2	State Review	10 days	Thu 3/1/18	Wed 3/14/18	60	62	State Team
62		1.1.2.4.3	State Comments Received	0 days	Wed 3/14/18	Wed 3/14/18	61	63	IBM PMO
63		1.1.2.4.4	Remediation and Integration of State Comments	5 days	Thu 3/15/18	Wed 3/21/18	62	64	IBM PMO
64		1.1.2.4.5	Final Review	5 days	Thu 3/22/18	Wed 3/28/18	63	65	State Team
65		1.1.2.4.6	Obtain final State Approval	0 days	Wed 3/28/18	Wed 3/28/18	64		IBM PMO
66		**1.1.2.5**	**Organizational Change Management Plan**	**20 days**	**Wed 3/28/18**	**Wed 4/25/18**			
67		1.1.2.5.1	Submit to State	0 days	Wed 3/28/18	Wed 3/28/18	39FS+60 days	68	IBM PMO
68		1.1.2.5.2	State Review	10 days	Thu 3/29/18	Wed 4/11/18	67	69	State Team
69		1.1.2.5.3	State Comments Received	0 days	Wed 4/11/18	Wed 4/11/18	68	70	IBM PMO
70		1.1.2.5.4	Remediation and Integration of State Comments	5 days	Thu 4/12/18	Wed 4/18/18	69	71	IBM PMO
71		1.1.2.5.5	Final Review	5 days	Thu 4/19/18	Wed 4/25/18	70	72	State Team
72		1.1.2.5.6	Obtain final State Approval	0 days	Wed 4/25/18	Wed 4/25/18	71		IBM PMO
73		**1.1.2.6**	**Data Conversion Plan**	**542 days**	**Tue 1/2/18**	**Thu 2/13/20**			
74		**1.1.2.6.1**	**Release 1**	**20 days**	**Mon 7/2/18**	**Mon 7/30/18**			
75		1.1.2.6.1.1	Submit to State	0 days	Mon 7/2/18	Mon 7/2/18	2010SF-40 day	76	IBM PMO
76		1.1.2.6.1.2	State Review	10 days	Mon 7/2/18	Mon 7/16/18	75	77	State Team
77		1.1.2.6.1.3	State Comments Received	0 days	Mon 7/16/18	Mon 7/16/18	76	78	IBM PMO
78		1.1.2.6.1.4	Remediation and Integration of State Comments	5 days	Mon 7/16/18	Mon 7/23/18	77	79	IBM PMO
79		1.1.2.6.1.5	Final Review	5 days	Mon 7/23/18	Mon 7/30/18	78	80	State Team
80		1.1.2.6.1.6	Obtain final State Approval	0 days	Mon 7/30/18	Mon 7/30/18	79		IBM PMO
81		**1.1.2.6.2**	**Release 2**	**20 days**	**Mon 12/24/18**	**Fri 1/18/19**			
82		1.1.2.6.2.1	Submit to State	0 days	Mon 12/24/18	Mon 12/24/18	2017SF-40 day	83	IBM PMO
83		1.1.2.6.2.2	State Review	10 days	Mon 12/24/18	Fri 1/4/19	82	84	State Team
84		1.1.2.6.2.3	State Comments Received	0 days	Fri 1/4/19	Fri 1/4/19	83	85	IBM PMO
85		1.1.2.6.2.4	Remediation and Integration of State Comments	5 days	Mon 1/7/19	Fri 1/11/19	84	86	IBM PMO
86		1.1.2.6.2.5	Final Review	5 days	Mon 1/14/19	Fri 1/18/19	85	87	State Team
87		1.1.2.6.2.6	Obtain final State Approval	0 days	Fri 1/18/19	Fri 1/18/19	86		IBM PMO
88		**1.1.2.6.3**	**Release 3**	**20 days**	**Tue 1/2/18**	**Tue 1/30/18**			
89		1.1.2.6.3.1	Submit to State	0 days	Tue 1/2/18	Tue 1/2/18		90	IBM PMO
90		1.1.2.6.3.2	State Review	10 days	Tue 1/2/18	Tue 1/16/18	89	91	State Team
91		1.1.2.6.3.3	State Comments Received	0 days	Tue 1/16/18	Tue 1/16/18	90	92	IBM PMO
92		1.1.2.6.3.4	Remediation and Integration of State Comments	5 days	Wed 1/17/18	Tue 1/23/18	91	93	IBM PMO
93		1.1.2.6.3.5	Final Review	5 days	Wed 1/24/18	Tue 1/30/18	92	94	State Team
94		1.1.2.6.3.6	Obtain final State Approval	0 days	Tue 1/30/18	Tue 1/30/18	93		IBM PMO
95		**1.1.2.6.4**	**Release 4**	**20 days**	**Thu 6/20/19**	**Thu 7/18/19**			
96		1.1.2.6.4.1	Submit to State	0 days	Thu 6/20/19	Thu 6/20/19	2031SF-40 day	97	IBM PMO
97		1.1.2.6.4.2	State Review	10 days	Thu 6/20/19	Thu 7/4/19	96	98	State Team
98		1.1.2.6.4.3	State Comments Received	0 days	Thu 7/4/19	Thu 7/4/19	97	99	IBM PMO
99		1.1.2.6.4.4	Remediation and Integration of State Comments	5 days	Thu 7/4/19	Thu 7/11/19	98	100	IBM PMO
100		1.1.2.6.4.5	Final Review	5 days	Thu 7/11/19	Thu 7/18/19	99	101	State Team

ID		WBS	Task Name	Duration	Start	Finish	Predecessors	Successors	Resource Names
101		1.1.2.6.4.6	Obtain final State Approval	0 days	Thu 7/18/19	Thu 7/18/19	100		IBM PMO
102		**1.1.2.6.5**	**Release 5**	**20 days**	**Thu 1/16/20**	**Thu 2/13/20**			
103		1.1.2.6.5.1	Submit to State	0 days	Thu 1/16/20	Thu 1/16/20	2037SF-40 day	104	IBM PMO
104		1.1.2.6.5.2	State Review	10 days	Thu 1/16/20	Thu 1/30/20	103	105	State Team
105		1.1.2.6.5.3	State Comments Received	0 days	Thu 1/30/20	Thu 1/30/20	104	106	IBM PMO
106		1.1.2.6.5.4	Remediation and Integration of State Comments	5 days	Fri 1/31/20	Thu 2/6/20	105	107	IBM PMO
107		1.1.2.6.5.5	Final Review	5 days	Fri 2/7/20	Thu 2/13/20	106	108	State Team
108		1.1.2.6.5.6	Obtain final State Approval	0 days	Thu 2/13/20	Thu 2/13/20	107		IBM PMO
109		**1.1.2.7**	**Master Test Plan**	**20 days**	**Mon 7/2/18**	**Mon 7/30/18**			
110		1.1.2.7.1	Submit to State	0 days	Mon 7/2/18	Mon 7/2/18	2064FS-40 day	111	IBM PMO
111		1.1.2.7.2	State Review	10 days	Mon 7/2/18	Mon 7/16/18	110	112	State Team
112		1.1.2.7.3	State Comments Received	0 days	Mon 7/16/18	Mon 7/16/18	111	113	IBM PMO
113		1.1.2.7.4	Remediation and Integration of State Comments	5 days	Mon 7/16/18	Mon 7/23/18	112	114	IBM PMO
114		1.1.2.7.5	Final Review	5 days	Mon 7/23/18	Mon 7/30/18	113	115	State Team
115		1.1.2.7.6	Obtain final State Approval	0 days	Mon 7/30/18	Mon 7/30/18	114		IBM PMO
116		**1.1.2.8**	**Training and Knowledge Transfer Plan**	**20 days**	**Tue 1/30/18**	**Wed 2/28/18**			
117		1.1.2.8.1	Submit to State	0 days	Tue 1/30/18	Tue 1/30/18	39FS+20 days	118	IBM PMO
118		1.1.2.8.2	State Review	10 days	Wed 1/31/18	Tue 2/13/18	117	119	State Team
119		1.1.2.8.3	State Comments Received	0 days	Tue 2/13/18	Tue 2/13/18	118	120	IBM PMO
120		1.1.2.8.4	Remediation and Integration of State Comments	5 days	Wed 2/14/18	Wed 2/21/18	119	121	IBM PMO
121		1.1.2.8.5	Final Review	5 days	Thu 2/22/18	Wed 2/28/18	120	122	State Team
122		1.1.2.8.6	Obtain final State Approval	0 days	Wed 2/28/18	Wed 2/28/18	121		IBM PMO
123		**1.1.2.9**	**Roll-Out Plan (Pilot and Full Roll-Out)**	**20 days**	**Tue 1/2/18**	**Tue 1/30/18**			
124		1.1.2.9.1	Submit to State	0 days	Tue 1/2/18	Tue 1/2/18	7	125	IBM PMO
125		1.1.2.9.2	State Review	10 days	Tue 1/2/18	Tue 1/16/18	124	126	State Team
126		1.1.2.9.3	State Comments Received	0 days	Tue 1/16/18	Tue 1/16/18	125	127	IBM PMO
127		1.1.2.9.4	Remediation and Integration of State Comments	5 days	Wed 1/17/18	Tue 1/23/18	126	128	IBM PMO
128		1.1.2.9.5	Final Review	5 days	Wed 1/24/18	Tue 1/30/18	127	129	State Team
129		1.1.2.9.5	Obtain final State Approval	0 days	Tue 1/30/18	Tue 1/30/18	128		IBM PMO
130		**1.1.2.10**	**Deployment Plan (Pilot and Full Deployment)**	**20 days**	**Tue 1/2/18**	**Tue 1/30/18**			
131		1.1.2.10.1	Submit to State	0 days	Tue 1/2/18	Tue 1/2/18	7	132	IBM PMO
132		1.1.2.10.2	State Review	10 days	Tue 1/2/18	Tue 1/16/18	131	133	State Team
133		1.1.2.10.3	State Comments Received	0 days	Tue 1/16/18	Tue 1/16/18	132	134	IBM PMO
134		1.1.2.10.4	Remediation and Integration of State Comments	5 days	Wed 1/17/18	Tue 1/23/18	133	135	IBM PMO
135		1.1.2.10.5	Final Review	5 days	Wed 1/24/18	Tue 1/30/18	134	136	State Team
136		1.1.2.10.6	Obtain final State Approval	0 days	Tue 1/30/18	Tue 1/30/18	135		IBM PMO
137		**1.1.2.11**	**System Operations, Support, and Transition Plan**	**20 days**	**Tue 1/2/18**	**Tue 1/30/18**			
138		1.1.2.11.1	Submit to State	0 days	Tue 1/2/18	Tue 1/2/18	7	139	IBM PMO
139		1.1.2.11.2	State Review	10 days	Tue 1/2/18	Tue 1/16/18	138	140	State Team
140		1.1.2.11.3	State Comments Received	0 days	Tue 1/16/18	Tue 1/16/18	139	141	IBM PMO
141		1.1.2.11.4	Remediation and Integration of State Comments	5 days	Wed 1/17/18	Tue 1/23/18	140	142	IBM PMO
142		1.1.2.11.5	Final Review	5 days	Wed 1/24/18	Tue 1/30/18	141	143	State Team
143		1.1.2.11.6	Obtain final State Approval	0 days	Tue 1/30/18	Tue 1/30/18	142		IBM PMO
144		**1.1.3**	**Technical Environment Specification**	**25 days**	**Mon 6/4/18**	**Fri 7/6/18**			
145		1.1.3.1	Create Technical Environment Specification Plan	5 days	Mon 6/4/18	Fri 6/8/18	39	146	IBM PMO
146		1.1.3.2	Submit Technical Environment Specification Plan	0 days	Fri 6/8/18	Fri 6/8/18	145,39FS+30 c	147	IBM PMO
147		1.1.3.3	State Review	10 days	Mon 6/11/18	Fri 6/22/18	146	148	State Team
148		1.1.3.4	State Comments Received	0 days	Fri 6/22/18	Fri 6/22/18	147	149	IBM PMO
149		1.1.3.5	Remediation and Integration of State Comments	5 days	Mon 6/25/18	Fri 6/29/18	148	150	IBM PMO
150		1.1.3.6	Final Review	5 days	Mon 7/2/18	Fri 7/6/18	149	151	State Team

ID		WBS	Task Name	Duration	Start	Finish	Predecessors	Successors	Resource Names
151		1.1.3.7	Obtain final State Approval	0 days	Fri 7/6/18	Fri 7/6/18	150		IBM PMO
152		**1.1.4**	**Design, Development, and Implementation (DDI)**	**574 days**	**Tue 1/2/18**	**Tue 3/31/20**			
153		**1.1.4.1**	**Release 1 - Client Portal & Integrated Application**	**178.5 days**	**Tue 1/2/18**	**Thu 9/13/18**			
154			Release 1 Comprehensive Planning & Visioning	40 days	Tue 1/2/18	Wed 2/28/18	7	157,173,18	IBM Dev
155			**Release 1 - Sprints**	**96.5 days**	**Thu 3/1/18**	**Mon 7/16/18**			
156			**R-1 Sprint 1 - Client Portal (New UI)**	**51.5 days**	**Thu 3/1/18**	**Fri 5/11/18**			
157			Sprint Planning/Visioning Meeting	0.5 days	Thu 3/1/18	Thu 3/1/18	154	158	IBM Dev
158			Create Working Software (% complete tracked by burndown)	25 days	Thu 3/1/18	Thu 4/5/18	157	160,235F-3C	IBM Dev
159			**Create R-1 S1 Package**	**5 days**	**Thu 4/5/18**	**Thu 4/12/18**			
160			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Thu 4/5/18	Fri 4/6/18	158	161,165	IBM BA
161			Functional Design Document (FDD)	1 day	Fri 4/6/18	Mon 4/9/18	160	162,165	IBM BA
162			Update Technical Design Document	1 day	Mon 4/9/18	Tue 4/10/18	161	163,165	IBM Dev
163			Data Integration and Interface Control Documents (ICD)	1 day	Tue 4/10/18	Wed 4/11/18	162	164,165	IBM Dev
164			Updated and Completed Functional and Technical Requirements T	1 day	Wed 4/11/18	Thu 4/12/18	163	165	IBM BA
165			Demo & Retrospective	1 day	Thu 4/12/18	Fri 4/13/18	163,160,161,1	167	IBM Dev
166			**Sprint Approval R-1 S1**	**20 days**	**Fri 4/13/18**	**Fri 5/11/18**			
167			Submit Sprint Package	0 days	Fri 4/13/18	Fri 4/13/18	165	168	IBM Dev
168			Retro/Review Sprint Package	10 days	Fri 4/13/18	Fri 4/27/18	167	169	State Team
169			Incorporate Comments	5 days	Fri 4/27/18	Fri 5/4/18	168	170	IBM Dev
170			Final Review of Sprint Package	5 days	Fri 5/4/18	Fri 5/11/18	169	171	State Team
171			Accept Sprint Package	0 days	Fri 5/11/18	Fri 5/11/18	170	2064	State Team
172			**R-1 Sprint 2 - Client Portal (Navigation to Existing Pre-Screener)**	**51.5 days**	**Thu 3/1/18**	**Fri 5/11/18**			
173			Sprint Planning/Visioning Meeting	0.5 days	Thu 3/1/18	Thu 3/1/18	154	174	IBM Dev
174			Create Working Software (% complete tracked by burndown)	25 days	Thu 3/1/18	Thu 4/5/18	173	176	IBM Dev
175			**Create R-1 S2 Package**	**5 days**	**Thu 4/5/18**	**Thu 4/12/18**			
176			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Thu 4/5/18	Fri 4/6/18	174	177,181	IBM BA
177			Functional Design Document (FDD)	1 day	Fri 4/6/18	Mon 4/9/18	176	178,181	IBM BA
178			Update Technical Design Document	1 day	Mon 4/9/18	Tue 4/10/18	177	179,181	IBM Dev
179			Data Integration and Interface Control Documents (ICD)	1 day	Tue 4/10/18	Wed 4/11/18	178	180,181	IBM Dev
180			Updated and Completed Functional and Technical Requirements T	1 day	Wed 4/11/18	Thu 4/12/18	179	181	IBM BA
181			Demo & Retrospective	1 day	Thu 4/12/18	Fri 4/13/18	176,177,178,1	183	IBM Dev
182			**Sprint Approval R-1 S2**	**20 days**	**Fri 4/13/18**	**Fri 5/11/18**			
183			Submit Sprint Package	0 days	Fri 4/13/18	Fri 4/13/18	181	184	IBM Dev
184			Retro/Review Sprint Package	10 days	Fri 4/13/18	Fri 4/27/18	183	185	State Team
185			Incorporate Comments	5 days	Fri 4/27/18	Fri 5/4/18	184	186	IBM Dev
186			Final Review of Sprint Package	5 days	Fri 5/4/18	Fri 5/11/18	185	187	State Team
187			Accept Sprint Package	0 days	Fri 5/11/18	Fri 5/11/18	186	2064	State Team
188			**R-1 Sprint 3 - Client Portal (Web Content Management)**	**51.5 days**	**Thu 3/1/18**	**Fri 5/11/18**			
189			Sprint Planning/Visioning Meeting	0.5 days	Thu 3/1/18	Thu 3/1/18	154	190	IBM Dev
190			Create Working Software (% complete tracked by burndown)	25 days	Thu 3/1/18	Thu 4/5/18	189	192	IBM Dev
191			**Create R-1 S3 Package**	**5 days**	**Thu 4/5/18**	**Thu 4/12/18**			
192			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Thu 4/5/18	Fri 4/6/18	190	193,197	IBM BA
193			Functional Design Document (FDD)	1 day	Fri 4/6/18	Mon 4/9/18	192	194,197	IBM BA
194			Update Technical Design Document	1 day	Mon 4/9/18	Tue 4/10/18	193	195,197	IBM Dev
195			Data Integration and Interface Control Documents (ICD)	1 day	Tue 4/10/18	Wed 4/11/18	194	196,197	IBM Dev
196			Updated and Completed Functional and Technical Requirements T	1 day	Wed 4/11/18	Thu 4/12/18	195	197	IBM BA
197			Demo & Retrospective	1 day	Thu 4/12/18	Fri 4/13/18	192,193,194,1	199	IBM Dev
198			**Sprint Approval R-1 S3**	**20 days**	**Fri 4/13/18**	**Fri 5/11/18**			
199			Submit Sprint Package	0 days	Fri 4/13/18	Fri 4/13/18	197	200	IBM Dev
200			Retro/Review Sprint Package	10 days	Fri 4/13/18	Fri 4/27/18	199	201	State Team

ID		WBS	Task Name	Duration	Start	Finish	Predecessors	Successors	Resource Names
201			Incorporate Comments	5 days	Fri 4/27/18	Fri 5/4/18	200	202	IBM Dev
202			Final Review of Sprint Package	5 days	Fri 5/4/18	Fri 5/11/18	201	203	State Team
203			Accept Sprint Package	0 days	Fri 5/11/18	Fri 5/11/18	202	2064	State Team
204			**R-1 Sprint 4 - Client Portal (User Account Management)**	**96.5 days**	**Thu 3/1/18**	**Mon 7/16/18**			
205			Sprint Planning/Visioning Meeting	0.5 days	Thu 3/1/18	Thu 3/1/18	154	206	IBM Dev
206			Create Working Software (% complete tracked by burndown)	70 days	Thu 3/1/18	Fri 6/8/18	205	208	IBM Dev
207			**Create R-1 S4 Package**	**5 days**	**Fri 6/8/18**	**Fri 6/15/18**			
208			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Fri 6/8/18	Mon 6/11/18	206	209,213	IBM BA
209			Functional Design Document (FDD)	1 day	Mon 6/11/18	Tue 6/12/18	208	210,213	IBM BA
210			Update Technical Design Document	1 day	Tue 6/12/18	Wed 6/13/18	209	211,213	IBM Dev
211			Data Integration and Interface Control Documents (ICD)	1 day	Wed 6/13/18	Thu 6/14/18	210	212,213	IBM Dev
212			Updated and Completed Functional and Technical Requirements T	1 day	Thu 6/14/18	Fri 6/15/18	211	213	IBM BA
213			Demo & Retrospective	1 day	Fri 6/15/18	Mon 6/18/18	208,209,210,2	215	IBM Dev
214			**Sprint Approval R-1 S4**	**20 days**	**Mon 6/18/18**	**Mon 7/16/18**			
215			Submit Sprint Package	0 days	Mon 6/18/18	Mon 6/18/18	213	216	IBM Dev
216			Retro/Review Sprint Package	10 days	Mon 6/18/18	Mon 7/2/18	215	217	State Team
217			Incorporate Comments	5 days	Mon 7/2/18	Mon 7/9/18	216	218	IBM Dev
218			Final Review of Sprint Package	5 days	Mon 7/9/18	Mon 7/16/18	217	219	State Team
219			Accept Sprint Package	0 days	Mon 7/16/18	Mon 7/16/18	218	2064	State Team
220			**R-1 Sprint 5 - Integrated Application (Integrated Pre-Screening)**	**51.5 days**	**Thu 3/1/18**	**Fri 5/11/18**			
221			Sprint Planning/Visioning Meeting	0.5 days	Thu 3/1/18	Thu 3/1/18	154	222	IBM Dev
222			Create Working Software (% complete tracked by burndown)	25 days	Thu 3/1/18	Thu 4/5/18	221	224	IBM Dev
223			**Create R-1 S5 Package**	**5 days**	**Thu 4/5/18**	**Thu 4/12/18**			
224			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Thu 4/5/18	Fri 4/6/18	222	225,229	IBM BA
225			Functional Design Document (FDD)	1 day	Fri 4/6/18	Mon 4/9/18	224	226,229	IBM BA
226			Update Technical Design Document	1 day	Mon 4/9/18	Tue 4/10/18	225	227,229	IBM Dev
227			Data Integration and Interface Control Documents (ICD)	1 day	Tue 4/10/18	Wed 4/11/18	226	228,229	IBM Dev
228			Updated and Completed Functional and Technical Requirements T	1 day	Wed 4/11/18	Thu 4/12/18	227	229	IBM BA
229			Demo & Retrospective	1 day	Thu 4/12/18	Fri 4/13/18	224,225,226,2	231	IBM Dev
230			**Sprint Approval R-1 S5**	**20 days**	**Fri 4/13/18**	**Fri 5/11/18**			
231			Submit Sprint Package	0 days	Fri 4/13/18	Fri 4/13/18	229	232	IBM Dev
232			Retro/Review Sprint Package	10 days	Fri 4/13/18	Fri 4/27/18	231	233	State Team
233			Incorporate Comments	5 days	Fri 4/27/18	Fri 5/4/18	232	234	IBM Dev
234			Final Review of Sprint Package	5 days	Fri 5/4/18	Fri 5/11/18	233	235	State Team
235			Accept Sprint Package	0 days	Fri 5/11/18	Fri 5/11/18	234	2064	State Team
236			**R-1 Sprint 6 - Integrated Application (Change of Circumstance)**	**96.5 days**	**Thu 3/1/18**	**Mon 7/16/18**			
237			Sprint Planning/Visioning Meeting	0.5 days	Thu 3/1/18	Thu 3/1/18	154	238	IBM Dev
238			Create Working Software (% complete tracked by burndown)	70 days	Thu 3/1/18	Fri 6/8/18	237	240	IBM Dev
239			**Create R-1 S6 Package**	**5 days**	**Fri 6/8/18**	**Fri 6/15/18**			
240			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Fri 6/8/18	Mon 6/11/18	238	241,245	IBM BA
241			Functional Design Document (FDD)	1 day	Mon 6/11/18	Tue 6/12/18	240	242,245	IBM BA
242			Update Technical Design Document	1 day	Tue 6/12/18	Wed 6/13/18	241	243,245	IBM Dev
243			Data Integration and Interface Control Documents (ICD)	1 day	Wed 6/13/18	Thu 6/14/18	242	244,245	IBM Dev
244			Updated and Completed Functional and Technical Requirements T	1 day	Thu 6/14/18	Fri 6/15/18	243	245	IBM BA
245			Demo & Retrospective	1 day	Fri 6/15/18	Mon 6/18/18	240,241,242,2	247	IBM Dev
246			**Sprint Approval R-1 S6**	**20 days**	**Mon 6/18/18**	**Mon 7/16/18**			
247			Submit Sprint Package	0 days	Mon 6/18/18	Mon 6/18/18	245	248	IBM Dev
248			Retro/Review Sprint Package	10 days	Mon 6/18/18	Mon 7/2/18	247	249	State Team
249			Incorporate Comments	5 days	Mon 7/2/18	Mon 7/9/18	248	250	IBM Dev
250			Final Review of Sprint Package	5 days	Mon 7/9/18	Mon 7/16/18	249	251	State Team

ID		WBS	Task Name	Duration	Start	Finish	Predecessors	Successors	Resource Names
251			Accept Sprint Package	0 days	Mon 7/16/18	Mon 7/16/18	250	2064	State Team
252			**R-1 Sprint 7 - Integrated Application (Web Content Management)**	**51.5 days**	**Thu 3/1/18**	**Fri 5/11/18**			
253			Sprint Planning/Visioning Meeting	0.5 days	Thu 3/1/18	Thu 3/1/18	154	254	IBM Dev
254			Create Working Software (% complete tracked by burndown)	25 days	Thu 3/1/18	Thu 4/5/18	253	256	IBM Dev
255			**Create R-1 S7 Package**	**5 days**	**Thu 4/5/18**	**Thu 4/12/18**			
256			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Thu 4/5/18	Fri 4/6/18	254	257,261	IBM BA
257			Functional Design Document (FDD)	1 day	Fri 4/6/18	Mon 4/9/18	256	258,261	IBM BA
258			Update Technical Design Document	1 day	Mon 4/9/18	Tue 4/10/18	257	259,261	IBM Dev
259			Data Integration and Interface Control Documents (ICD)	1 day	Tue 4/10/18	Wed 4/11/18	258	260,261	IBM Dev
260			Updated and Completed Functional and Technical Requirements T	1 day	Wed 4/11/18	Thu 4/12/18	259	261	IBM BA
261			Demo & Retrospective	1 day	Thu 4/12/18	Fri 4/13/18	256,257,258,2	263	IBM Dev
262			**Sprint Approval R-1 S7**	**20 days**	**Fri 4/13/18**	**Fri 5/11/18**			
263			Submit Sprint Package	0 days	Fri 4/13/18	Fri 4/13/18	261	264	IBM Dev
264			Retro/Review Sprint Package	10 days	Fri 4/13/18	Fri 4/27/18	263	265	State Team
265			Incorporate Comments	5 days	Fri 4/27/18	Fri 5/4/18	264	266	IBM Dev
266			Final Review of Sprint Package	5 days	Fri 5/4/18	Fri 5/11/18	265	267	State Team
267			Accept Sprint Package	0 days	Fri 5/11/18	Fri 5/11/18	266	2064	State Team
268			**R-1 Sprint 8 - Integrated Application (Document Upload)**	**51.5 days**	**Thu 3/1/18**	**Fri 5/11/18**			
269			Sprint Planning/Visioning Meeting	0.5 days	Thu 3/1/18	Thu 3/1/18	154	270	IBM Dev
270			Create Working Software (% complete tracked by burndown)	25 days	Thu 3/1/18	Thu 4/5/18	269	272	IBM Dev
271			**Create R-1 S8 Package**	**5 days**	**Thu 4/5/18**	**Thu 4/12/18**			
272			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Thu 4/5/18	Fri 4/6/18	270	273,277	IBM BA
273			Functional Design Document (FDD)	1 day	Fri 4/6/18	Mon 4/9/18	272	274,277	IBM BA
274			Update Technical Design Document	1 day	Mon 4/9/18	Tue 4/10/18	273	275,277	IBM Dev
275			Data Integration and Interface Control Documents (ICD)	1 day	Tue 4/10/18	Wed 4/11/18	274	276,277	IBM Dev
276			Updated and Completed Functional and Technical Requirements T	1 day	Wed 4/11/18	Thu 4/12/18	275	277	IBM BA
277			Demo & Retrospective	1 day	Thu 4/12/18	Fri 4/13/18	272,273,274,2	279	IBM Dev
278			**Sprint Approval R-1 S8**	**20 days**	**Fri 4/13/18**	**Fri 5/11/18**			
279			Submit Sprint Package	0 days	Fri 4/13/18	Fri 4/13/18	277	280	IBM Dev
280			Retro/Review Sprint Package	10 days	Fri 4/13/18	Fri 4/27/18	279	281	State Team
281			Incorporate Comments	5 days	Fri 4/27/18	Fri 5/4/18	280	282	IBM Dev
282			Final Review of Sprint Package	5 days	Fri 5/4/18	Fri 5/11/18	281	283	State Team
283			Accept Sprint Package	0 days	Fri 5/11/18	Fri 5/11/18	282	2064	State Team
284			**R-1 Sprint 9 - Integrated Application (Document Management Integratio**	**76.5 days**	**Thu 3/1/18**	**Mon 6/18/18**			
285			Sprint Planning/Visioning Meeting	0.5 days	Thu 3/1/18	Thu 3/1/18	154	286	IBM Dev
286			Create Working Software (% complete tracked by burndown)	50 days	Thu 3/1/18	Thu 5/10/18	285	288	IBM Dev
287			**Create R-1 S9 Package**	**5 days**	**Thu 5/10/18**	**Thu 5/17/18**			
288			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Thu 5/10/18	Fri 5/11/18	286	289,293	IBM BA
289			Functional Design Document (FDD)	1 day	Fri 5/11/18	Mon 5/14/18	288	290,293	IBM BA
290			Update Technical Design Document	1 day	Mon 5/14/18	Tue 5/15/18	289	291,293	IBM Dev
291			Data Integration and Interface Control Documents (ICD)	1 day	Tue 5/15/18	Wed 5/16/18	290	292,293	IBM Dev
292			Updated and Completed Functional and Technical Requirements T	1 day	Wed 5/16/18	Thu 5/17/18	291	293	IBM BA
293			Demo & Retrospective	1 day	Thu 5/17/18	Fri 5/18/18	288,289,290,2	295	IBM Dev
294			**Sprint Approval R-1 S9**	**20 days**	**Fri 5/18/18**	**Mon 6/18/18**			
295			Submit Sprint Package	0 days	Fri 5/18/18	Fri 5/18/18	293	296	IBM Dev
296			Retro/Review Sprint Package	10 days	Fri 5/18/18	Mon 6/4/18	295	297	State Team
297			Incorporate Comments	5 days	Mon 6/4/18	Mon 6/11/18	296	298	IBM Dev
298			Final Review of Sprint Package	5 days	Mon 6/11/18	Mon 6/18/18	297	299	State Team
299			Accept Sprint Package	0 days	Mon 6/18/18	Mon 6/18/18	298	2064	State Team
300			**R-1 Sprint 10 Integrated Application (Barcode verification documents)**	**51.5 days**	**Thu 3/1/18**	**Fri 5/11/18**			

ID		WBS	Task Name	Duration	Start	Finish	Predecessors	Successors	Resource Names
301			Sprint Planning/Visioning Meeting	0.5 days	Thu 3/1/18	Thu 3/1/18	154	302	IBM Dev
302			Create Working Software (% complete tracked by burndown)	25 days	Thu 3/1/18	Thu 4/5/18	301	304	IBM Dev
303			**Create R-1 S10 Package**	**5 days**	**Thu 4/5/18**	**Thu 4/12/18**			
304			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Thu 4/5/18	Fri 4/6/18	302	305,309	IBM BA
305			Functional Design Document (FDD)	1 day	Fri 4/6/18	Mon 4/9/18	304	306,309	IBM BA
306			Update Technical Design Document	1 day	Mon 4/9/18	Tue 4/10/18	305	307,309	IBM Dev
307			Data Integration and Interface Control Documents (ICD)	1 day	Tue 4/10/18	Wed 4/11/18	306	308,309	IBM Dev
308			Updated and Completed Functional and Technical Requirements T	1 day	Wed 4/11/18	Thu 4/12/18	307	309	IBM BA
309			Demo & Retrospective	1 day	Thu 4/12/18	Fri 4/13/18	304,305,306,3	311	IBM Dev
310			**Sprint Approval R-1 S10**	**20 days**	**Fri 4/13/18**	**Fri 5/11/18**			
311			Submit Sprint Package	0 days	Fri 4/13/18	Fri 4/13/18	309	312	IBM Dev
312			Retro/Review Sprint Package	10 days	Fri 4/13/18	Fri 4/27/18	311	313	State Team
313			Incorporate Comments	5 days	Fri 4/27/18	Fri 5/4/18	312	314	IBM Dev
314			Final Review of Sprint Package	5 days	Fri 5/4/18	Fri 5/11/18	313	315	State Team
315			Accept Sprint Package	0 days	Fri 5/11/18	Fri 5/11/18	314	2064	State Team
316			**R-1 Sprint 11 Integrated Application (Barcode Application Forms)**	**51.5 days**	**Thu 3/1/18**	**Fri 5/11/18**			
317			Sprint Planning/Visioning Meeting	0.5 days	Thu 3/1/18	Thu 3/1/18	154	318	IBM Dev
318			Create Working Software (% complete tracked by burndown)	25 days	Thu 3/1/18	Thu 4/5/18	317	320	IBM Dev
319			**Create R-1 S11 Package**	**5 days**	**Thu 4/5/18**	**Thu 4/12/18**			
320			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Thu 4/5/18	Fri 4/6/18	318	321,325	IBM BA
321			Functional Design Document (FDD)	1 day	Fri 4/6/18	Mon 4/9/18	320	322,325	IBM BA
322			Update Technical Design Document	1 day	Mon 4/9/18	Tue 4/10/18	321	323,325	IBM Dev
323			Data Integration and Interface Control Documents (ICD)	1 day	Tue 4/10/18	Wed 4/11/18	322	324,325	IBM Dev
324			Updated and Completed Functional and Technical Requirements T	1 day	Wed 4/11/18	Thu 4/12/18	323	325	IBM BA
325			Demo & Retrospective	1 day	Thu 4/12/18	Fri 4/13/18	320,321,322,3	327	IBM Dev
326			**Sprint Approval R-1 S11**	**20 days**	**Fri 4/13/18**	**Fri 5/11/18**			
327			Submit Sprint Package	0 days	Fri 4/13/18	Fri 4/13/18	325	328	IBM Dev
328			Retro/Review Sprint Package	10 days	Fri 4/13/18	Fri 4/27/18	327	329	State Team
329			Incorporate Comments	5 days	Fri 4/27/18	Fri 5/4/18	328	330	IBM Dev
330			Final Review of Sprint Package	5 days	Fri 5/4/18	Fri 5/11/18	329	331	State Team
331			Accept Sprint Package	0 days	Fri 5/11/18	Fri 5/11/18	330	2064	State Team
332			**Release 1 - Deployment**	**12 days**	**Mon 8/27/18**	**Thu 9/13/18**			
333			R1 First Deployment	12 days	Mon 8/27/18	Thu 9/13/18	2064	2088	IBM Dev
334		**1.1.4.2**	**Release 2 - Integrated Application Interface**	**208.5 days**	**Thu 3/1/18**	**Fri 12/21/18**			
335			Release 2 Comprehensive Planning & Visioning	40 days	Thu 3/1/18	Wed 4/25/18		338,354,37(	IBM Dev
336			**Release 2 - Sprints**	**136.5 days**	**Thu 4/26/18**	**Tue 11/6/18**			
337			**R-2 Sprint 1 - Change of Circumstances (WIC)**	**106.5 days**	**Thu 4/26/18**	**Tue 9/25/18**			
338			Sprint Planning/Visioning Meeting	0.5 days	Thu 4/26/18	Thu 4/26/18	335	339	IBM Dev
339			Create Working Software (% complete tracked by burndown)	80 days	Thu 4/26/18	Fri 8/17/18	338	341	IBM Dev
340			**Create R-2 S1 Package**	**5 days**	**Fri 8/17/18**	**Fri 8/24/18**			
341			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Fri 8/17/18	Mon 8/20/18	339	342,346	IBM BA
342			Functional Design Document (FDD)	1 day	Mon 8/20/18	Tue 8/21/18	341	343,346	IBM BA
343			Update Technical Design Document	1 day	Tue 8/21/18	Wed 8/22/18	342	344,346	IBM Dev
344			Data Integration and Interface Control Documents (ICD)	1 day	Wed 8/22/18	Thu 8/23/18	343	345,346	IBM Dev
345			Updated and Completed Functional and Technical Requirements T	1 day	Thu 8/23/18	Fri 8/24/18	344	346	IBM BA
346			Demo & Retrospective	1 day	Fri 8/24/18	Mon 8/27/18	341,342,343,3	348	IBM Dev
347			**Sprint Approval R-2 S1**	**20 days**	**Mon 8/27/18**	**Tue 9/25/18**			
348			Submit Sprint Package	0 days	Mon 8/27/18	Mon 8/27/18	346	349	IBM Dev
349			Retro/Review Sprint Package	10 days	Mon 8/27/18	Tue 9/11/18	348	350	State Team
350			Incorporate Comments	5 days	Tue 9/11/18	Tue 9/18/18	349	351	IBM Dev

ID		WBS	Task Name	Duration	Start	Finish	Predecessors	Successors	Resource Names
351			Final Review of Sprint Package	5 days	Tue 9/18/18	Tue 9/25/18	350	352	State Team
352			Accept Sprint Package	0 days	Tue 9/25/18	Tue 9/25/18	351	2066	State Team
353			**R-2 Sprint 2 - Change of Circumstances (SNAP)**	**106.5 days**	**Thu 4/26/18**	**Tue 9/25/18**			
354			Sprint Planning/Visioning Meeting	0.5 days	Thu 4/26/18	Thu 4/26/18	335	355	IBM Dev
355			Create Working Software (% complete tracked by burndown)	80 days	Thu 4/26/18	Fri 8/17/18	354	357	IBM Dev
356			**Create R-2 S2 Package**	**5 days**	**Fri 8/17/18**	**Fri 8/24/18**			
357			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Fri 8/17/18	Mon 8/20/18	355	358,362	IBM BA
358			Functional Design Document (FDD)	1 day	Mon 8/20/18	Tue 8/21/18	357	359,362	IBM BA
359			Update Technical Design Document	1 day	Tue 8/21/18	Wed 8/22/18	358	360,362	IBM Dev
360			Data Integration and Interface Control Documents (ICD)	1 day	Wed 8/22/18	Thu 8/23/18	359	361,362	IBM Dev
361			Updated and Completed Functional and Technical Requirements T	1 day	Thu 8/23/18	Fri 8/24/18	360	362	IBM BA
362			Demo & Retrospective	1 day	Fri 8/24/18	Mon 8/27/18	357,358,359,3	364	IBM Dev
363			**Sprint Approval R-2 S2**	**20 days**	**Mon 8/27/18**	**Tue 9/25/18**			
364			Submit Sprint Package	0 days	Mon 8/27/18	Mon 8/27/18	362	365	IBM Dev
365			Retro/Review Sprint Package	10 days	Mon 8/27/18	Tue 9/11/18	364	366	State Team
366			Incorporate Comments	5 days	Tue 9/11/18	Tue 9/18/18	365	367	IBM Dev
367			Final Review of Sprint Package	5 days	Tue 9/18/18	Tue 9/25/18	366	368	State Team
368			Accept Sprint Package	0 days	Tue 9/25/18	Tue 9/25/18	367	2066	State Team
369			**R-2 Sprint 3 - Change of Circumstances (TANF)**	**106.5 days**	**Thu 4/26/18**	**Tue 9/25/18**			
370			Sprint Planning/Visioning Meeting	0.5 days	Thu 4/26/18	Thu 4/26/18	335	371	IBM Dev
371			Create Working Software (% complete tracked by burndown)	80 days	Thu 4/26/18	Fri 8/17/18	370	373	IBM Dev
372			**Create R-2 S3 Package**	**5 days**	**Fri 8/17/18**	**Fri 8/24/18**			
373			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Fri 8/17/18	Mon 8/20/18	371	374,378	IBM BA
374			Functional Design Document (FDD)	1 day	Mon 8/20/18	Tue 8/21/18	373	375,378	IBM BA
375			Update Technical Design Document	1 day	Tue 8/21/18	Wed 8/22/18	374	376,378	IBM Dev
376			Data Integration and Interface Control Documents (ICD)	1 day	Wed 8/22/18	Thu 8/23/18	375	377,378	IBM Dev
377			Updated and Completed Functional and Technical Requirements T	1 day	Thu 8/23/18	Fri 8/24/18	376	378	IBM BA
378			Demo & Retrospective	1 day	Fri 8/24/18	Mon 8/27/18	373,374,375,3	380	IBM Dev
379			**Sprint Approval R-2 S3**	**20 days**	**Mon 8/27/18**	**Tue 9/25/18**			
380			Submit Sprint Package	0 days	Mon 8/27/18	Mon 8/27/18	378	381	IBM Dev
381			Retro/Review Sprint Package	10 days	Mon 8/27/18	Tue 9/11/18	380	382	State Team
382			Incorporate Comments	5 days	Tue 9/11/18	Tue 9/18/18	381	383	IBM Dev
383			Final Review of Sprint Package	5 days	Tue 9/18/18	Tue 9/25/18	382	384	State Team
384			Accept Sprint Package	0 days	Tue 9/25/18	Tue 9/25/18	383	2066	State Team
385			**R-2 Sprint 4 - Change of Circumstances (Medicaid)**	**136.5 days**	**Thu 4/26/18**	**Tue 11/6/18**			
386			Sprint Planning/Visioning Meeting	0.5 days	Thu 4/26/18	Thu 4/26/18	335	387	IBM Dev
387			Create Working Software (% complete tracked by burndown)	110 days	Thu 4/26/18	Mon 10/1/18	386	389	IBM Dev
388			**Create R-2 S4 Package**	**5 days**	**Mon 10/1/18**	**Mon 10/8/18**			
389			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Mon 10/1/18	Tue 10/2/18	387	390,394	IBM BA
390			Functional Design Document (FDD)	1 day	Tue 10/2/18	Wed 10/3/18	389	391,394	IBM BA
391			Update Technical Design Document	1 day	Wed 10/3/18	Thu 10/4/18	390	392,394	IBM Dev
392			Data Integration and Interface Control Documents (ICD)	1 day	Thu 10/4/18	Fri 10/5/18	391	393,394	IBM Dev
393			Updated and Completed Functional and Technical Requirements T	1 day	Fri 10/5/18	Mon 10/8/18	392	394	IBM BA
394			Demo & Retrospective	1 day	Mon 10/8/18	Tue 10/9/18	389,390,391,3	396	IBM Dev
395			**Sprint Approval R-2 S4**	**20 days**	**Tue 10/9/18**	**Tue 11/6/18**			
396			Submit Sprint Package	0 days	Tue 10/9/18	Tue 10/9/18	394	397	IBM Dev
397			Retro/Review Sprint Package	10 days	Tue 10/9/18	Tue 10/23/18	396	398	State Team
398			Incorporate Comments	5 days	Tue 10/23/18	Tue 10/30/18	397	399	IBM Dev
399			Final Review of Sprint Package	5 days	Tue 10/30/18	Tue 11/6/18	398	400	State Team
400			Accept Sprint Package	0 days	Tue 11/6/18	Tue 11/6/18	399	2066	State Team

ID		WBS	Task Name	Duration	Start	Finish	Predecessors	Successors	Resource Names
401			**R-2 Sprint 5 - Reporting**	**106.5 days**	**Thu 4/26/18**	**Tue 9/25/18**			
402			Sprint Planning/Visioning Meeting	0.5 days	Thu 4/26/18	Thu 4/26/18	335	403	IBM Dev
403			Create Working Software (% complete tracked by burndown)	80 days	Thu 4/26/18	Fri 8/17/18	402	405	IBM Dev
404			**Create R-2 S5 Package**	**5 days**	**Fri 8/17/18**	**Fri 8/24/18**			
405			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Fri 8/17/18	Mon 8/20/18	403	406,410	IBM BA
406			Functional Design Document (FDD)	1 day	Mon 8/20/18	Tue 8/21/18	405	407,410	IBM BA
407			Update Technical Design Document	1 day	Tue 8/21/18	Wed 8/22/18	406	408,410	IBM Dev
408			Data Integration and Interface Control Documents (ICD)	1 day	Wed 8/22/18	Thu 8/23/18	407	409,410	IBM Dev
409			Updated and Completed Functional and Technical Requirements T	1 day	Thu 8/23/18	Fri 8/24/18	408	410	IBM BA
410			Demo & Retrospective	1 day	Fri 8/24/18	Mon 8/27/18	405,406,407,4	412	IBM Dev
411			**Sprint Approval R-2 S5**	**20 days**	**Mon 8/27/18**	**Tue 9/25/18**			
412			Submit Sprint Package	0 days	Mon 8/27/18	Mon 8/27/18	410	413	IBM Dev
413			Retro/Review Sprint Package	10 days	Mon 8/27/18	Tue 9/11/18	412	414	State Team
414			Incorporate Comments	5 days	Tue 9/11/18	Tue 9/18/18	413	415	IBM Dev
415			Final Review of Sprint Package	5 days	Tue 9/18/18	Tue 9/25/18	414	416	State Team
416			Accept Sprint Package	0 days	Tue 9/25/18	Tue 9/25/18	415	2066	State Team
417			**Release 2 - Deployment**	**12 days**	**Wed 12/5/18**	**Fri 12/21/18**			
418			R2 First Deployment	12 days	Wed 12/5/18	Fri 12/21/18	2066	2089	IBM Dev
419		**1.1.4.3**	**Release 3 - SNAP**	**285.5 days**	**Fri 6/1/18**	**Fri 7/12/19**			
420			Release 3 Comprehensive Planning & Visioning	70 days	Fri 6/1/18	Fri 9/7/18		424,440,456	
421		**1.1.4.1.1**	**Release 3 - Sprints**	**215.5 days**	**Mon 9/10/18**	**Fri 7/12/19**			
422			**First Round Sprints**	**91.5 days**	**Mon 9/10/18**	**Wed 1/16/19**			
423			**R-3 Sprint 1 - Electronic Beneft Transfer (EBT)**	**86.5 days**	**Mon 9/10/18**	**Wed 1/9/19**			
424			Sprint Planning/Visioning Meeting	0.5 days	Mon 9/10/18	Mon 9/10/18	420	425	IBM Dev
425			Create Working Software (% complete tracked by burndown)	60 days	Mon 9/10/18	Tue 12/4/18	424	427	IBM Dev
426			**Create R-3 S1 Package**	**5 days**	**Tue 12/4/18**	**Tue 12/11/18**			
427			Requirements Validation and updates to RTM, BPA and Use Ca	1 day	Tue 12/4/18	Wed 12/5/18	425	428,432	IBM BA
428			Functional Design Document (FDD)	1 day	Wed 12/5/18	Thu 12/6/18	427	429,432	IBM BA
429			Update Technical Design Document	1 day	Thu 12/6/18	Fri 12/7/18	428	430,432	IBM Dev
430			Data Integration and Interface Control Documents (ICD)	1 day	Fri 12/7/18	Mon 12/10/18	429	431,432	IBM Dev
431			Updated and Completed Functional and Technical Requiremer	1 day	Mon 12/10/18	Tue 12/11/18	430	432	IBM BA
432			Demo & Retrospective	1 day	Tue 12/11/18	Wed 12/12/18	427,428,429,4	434	IBM Dev
433			**Sprint Approval R-3 S1**	**20 days**	**Wed 12/12/18**	**Wed 1/9/19**			
434			Submit Sprint Package	0 days	Wed 12/12/18	Wed 12/12/18	432	435	IBM Dev
435			Retro/Review Sprint Package	10 days	Wed 12/12/18	Wed 12/26/18	434	436	State Team
436			Incorporate Comments	5 days	Wed 12/26/18	Wed 1/2/19	435	437	IBM Dev
437			Final Review of Sprint Package	5 days	Wed 1/2/19	Wed 1/9/19	436	438	State Team
438			Accept Sprint Package	0 days	Wed 1/9/19	Wed 1/9/19	437	2068	State Team
439			**R-3 Sprint 2 - Barcoding Enhancements**	**51.5 days**	**Mon 9/10/18**	**Tue 11/20/18**			
440			Sprint Planning/Visioning Meeting	0.5 days	Mon 9/10/18	Mon 9/10/18	420	441	IBM Dev
441			Create Working Software (% complete tracked by burndown)	25 days	Mon 9/10/18	Mon 10/15/18	440	443	IBM Dev
442			**Create R-3 S2 Package**	**5 days**	**Mon 10/15/18**	**Mon 10/22/18**			
443			Requirements Validation and updates to RTM, BPA and Use Ca	1 day	Mon 10/15/18	Tue 10/16/18	441	444,448	IBM BA
444			Functional Design Document (FDD)	1 day	Tue 10/16/18	Wed 10/17/18	443	445,448	IBM BA
445			Update Technical Design Document	1 day	Wed 10/17/18	Thu 10/18/18	444	446,448	IBM Dev
446			Data Integration and Interface Control Documents (ICD)	1 day	Thu 10/18/18	Fri 10/19/18	445	447,448	IBM Dev
447			Updated and Completed Functional and Technical Requiremer	1 day	Fri 10/19/18	Mon 10/22/18	446	448	IBM BA
448			Demo & Retrospective	1 day	Mon 10/22/18	Tue 10/23/18	443,444,445,4	450	IBM Dev
449			**Sprint Approval R-3 S2**	**20 days**	**Tue 10/23/18**	**Tue 11/20/18**			
450			Submit Sprint Package	0 days	Tue 10/23/18	Tue 10/23/18	448	451	IBM Dev

ID		WBS	Task Name	Duration	Start	Finish	Predecessors	Successors	Resource Names
451			Retro/Review Sprint Package	10 days	Tue 10/23/18	Tue 11/6/18	450	452	State Team
452			Incorporate Comments	5 days	Tue 11/6/18	Tue 11/13/18	451	453	IBM Dev
453			Final Review of Sprint Package	5 days	Tue 11/13/18	Tue 11/20/18	452	454	State Team
454			Accept Sprint Package	0 days	Tue 11/20/18	Tue 11/20/18	453	2068	State Team
455			**R-3 Sprint 3 - Eligibility Determination**	**86.5 days**	**Mon 9/10/18**	**Wed 1/9/19**			
456			Sprint Planning/Visioning Meeting	0.5 days	Mon 9/10/18	Mon 9/10/18	420	457	IBM Dev
457			Create Working Software (% complete tracked by burndown)	60 days	Mon 9/10/18	Tue 12/4/18	456	459	IBM Dev
458			**Create R-3 S3 Package**	**5 days**	**Tue 12/4/18**	**Tue 12/11/18**			
459			Requirements Validation and updates to RTM, BPA and Use Ca	1 day	Tue 12/4/18	Wed 12/5/18	457	460,464	IBM BA
460			Functional Design Document (FDD)	1 day	Wed 12/5/18	Thu 12/6/18	459	461,464	IBM BA
461			Update Technical Design Document	1 day	Thu 12/6/18	Fri 12/7/18	460	462,464	IBM Dev
462			Data Integration and Interface Control Documents (ICD)	1 day	Fri 12/7/18	Mon 12/10/18	461	463,464	IBM Dev
463			Updated and Completed Functional and Technical Requiremer	1 day	Mon 12/10/18	Tue 12/11/18	462	464	IBM BA
464			Demo & Retrospective	1 day	Tue 12/11/18	Wed 12/12/18	459,460,461,4	466	IBM Dev
465			**Sprint Approval R-3 S3**	**20 days**	**Wed 12/12/18**	**Wed 1/9/19**			
466			Submit Sprint Package	0 days	Wed 12/12/18	Wed 12/12/18	464	467	IBM Dev
467			Retro/Review Sprint Package	10 days	Wed 12/12/18	Wed 12/26/18	466	468	State Team
468			Incorporate Comments	5 days	Wed 12/26/18	Wed 1/2/19	467	469	IBM Dev
469			Final Review of Sprint Package	5 days	Wed 1/2/19	Wed 1/9/19	468	470	State Team
470			Accept Sprint Package	0 days	Wed 1/9/19	Wed 1/9/19	469	2068	State Team
471			**R-3 Sprint 4 - Benefits Management**	**66.5 days**	**Mon 9/10/18**	**Wed 12/12/18**			
472			Sprint Planning/Visioning Meeting	0.5 days	Mon 9/10/18	Mon 9/10/18	420	473	IBM Dev
473			Create Working Software (% complete tracked by burndown)	40 days	Mon 9/10/18	Mon 11/5/18	472	475	IBM Dev
474			**Create R-3 S4 Package**	**5 days**	**Mon 11/5/18**	**Mon 11/12/18**			
475			Requirements Validation and updates to RTM, BPA and Use Ca	1 day	Mon 11/5/18	Tue 11/6/18	473	476,480	IBM BA
476			Functional Design Document (FDD)	1 day	Tue 11/6/18	Wed 11/7/18	475	477,480	IBM BA
477			Update Technical Design Document	1 day	Wed 11/7/18	Thu 11/8/18	476	478,480	IBM Dev
478			Data Integration and Interface Control Documents (ICD)	1 day	Thu 11/8/18	Fri 11/9/18	477	479,480	IBM Dev
479			Updated and Completed Functional and Technical Requiremer	1 day	Fri 11/9/18	Mon 11/12/18	478	480	IBM BA
480			Demo & Retrospective	1 day	Mon 11/12/18	Tue 11/13/18	475,476,477,4	482	IBM Dev
481			**Sprint Approval R-3 S4**	**20 days**	**Tue 11/13/18**	**Wed 12/12/18**			
482			Submit Sprint Package	0 days	Tue 11/13/18	Tue 11/13/18	480	483	IBM Dev
483			Retro/Review Sprint Package	10 days	Tue 11/13/18	Wed 11/28/18	482	484	State Team
484			Incorporate Comments	5 days	Wed 11/28/18	Wed 12/5/18	483	485	IBM Dev
485			Final Review of Sprint Package	5 days	Wed 12/5/18	Wed 12/12/18	484	486	State Team
486			Accept Sprint Package	0 days	Wed 12/12/18	Wed 12/12/18	485	2068	State Team
487			**R-3 Sprint 5 - Overpayment Tracking**	**91.5 days**	**Mon 9/10/18**	**Wed 1/16/19**			
488			Sprint Planning/Visioning Meeting	0.5 days	Mon 9/10/18	Mon 9/10/18	420	489	IBM Dev
489			Create Working Software (% complete tracked by burndown)	65 days	Mon 9/10/18	Tue 12/11/18	488	491	IBM Dev
490			**Create R-3 S5 Package**	**5 days**	**Tue 12/11/18**	**Tue 12/18/18**			
491			Requirements Validation and updates to RTM, BPA and Use Ca	1 day	Tue 12/11/18	Wed 12/12/18	489	492,496	IBM BA
492			Functional Design Document (FDD)	1 day	Wed 12/12/18	Thu 12/13/18	491	493,496	IBM BA
493			Update Technical Design Document	1 day	Thu 12/13/18	Fri 12/14/18	492	494,496	IBM Dev
494			Data Integration and Interface Control Documents (ICD)	1 day	Fri 12/14/18	Mon 12/17/18	493	495,496	IBM Dev
495			Updated and Completed Functional and Technical Requiremer	1 day	Mon 12/17/18	Tue 12/18/18	494	496	IBM BA
496			Demo & Retrospective	1 day	Tue 12/18/18	Wed 12/19/18	491,492,493,4	498	IBM Dev
497			**Sprint Approval R-3 S5**	**20 days**	**Wed 12/19/18**	**Wed 1/16/19**			
498			Submit Sprint Package	0 days	Wed 12/19/18	Wed 12/19/18	496	499	IBM Dev
499			Retro/Review Sprint Package	10 days	Wed 12/19/18	Wed 1/2/19	498	500	State Team
500			Incorporate Comments	5 days	Wed 1/2/19	Wed 1/9/19	499	501	IBM Dev

ID		WBS	Task Name	Duration	Start	Finish	Predecessors	Successors	Resource Names
501			Final Review of Sprint Package	5 days	Wed 1/9/19	Wed 1/16/19	500	502	State Team
502			Accept Sprint Package	0 days	Wed 1/16/19	Wed 1/16/19	501	2068	State Team
503			**R-3 Sprint 6 - Integration with Case Management System**	**91.5 days**	**Mon 9/10/18**	**Wed 1/16/19**			
504			Sprint Planning/Visioning Meeting	0.5 days	Mon 9/10/18	Mon 9/10/18	420	505	IBM Dev
505			Create Working Software (% complete tracked by burndown)	65 days	Mon 9/10/18	Tue 12/11/18	504	507	IBM Dev
506			**Create R-3 S6 Package**	**5 days**	**Tue 12/11/18**	**Tue 12/18/18**			
507			Requirements Validation and updates to RTM, BPA and Use Ca	1 day	Tue 12/11/18	Wed 12/12/18	505	508,512	IBM BA
508			Functional Design Document (FDD)	1 day	Wed 12/12/18	Thu 12/13/18	507	509,512	IBM BA
509			Update Technical Design Document	1 day	Thu 12/13/18	Fri 12/14/18	508	510,512	IBM Dev
510			Data Integration and Interface Control Documents (ICD)	1 day	Fri 12/14/18	Mon 12/17/18	509	511,512	IBM Dev
511			Updated and Completed Functional and Technical Requiremer	1 day	Mon 12/17/18	Tue 12/18/18	510	512	IBM BA
512			Demo & Retrospective	1 day	Tue 12/18/18	Wed 12/19/18	507,508,509,5	514	IBM Dev
513			**Sprint Approval R-3 S6**	**20 days**	**Wed 12/19/18**	**Wed 1/16/19**			
514			Submit Sprint Package	0 days	Wed 12/19/18	Wed 12/19/18	512	515	IBM Dev
515			Retro/Review Sprint Package	10 days	Wed 12/19/18	Wed 1/2/19	514	516	State Team
516			Incorporate Comments	5 days	Wed 1/2/19	Wed 1/9/19	515	517	IBM Dev
517			Final Review of Sprint Package	5 days	Wed 1/9/19	Wed 1/16/19	516	518	State Team
518			Accept Sprint Package	0 days	Wed 1/16/19	Wed 1/16/19	517	2068	State Team
519			**R-3 Sprint 7 - Reporting**	**91.5 days**	**Mon 9/10/18**	**Wed 1/16/19**			
520			Sprint Planning/Visioning Meeting	0.5 days	Mon 9/10/18	Mon 9/10/18	420	521	IBM Dev
521			Create Working Software (% complete tracked by burndown)	65 days	Mon 9/10/18	Tue 12/11/18	520	523	IBM Dev
522			**Create R-3 S7 Package**	**5 days**	**Tue 12/11/18**	**Tue 12/18/18**			
523			Requirements Validation and updates to RTM, BPA and Use Ca	1 day	Tue 12/11/18	Wed 12/12/18	521	524,528	IBM BA
524			Functional Design Document (FDD)	1 day	Wed 12/12/18	Thu 12/13/18	523	525,528	IBM BA
525			Update Technical Design Document	1 day	Thu 12/13/18	Fri 12/14/18	524	526,528	IBM Dev
526			Data Integration and Interface Control Documents (ICD)	1 day	Fri 12/14/18	Mon 12/17/18	525	527,528	IBM Dev
527			Updated and Completed Functional and Technical Requiremer	1 day	Mon 12/17/18	Tue 12/18/18	526	528	IBM BA
528			Demo & Retrospective	1 day	Tue 12/18/18	Wed 12/19/18	523,524,525,5	530	IBM Dev
529			**Sprint Approval R-3 S7**	**20 days**	**Wed 12/19/18**	**Wed 1/16/19**			
530			Submit Sprint Package	0 days	Wed 12/19/18	Wed 12/19/18	528	531	IBM Dev
531			Retro/Review Sprint Package	10 days	Wed 12/19/18	Wed 1/2/19	530	532	State Team
532			Incorporate Comments	5 days	Wed 1/2/19	Wed 1/9/19	531	533	IBM Dev
533			Final Review of Sprint Package	5 days	Wed 1/9/19	Wed 1/16/19	532	534	State Team
534			Accept Sprint Package	0 days	Wed 1/16/19	Wed 1/16/19	533	2068	State Team
535			**R-3 Sprint 8 -DWS Integration**	**91.5 days**	**Mon 9/10/18**	**Wed 1/16/19**			
536			Sprint Planning/Visioning Meeting	0.5 days	Mon 9/10/18	Mon 9/10/18	420	537	IBM Dev
537			Create Working Software (% complete tracked by burndown)	65 days	Mon 9/10/18	Tue 12/11/18	536	539	IBM Dev
538			**Create R-3 S8 Package**	**5 days**	**Tue 12/11/18**	**Tue 12/18/18**			
539			Requirements Validation and updates to RTM, BPA and Use Ca	1 day	Tue 12/11/18	Wed 12/12/18	537	540,544	IBM BA
540			Functional Design Document (FDD)	1 day	Wed 12/12/18	Thu 12/13/18	539	541,544	IBM BA
541			Update Technical Design Document	1 day	Thu 12/13/18	Fri 12/14/18	540	542,544	IBM Dev
542			Data Integration and Interface Control Documents (ICD)	1 day	Fri 12/14/18	Mon 12/17/18	541	543,544	IBM Dev
543			Updated and Completed Functional and Technical Requiremer	1 day	Mon 12/17/18	Tue 12/18/18	542	544	IBM BA
544			Demo & Retrospective	1 day	Tue 12/18/18	Wed 12/19/18	539,540,541,5	546	IBM Dev
545			**Sprint Approval R-3 S8**	**20 days**	**Wed 12/19/18**	**Wed 1/16/19**			
546			Submit Sprint Package	0 days	Wed 12/19/18	Wed 12/19/18	544	547	IBM Dev
547			Retro/Review Sprint Package	10 days	Wed 12/19/18	Wed 1/2/19	546	548	State Team
548			Incorporate Comments	5 days	Wed 1/2/19	Wed 1/9/19	547	549	IBM Dev
549			Final Review of Sprint Package	5 days	Wed 1/9/19	Wed 1/16/19	548	550	State Team
550			Accept Sprint Package	0 days	Wed 1/16/19	Wed 1/16/19	549	2068	State Team

ID		WBS	Task Name	Duration	Start	Finish	Predecessors	Successors	Resource Names
551			**R-3 Sprint 9 SNAP Client Services (Outlook)**	**51.5 days**	**Mon 9/10/18**	**Tue 11/20/18**			
552			Sprint Planning/Visioning Meeting	0.5 days	Mon 9/10/18	Mon 9/10/18	420	553	IBM Dev
553			Create Working Software (% complete tracked by burndown)	25 days	Mon 9/10/18	Mon 10/15/18	552	555	IBM Dev
554			**Create R-3 S9 Package**	**5 days**	**Mon 10/15/18**	**Mon 10/22/18**			
555			Requirements Validation and updates to RTM, BPA and Use Ca	1 day	Mon 10/15/18	Tue 10/16/18	553	556,560	IBM BA
556			Functional Design Document (FDD)	1 day	Tue 10/16/18	Wed 10/17/18	555	557,560	IBM BA
557			Update Technical Design Document	1 day	Wed 10/17/18	Thu 10/18/18	556	558,560	IBM Dev
558			Data Integration and Interface Control Documents (ICD)	1 day	Thu 10/18/18	Fri 10/19/18	557	559,560	IBM Dev
559			Updated and Completed Functional and Technical Requiremer	1 day	Fri 10/19/18	Mon 10/22/18	558	560	IBM BA
560			Demo & Retrospective	1 day	Mon 10/22/18	Tue 10/23/18	555,556,557,5	562	IBM Dev
561			**Sprint Approval R-3 S9**	**20 days**	**Tue 10/23/18**	**Tue 11/20/18**			
562			Submit Sprint Package	0 days	Tue 10/23/18	Tue 10/23/18	560	563	IBM Dev
563			Retro/Review Sprint Package	10 days	Tue 10/23/18	Tue 11/6/18	562	564	State Team
564			Incorporate Comments	5 days	Tue 11/6/18	Tue 11/13/18	563	565	IBM Dev
565			Final Review of Sprint Package	5 days	Tue 11/13/18	Tue 11/20/18	564	566	State Team
566			Accept Sprint Package	0 days	Tue 11/20/18	Tue 11/20/18	565	2068	State Team
567			**R-3 Sprint 10 - SNAP Client Services (Client Portal Calendar)**	**51.5 days**	**Mon 9/10/18**	**Tue 11/20/18**			
568			Sprint Planning/Visioning Meeting	0.5 days	Mon 9/10/18	Mon 9/10/18	420	569	IBM Dev
569			Create Working Software (% complete tracked by burndown)	25 days	Mon 9/10/18	Mon 10/15/18	568	571	IBM Dev
570			**Create R-3 S10 Package**	**5 days**	**Mon 10/15/18**	**Mon 10/22/18**			
571			Requirements Validation and updates to RTM, BPA and Use Ca	1 day	Mon 10/15/18	Tue 10/16/18	569	572,576	IBM BA
572			Functional Design Document (FDD)	1 day	Tue 10/16/18	Wed 10/17/18	571	573,576	IBM BA
573			Update Technical Design Document	1 day	Wed 10/17/18	Thu 10/18/18	572	574,576	IBM Dev
574			Data Integration and Interface Control Documents (ICD)	1 day	Thu 10/18/18	Fri 10/19/18	573	575,576	IBM Dev
575			Updated and Completed Functional and Technical Requiremer	1 day	Fri 10/19/18	Mon 10/22/18	574	576	IBM BA
576			Demo & Retrospective	1 day	Mon 10/22/18	Tue 10/23/18	571,572,573,5	578	IBM Dev
577			**Sprint Approval R-3 S10**	**20 days**	**Tue 10/23/18**	**Tue 11/20/18**			
578			Submit Sprint Package	0 days	Tue 10/23/18	Tue 10/23/18	576	579	IBM Dev
579			Retro/Review Sprint Package	10 days	Tue 10/23/18	Tue 11/6/18	578	580	State Team
580			Incorporate Comments	5 days	Tue 11/6/18	Tue 11/13/18	579	581	IBM Dev
581			Final Review of Sprint Package	5 days	Tue 11/13/18	Tue 11/20/18	580	582	State Team
582			Accept Sprint Package	0 days	Tue 11/20/18	Tue 11/20/18	581	2068	State Team
583			**R-3 Sprint 11 -SNAP Client Services (Redetermination)**	**66.5 days**	**Mon 9/10/18**	**Wed 12/12/18**			
584			Sprint Planning/Visioning Meeting	0.5 days	Mon 9/10/18	Mon 9/10/18	420	585	IBM Dev
585			Create Working Software (% complete tracked by burndown)	40 days	Mon 9/10/18	Mon 11/5/18	584	587	IBM Dev
586			**Create R-3 S11 Package**	**5 days**	**Mon 11/5/18**	**Mon 11/12/18**			
587			Requirements Validation and updates to RTM, BPA and Use Ca	1 day	Mon 11/5/18	Tue 11/6/18	585	588,592	IBM BA
588			Functional Design Document (FDD)	1 day	Tue 11/6/18	Wed 11/7/18	587	589,592	IBM BA
589			Update Technical Design Document	1 day	Wed 11/7/18	Thu 11/8/18	588	590,592	IBM Dev
590			Data Integration and Interface Control Documents (ICD)	1 day	Thu 11/8/18	Fri 11/9/18	589	591,592	IBM Dev
591			Updated and Completed Functional and Technical Requiremer	1 day	Fri 11/9/18	Mon 11/12/18	590	592	IBM BA
592			Demo & Retrospective	1 day	Mon 11/12/18	Tue 11/13/18	587,588,589,5	594	IBM Dev
593			**Sprint Approval R-3 S11**	**20 days**	**Tue 11/13/18**	**Wed 12/12/18**			
594			Submit Sprint Package	0 days	Tue 11/13/18	Tue 11/13/18	592	595	IBM Dev
595			Retro/Review Sprint Package	10 days	Tue 11/13/18	Wed 11/28/18	594	596	State Team
596			Incorporate Comments	5 days	Wed 11/28/18	Wed 12/5/18	595	597	IBM Dev
597			Final Review of Sprint Package	5 days	Wed 12/5/18	Wed 12/12/18	596	598	State Team
598			Accept Sprint Package	0 days	Wed 12/12/18	Wed 12/12/18	597	2068	State Team
599			**R-3 Sprint 12 - SNAP Client Services (Change in Circumstance)**	**91.5 days**	**Mon 9/10/18**	**Wed 1/16/19**			
600			Sprint Planning/Visioning Meeting	0.5 days	Mon 9/10/18	Mon 9/10/18	420	601	IBM Dev

ID		WBS	Task Name	Duration	Start	Finish	Predecessors	Successors	Resource Names
601			Create Working Software (% complete tracked by burndown)	65 days	Mon 9/10/18	Tue 12/11/18	600	603	IBM Dev
602			**Create R-3 S12 Package**	**5 days**	**Tue 12/11/18**	**Tue 12/18/18**			
603			Requirements Validation and updates to RTM, BPA and Use Ca	1 day	Tue 12/11/18	Wed 12/12/18	601	604,608	IBM BA
604			Functional Design Document (FDD)	1 day	Wed 12/12/18	Thu 12/13/18	603	605,608	IBM BA
605			Update Technical Design Document	1 day	Thu 12/13/18	Fri 12/14/18	604	606,608	IBM Dev
606			Data Integration and Interface Control Documents (ICD)	1 day	Fri 12/14/18	Mon 12/17/18	605	607,608	IBM Dev
607			Updated and Completed Functional and Technical Requiremer	1 day	Mon 12/17/18	Tue 12/18/18	606	608	IBM BA
608			Demo & Retrospective	1 day	Tue 12/18/18	Wed 12/19/18	603,604,605,6	610	IBM Dev
609			**Sprint Approval R-3 S12**	**20 days**	**Wed 12/19/18**	**Wed 1/16/19**			
610			Submit Sprint Package	0 days	Wed 12/19/18	Wed 12/19/18	608	611	IBM Dev
611			Retro/Review Sprint Package	10 days	Wed 12/19/18	Wed 1/2/19	610	612	State Team
612			Incorporate Comments	5 days	Wed 1/2/19	Wed 1/9/19	611	613	IBM Dev
613			Final Review of Sprint Package	5 days	Wed 1/9/19	Wed 1/16/19	612	614	State Team
614			Accept Sprint Package	0 days	Wed 1/16/19	Wed 1/16/19	613	2068	State Team
615			**Second-Round Sprints (Post Pilot)**	**31.5 days**	**Thu 5/30/19**	**Fri 7/12/19**			
616			**R-3 Sprint (x)**	**31.5 days**	**Thu 5/30/19**	**Fri 7/12/19**			
617			Sprint Planning/Visioning Meeting	0.5 days	Thu 5/30/19	Thu 5/30/19	2092	618	IBM Dev
618			Create Working Software (% complete tracked by burndown)	5 days	Thu 5/30/19	Thu 6/6/19	617	620	IBM Dev
619			**Create R-3 S(x) Package**	**5 days**	**Thu 6/6/19**	**Thu 6/13/19**			
620			Requirements Validation and updates to RTM, BPA and Use Ca	1 day	Thu 6/6/19	Fri 6/7/19	618	621,625	IBM BA
621			Functional Design Document (FDD)	1 day	Fri 6/7/19	Mon 6/10/19	620	622,625	IBM BA
622			Update Technical Design Document	1 day	Mon 6/10/19	Tue 6/11/19	621	623,625	IBM Dev
623			Data Integration and Interface Control Documents (ICD)	1 day	Tue 6/11/19	Wed 6/12/19	622	624,625	IBM Dev
624			Updated and Completed Functional and Technical Requiremer	1 day	Wed 6/12/19	Thu 6/13/19	623	625	IBM BA
625			Demo & Retrospective	1 day	Thu 6/13/19	Fri 6/14/19	620,621,622,6	627	IBM Dev
626			**Sprint Approval R-3 S(x)**	**20 days**	**Fri 6/14/19**	**Fri 7/12/19**			
627			Submit Sprint Package	0 days	Fri 6/14/19	Fri 6/14/19	625	628	IBM Dev
628			Retro/Review Sprint Package	10 days	Fri 6/14/19	Fri 6/28/19	627	629	State Team
629			Incorporate Comments	5 days	Fri 6/28/19	Fri 7/5/19	628	630	IBM Dev
630			Final Review of Sprint Package	5 days	Fri 7/5/19	Fri 7/12/19	629	631	State Team
631			Accept Sprint Package	0 days	Fri 7/12/19	Fri 7/12/19	630		State Team
632			**Release 3 - Deployment**	**10 days**	**Wed 2/20/19**	**Tue 3/5/19**			
633			**Release 3 - Deployment**	**10 days**	**Wed 2/20/19**	**Tue 3/5/19**			
634			Release 3 - First Deployment	10 days	Wed 2/20/19	Tue 3/5/19	2068	2090,2092	
635		**1.1.4.4**	**Release 4 - TANF**	**341.5 days**	**Tue 5/1/18**	**Thu 8/29/19**			
636			Release 4 Comprehensive Planning & Visioning	88 days	Tue 5/1/18	Fri 8/31/18		639,655,671	IBM Dev
637			**Release 4 - Sprints**	**223.5 days**	**Tue 9/4/18**	**Thu 7/18/19**			
638			**R-4 Sprint 1 - Barcoding Enhancements**	**223.5 days**	**Tue 9/4/18**	**Thu 7/18/19**			
639			Sprint Planning/Visioning Meeting	0.5 days	Tue 9/4/18	Tue 9/4/18	636	640	IBM Dev
640			Create Working Software (% complete tracked by burndown)	197 days	Tue 9/4/18	Wed 6/12/19	639	642	IBM Dev
641			**Create R-4 S1 Package**	**5 days**	**Wed 6/12/19**	**Wed 6/19/19**			
642			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Wed 6/12/19	Thu 6/13/19	640	643,647	IBM BA
643			Functional Design Document (FDD)	1 day	Thu 6/13/19	Fri 6/14/19	642	644,647	IBM BA
644			Update Technical Design Document	1 day	Fri 6/14/19	Mon 6/17/19	643	645,647	IBM Dev
645			Data Integration and Interface Control Documents (ICD)	1 day	Mon 6/17/19	Tue 6/18/19	644	646,647	IBM Dev
646			Updated and Completed Functional and Technical Requirements T	1 day	Tue 6/18/19	Wed 6/19/19	645	647	IBM BA
647			Demo & Retrospective	1 day	Wed 6/19/19	Thu 6/20/19	642,643,644,6	649	IBM Dev
648			**Sprint Approval R-4 S1**	**20 days**	**Thu 6/20/19**	**Thu 7/18/19**			
649			Submit Sprint Package	0 days	Thu 6/20/19	Thu 6/20/19	647	650	IBM Dev
650			Retro/Review Sprint Package	10 days	Thu 6/20/19	Thu 7/4/19	649	651	State Team

ID		WBS	Task Name	Duration	Start	Finish	Predecessors	Successors	Resource Names
651			Incorporate Comments	5 days	Thu 7/4/19	Thu 7/11/19	650	652	IBM Dev
652			Final Review of Sprint Package	5 days	Thu 7/11/19	Thu 7/18/19	651	653	State Team
653			Accept Sprint Package	0 days	Thu 7/18/19	Thu 7/18/19	652	2070	State Team
654			**R-4 Sprint 2 - Eligiblility Determination**	**51.5 days**	**Tue 9/4/18**	**Wed 11/14/18**			
655			Sprint Planning/Visioning Meeting	0.5 days	Tue 9/4/18	Tue 9/4/18	636	656	IBM Dev
656			Create Working Software (% complete tracked by burndown)	25 days	Tue 9/4/18	Tue 10/9/18	655	658	IBM Dev
657			**Create R-4 S2 Package**	**5 days**	**Tue 10/9/18**	**Tue 10/16/18**			
658			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Tue 10/9/18	Wed 10/10/18	656	659,663	IBM BA
659			Functional Design Document (FDD)	1 day	Wed 10/10/18	Thu 10/11/18	658	660,663	IBM BA
660			Update Technical Design Document	1 day	Thu 10/11/18	Fri 10/12/18	659	661,663	IBM Dev
661			Data Integration and Interface Control Documents (ICD)	1 day	Fri 10/12/18	Mon 10/15/18	660	662,663	IBM Dev
662			Updated and Completed Functional and Technical Requirements T	1 day	Mon 10/15/18	Tue 10/16/18	661	663	IBM BA
663			Demo & Retrospective	1 day	Tue 10/16/18	Wed 10/17/18	658,659,660,6	665	IBM Dev
664			**Sprint Approval R-4 S2**	**20 days**	**Wed 10/17/18**	**Wed 11/14/18**			
665			Submit Sprint Package	0 days	Wed 10/17/18	Wed 10/17/18	663	666	IBM Dev
666			Retro/Review Sprint Package	10 days	Wed 10/17/18	Wed 10/31/18	665	667	State Team
667			Incorporate Comments	5 days	Wed 10/31/18	Wed 11/7/18	666	668	IBM Dev
668			Final Review of Sprint Package	5 days	Wed 11/7/18	Wed 11/14/18	667	669	State Team
669			Accept Sprint Package	0 days	Wed 11/14/18	Wed 11/14/18	668	2070	State Team
670			**R-4 Sprint 3 - Benefits Management**	**106.5 days**	**Tue 9/4/18**	**Fri 2/1/19**			
671			Sprint Planning/Visioning Meeting	0.5 days	Tue 9/4/18	Tue 9/4/18	636	672	IBM Dev
672			Create Working Software (% complete tracked by burndown)	80 days	Tue 9/4/18	Wed 12/26/18	671	674	IBM Dev
673			**Create R-4 S3 Package**	**5 days**	**Wed 12/26/18**	**Wed 1/2/19**			
674			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Wed 12/26/18	Thu 12/27/18	672	675,679	IBM BA
675			Functional Design Document (FDD)	1 day	Thu 12/27/18	Fri 12/28/18	674	676,679	IBM BA
676			Update Technical Design Document	1 day	Fri 12/28/18	Mon 12/31/18	675	677,679	IBM Dev
677			Data Integration and Interface Control Documents (ICD)	1 day	Mon 12/31/18	Tue 1/1/19	676	678,679	IBM Dev
678			Updated and Completed Functional and Technical Requirements T	1 day	Tue 1/1/19	Wed 1/2/19	677	679	IBM BA
679			Demo & Retrospective	1 day	Wed 1/2/19	Thu 1/3/19	674,675,676,6	681	IBM Dev
680			**Sprint Approval R-4 S3**	**20 days**	**Thu 1/3/19**	**Fri 2/1/19**			
681			Submit Sprint Package	0 days	Thu 1/3/19	Thu 1/3/19	679	682	IBM Dev
682			Retro/Review Sprint Package	10 days	Thu 1/3/19	Thu 1/17/19	681	683	State Team
683			Incorporate Comments	5 days	Thu 1/17/19	Fri 1/25/19	682	684	IBM Dev
684			Final Review of Sprint Package	5 days	Fri 1/25/19	Fri 2/1/19	683	685	State Team
685			Accept Sprint Package	0 days	Fri 2/1/19	Fri 2/1/19	684	2070	State Team
686			**R-4 Sprint 4 - Overpayment Tracking**	**66.5 days**	**Tue 9/4/18**	**Thu 12/6/18**			
687			Sprint Planning/Visioning Meeting	0.5 days	Tue 9/4/18	Tue 9/4/18	636	688	IBM Dev
688			Create Working Software (% complete tracked by burndown)	40 days	Tue 9/4/18	Tue 10/30/18	687	690	IBM Dev
689			**Create R-4 S4 Package**	**5 days**	**Tue 10/30/18**	**Tue 11/6/18**			
690			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Tue 10/30/18	Wed 10/31/18	688	691,695	IBM BA
691			Functional Design Document (FDD)	1 day	Wed 10/31/18	Thu 11/1/18	690	692,695	IBM BA
692			Update Technical Design Document	1 day	Thu 11/1/18	Fri 11/2/18	691	693,695	IBM Dev
693			Data Integration and Interface Control Documents (ICD)	1 day	Fri 11/2/18	Mon 11/5/18	692	694,695	IBM Dev
694			Updated and Completed Functional and Technical Requirements T	1 day	Mon 11/5/18	Tue 11/6/18	693	695	IBM BA
695			Demo & Retrospective	1 day	Tue 11/6/18	Wed 11/7/18	690,691,692,6	697	IBM Dev
696			**Sprint Approval R-4 S4**	**20 days**	**Wed 11/7/18**	**Thu 12/6/18**			
697			Submit Sprint Package	0 days	Wed 11/7/18	Wed 11/7/18	695	698	IBM Dev
698			Retro/Review Sprint Package	10 days	Wed 11/7/18	Wed 11/21/18	697	699	State Team
699			Incorporate Comments	5 days	Wed 11/21/18	Thu 11/29/18	698	700	IBM Dev
700			Final Review of Sprint Package	5 days	Thu 11/29/18	Thu 12/6/18	699	701	State Team

ID		WBS	Task Name	Duration	Start	Finish	Predecessors	Successors	Resource Names
701			Accept Sprint Package	0 days	Thu 12/6/18	Thu 12/6/18	700	2070	State Team
702			**R-4 Sprint 5 - Integration with Case Management System**	**106.5 days**	**Tue 9/4/18**	**Fri 2/1/19**			
703			Sprint Planning/Visioning Meeting	0.5 days	Tue 9/4/18	Tue 9/4/18	636	704	IBM Dev
704			Create Working Software (% complete tracked by burndown)	80 days	Tue 9/4/18	Wed 12/26/18	703	706	IBM Dev
705			**Create R-4 S5 Package**	**5 days**	**Wed 12/26/18**	**Wed 1/2/19**			
706			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Wed 12/26/18	Thu 12/27/18	704	707,711	IBM BA
707			Functional Design Document (FDD)	1 day	Thu 12/27/18	Fri 12/28/18	706	708,711	IBM BA
708			Update Technical Design Document	1 day	Fri 12/28/18	Mon 12/31/18	707	709,711	IBM Dev
709			Data Integration and Interface Control Documents (ICD)	1 day	Mon 12/31/18	Tue 1/1/19	708	710,711	IBM Dev
710			Updated and Completed Functional and Technical Requirements T	1 day	Tue 1/1/19	Wed 1/2/19	709	711	IBM BA
711			Demo & Retrospective	1 day	Wed 1/2/19	Thu 1/3/19	706,707,708,7	713	IBM Dev
712			**Sprint Approval R-4 S5**	**20 days**	**Thu 1/3/19**	**Fri 2/1/19**			
713			Submit Sprint Package	0 days	Thu 1/3/19	Thu 1/3/19	711	714	IBM Dev
714			Retro/Review Sprint Package	10 days	Thu 1/3/19	Thu 1/17/19	713	715	State Team
715			Incorporate Comments	5 days	Thu 1/17/19	Fri 1/25/19	714	716	IBM Dev
716			Final Review of Sprint Package	5 days	Fri 1/25/19	Fri 2/1/19	715	717	State Team
717			Accept Sprint Package	0 days	Fri 2/1/19	Fri 2/1/19	716	2070	State Team
718			**R-4 Sprint 6 - Reporting**	**106.5 days**	**Tue 9/4/18**	**Fri 2/1/19**			
719			Sprint Planning/Visioning Meeting	0.5 days	Tue 9/4/18	Tue 9/4/18	636	720	IBM Dev
720			Create Working Software (% complete tracked by burndown)	80 days	Tue 9/4/18	Wed 12/26/18	719	722	IBM Dev
721			**Create R-4 S6 Package**	**5 days**	**Wed 12/26/18**	**Wed 1/2/19**			
722			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Wed 12/26/18	Thu 12/27/18	720	723,727	IBM BA
723			Functional Design Document (FDD)	1 day	Thu 12/27/18	Fri 12/28/18	722	724,727	IBM BA
724			Update Technical Design Document	1 day	Fri 12/28/18	Mon 12/31/18	723	725,727	IBM Dev
725			Data Integration and Interface Control Documents (ICD)	1 day	Mon 12/31/18	Tue 1/1/19	724	726,727	IBM Dev
726			Updated and Completed Functional and Technical Requirements T	1 day	Tue 1/1/19	Wed 1/2/19	725	727	IBM BA
727			Demo & Retrospective	1 day	Wed 1/2/19	Thu 1/3/19	722,723,724,7	729	IBM Dev
728			**Sprint Approval R-4 S6**	**20 days**	**Thu 1/3/19**	**Fri 2/1/19**			
729			Submit Sprint Package	0 days	Thu 1/3/19	Thu 1/3/19	727	730	IBM Dev
730			Retro/Review Sprint Package	10 days	Thu 1/3/19	Thu 1/17/19	729	731	State Team
731			Incorporate Comments	5 days	Thu 1/17/19	Fri 1/25/19	730	732	IBM Dev
732			Final Review of Sprint Package	5 days	Fri 1/25/19	Fri 2/1/19	731	733	State Team
733			Accept Sprint Package	0 days	Fri 2/1/19	Fri 2/1/19	732	2070	State Team
734			**R-4 Sprint 7 - DWS Integration**	**106.5 days**	**Tue 9/4/18**	**Fri 2/1/19**			
735			Sprint Planning/Visioning Meeting	0.5 days	Tue 9/4/18	Tue 9/4/18	636	736	IBM Dev
736			Create Working Software (% complete tracked by burndown)	80 days	Tue 9/4/18	Wed 12/26/18	735	738	IBM Dev
737			**Create R-4 S7 Package**	**5 days**	**Wed 12/26/18**	**Wed 1/2/19**			
738			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Wed 12/26/18	Thu 12/27/18	736	739,743	IBM BA
739			Functional Design Document (FDD)	1 day	Thu 12/27/18	Fri 12/28/18	738	740,743	IBM BA
740			Update Technical Design Document	1 day	Fri 12/28/18	Mon 12/31/18	739	741,743	IBM Dev
741			Data Integration and Interface Control Documents (ICD)	1 day	Mon 12/31/18	Tue 1/1/19	740	742,743	IBM Dev
742			Updated and Completed Functional and Technical Requirements T	1 day	Tue 1/1/19	Wed 1/2/19	741	743	IBM BA
743			Demo & Retrospective	1 day	Wed 1/2/19	Thu 1/3/19	738,739,740,7	745	IBM Dev
744			**Sprint Approval R-4 S7**	**20 days**	**Thu 1/3/19**	**Fri 2/1/19**			
745			Submit Sprint Package	0 days	Thu 1/3/19	Thu 1/3/19	743	746	IBM Dev
746			Retro/Review Sprint Package	10 days	Thu 1/3/19	Thu 1/17/19	745	747	State Team
747			Incorporate Comments	5 days	Thu 1/17/19	Fri 1/25/19	746	748	IBM Dev
748			Final Review of Sprint Package	5 days	Fri 1/25/19	Fri 2/1/19	747	749	State Team
749			Accept Sprint Package	0 days	Fri 2/1/19	Fri 2/1/19	748	2070	State Team
750			**R-4 Sprint 8 - TANF Client Services (Outlook)**	**106.5 days**	**Tue 9/4/18**	**Fri 2/1/19**			

ID		WBS	Task Name	Duration	Start	Finish	Predecessors	Successors	Resource Names
751			Sprint Planning/Visioning Meeting	0.5 days	Tue 9/4/18	Tue 9/4/18	636	752	IBM Dev
752			Create Working Software (% complete tracked by burndown)	80 days	Tue 9/4/18	Wed 12/26/18	751	754	IBM Dev
753			**Create R-4 S8 Package**	**5 days**	**Wed 12/26/18**	**Wed 1/2/19**			
754			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Wed 12/26/18	Thu 12/27/18	752	755,759	IBM BA
755			Functional Design Document (FDD)	1 day	Thu 12/27/18	Fri 12/28/18	754	756,759	IBM BA
756			Update Technical Design Document	1 day	Fri 12/28/18	Mon 12/31/18	755	757,759	IBM Dev
757			Data Integration and Interface Control Documents (ICD)	1 day	Mon 12/31/18	Tue 1/1/19	756	758,759	IBM Dev
758			Updated and Completed Functional and Technical Requirements T	1 day	Tue 1/1/19	Wed 1/2/19	757	759	IBM BA
759			Demo & Retrospective	1 day	Wed 1/2/19	Thu 1/3/19	754,755,756,7	761	IBM Dev
760			**Sprint Approval R-4 S8**	**20 days**	**Thu 1/3/19**	**Fri 2/1/19**			
761			Submit Sprint Package	0 days	Thu 1/3/19	Thu 1/3/19	759	762	IBM Dev
762			Retro/Review Sprint Package	10 days	Thu 1/3/19	Thu 1/17/19	761	763	State Team
763			Incorporate Comments	5 days	Thu 1/17/19	Fri 1/25/19	762	764	IBM Dev
764			Final Review of Sprint Package	5 days	Fri 1/25/19	Fri 2/1/19	763	765	State Team
765			Accept Sprint Package	0 days	Fri 2/1/19	Fri 2/1/19	764	2070	State Team
766			**R-4 Sprint 9 - TANF Client Services (Client Portal Calendar)**	**51.5 days**	**Tue 9/4/18**	**Wed 11/14/18**			
767			Sprint Planning/Visioning Meeting	0.5 days	Tue 9/4/18	Tue 9/4/18	636	768	IBM Dev
768			Create Working Software (% complete tracked by burndown)	25 days	Tue 9/4/18	Tue 10/9/18	767	770	IBM Dev
769			**Create R-4 S9 Package**	**5 days**	**Tue 10/9/18**	**Tue 10/16/18**			
770			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Tue 10/9/18	Wed 10/10/18	768	771,775	IBM BA
771			Functional Design Document (FDD)	1 day	Wed 10/10/18	Thu 10/11/18	770	772,775	IBM BA
772			Update Technical Design Document	1 day	Thu 10/11/18	Fri 10/12/18	771	773,775	IBM Dev
773			Data Integration and Interface Control Documents (ICD)	1 day	Fri 10/12/18	Mon 10/15/18	772	774,775	IBM Dev
774			Updated and Completed Functional and Technical Requirements T	1 day	Mon 10/15/18	Tue 10/16/18	773	775	IBM BA
775			Demo & Retrospective	1 day	Tue 10/16/18	Wed 10/17/18	770,771,772,7	777	IBM Dev
776			**Sprint Approval R-4 S9**	**20 days**	**Wed 10/17/18**	**Wed 11/14/18**			
777			Submit Sprint Package	0 days	Wed 10/17/18	Wed 10/17/18	775	778	IBM Dev
778			Retro/Review Sprint Package	10 days	Wed 10/17/18	Wed 10/31/18	777	779	State Team
779			Incorporate Comments	5 days	Wed 10/31/18	Wed 11/7/18	778	780	IBM Dev
780			Final Review of Sprint Package	5 days	Wed 11/7/18	Wed 11/14/18	779	781	State Team
781			Accept Sprint Package	0 days	Wed 11/14/18	Wed 11/14/18	780	2070	State Team
782			**R-4 Sprint 10 - TANF Client Services (Redetermination)**	**51.5 days**	**Tue 9/4/18**	**Wed 11/14/18**			
783			Sprint Planning/Visioning Meeting	0.5 days	Tue 9/4/18	Tue 9/4/18	636	784	IBM Dev
784			Create Working Software (% complete tracked by burndown)	25 days	Tue 9/4/18	Tue 10/9/18	783	786	IBM Dev
785			**Create R-4 S10 Package**	**5 days**	**Tue 10/9/18**	**Tue 10/16/18**			
786			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Tue 10/9/18	Wed 10/10/18	784	787,791	IBM BA
787			Functional Design Document (FDD)	1 day	Wed 10/10/18	Thu 10/11/18	786	788,791	IBM BA
788			Update Technical Design Document	1 day	Thu 10/11/18	Fri 10/12/18	787	789,791	IBM Dev
789			Data Integration and Interface Control Documents (ICD)	1 day	Fri 10/12/18	Mon 10/15/18	788	790,791	IBM Dev
790			Updated and Completed Functional and Technical Requirements T	1 day	Mon 10/15/18	Tue 10/16/18	789	791	IBM BA
791			Demo & Retrospective	1 day	Tue 10/16/18	Wed 10/17/18	786,787,788,7	793	IBM Dev
792			**Sprint Approval R-4 S10**	**20 days**	**Wed 10/17/18**	**Wed 11/14/18**			
793			Submit Sprint Package	0 days	Wed 10/17/18	Wed 10/17/18	791	794	IBM Dev
794			Retro/Review Sprint Package	10 days	Wed 10/17/18	Wed 10/31/18	793	795	State Team
795			Incorporate Comments	5 days	Wed 10/31/18	Wed 11/7/18	794	796	IBM Dev
796			Final Review of Sprint Package	5 days	Wed 11/7/18	Wed 11/14/18	795	797	State Team
797			Accept Sprint Package	0 days	Wed 11/14/18	Wed 11/14/18	796	2070	State Team
798			**R-4 Sprint 11 - TANF Client Services (Change in Circumstance)**	**66.5 days**	**Tue 9/4/18**	**Thu 12/6/18**			
799			Sprint Planning/Visioning Meeting	0.5 days	Tue 9/4/18	Tue 9/4/18	636	800	IBM Dev
800			Create Working Software (% complete tracked by burndown)	40 days	Tue 9/4/18	Tue 10/30/18	799	802	IBM Dev

ID		WBS	Task Name	Duration	Start	Finish	Predecessors	Successors	Resource Names
801			**Create R-4 S10 Package**	**5 days**	**Tue 10/30/18**	**Tue 11/6/18**			
802			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Tue 10/30/18	Wed 10/31/18	800	803,807	IBM BA
803			Functional Design Document (FDD)	1 day	Wed 10/31/18	Thu 11/1/18	802	804,807	IBM BA
804			Update Technical Design Document	1 day	Thu 11/1/18	Fri 11/2/18	803	805,807	IBM Dev
805			Data Integration and Interface Control Documents (ICD)	1 day	Fri 11/2/18	Mon 11/5/18	804	806,807	IBM Dev
806			Updated and Completed Functional and Technical Requirements T	1 day	Mon 11/5/18	Tue 11/6/18	805	807	IBM BA
807			Demo & Retrospective	1 day	Tue 11/6/18	Wed 11/7/18	802,803,804,8	809	IBM Dev
808			**Sprint Approval R-4 S10**	**20 days**	**Wed 11/7/18**	**Thu 12/6/18**			
809			Submit Sprint Package	0 days	Wed 11/7/18	Wed 11/7/18	807	810	IBM Dev
810			Retro/Review Sprint Package	10 days	Wed 11/7/18	Wed 11/21/18	809	811	State Team
811			Incorporate Comments	5 days	Wed 11/21/18	Thu 11/29/18	810	812	IBM Dev
812			Final Review of Sprint Package	5 days	Thu 11/29/18	Thu 12/6/18	811	813	State Team
813			Accept Sprint Package	0 days	Thu 12/6/18	Thu 12/6/18	812	2070	State Team
814			**Release 4 - Deployment**	**10 days**	**Thu 8/15/19**	**Thu 8/29/19**			
815			**Release 4 - Deployment**	**10 days**	**Thu 8/15/19**	**Thu 8/29/19**			
816			Release 4 - First Deployment	10 days	Thu 8/15/19	Thu 8/29/19	2069	2093	IBM Dev
817		**1.1.4.5**	**Release 5 - Medicaid**	**446 days**	**Wed 7/4/18**	**Tue 3/31/20**			
818			Release 5 Comprehensive Planning & Visioning	85 days	Wed 7/4/18	Wed 10/31/18		821,837,853	
819			**Release 5 - Sprints**	**329 days**	**Thu 11/1/18**	**Thu 2/13/20**			
820			**R-5 Sprint 1 - Medical Review Team Visibility Determination**	**226.5 days**	**Thu 11/1/18**	**Fri 9/20/19**			
821			Sprint Planning/Visioning Meeting	0.5 days	Thu 11/1/18	Thu 11/1/18	818	822	IBM Dev
822			Create Working Software (% complete tracked by burndown)	200 days	Thu 11/1/18	Wed 8/14/19	821	824	IBM Dev
823			**Create R-5 S1 Package**	**5 days**	**Wed 8/14/19**	**Wed 8/21/19**			
824			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Wed 8/14/19	Thu 8/15/19	822	825,829	IBM BA
825			Functional Design Document (FDD)	1 day	Thu 8/15/19	Fri 8/16/19	824	826,829	IBM BA
826			Update Technical Design Document	1 day	Fri 8/16/19	Mon 8/19/19	825	827,829	IBM Dev
827			Data Integration and Interface Control Documents (ICD)	1 day	Mon 8/19/19	Tue 8/20/19	826	828,829	IBM Dev
828			Updated and Completed Functional and Technical Requirements T	1 day	Tue 8/20/19	Wed 8/21/19	827	829	IBM BA
829			Demo & Retrospective	1 day	Wed 8/21/19	Thu 8/22/19	824,825,826,8	831,943	IBM Dev
830			**Sprint Approval R-5 S1**	**20 days**	**Thu 8/22/19**	**Fri 9/20/19**			
831			Submit Sprint Package	0 days	Thu 8/22/19	Thu 8/22/19	829	832	IBM Dev
832			Retro/Review Sprint Package	10 days	Thu 8/22/19	Fri 9/6/19	831	833	State Team
833			Incorporate Comments	5 days	Fri 9/6/19	Fri 9/13/19	832	834	IBM Dev
834			Final Review of Sprint Package	5 days	Fri 9/13/19	Fri 9/20/19	833	835	State Team
835			Accept Sprint Package	0 days	Fri 9/20/19	Fri 9/20/19	834	2072	State Team
836			**R-5 Sprint 2 - MRT Portal**	**106.5 days**	**Thu 11/1/18**	**Wed 4/3/19**			
837			Sprint Planning/Visioning Meeting	0.5 days	Thu 11/1/18	Thu 11/1/18	818	838	IBM Dev
838			Create Working Software (% complete tracked by burndown)	80 days	Thu 11/1/18	Tue 2/26/19	837	840	IBM Dev
839			**Create R-5 S2 Package**	**5 days**	**Tue 2/26/19**	**Tue 3/5/19**			
840			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Tue 2/26/19	Wed 2/27/19	838	841,845	IBM BA
841			Functional Design Document (FDD)	1 day	Wed 2/27/19	Thu 2/28/19	840	842,845	IBM BA
842			Update Technical Design Document	1 day	Thu 2/28/19	Fri 3/1/19	841	843,845	IBM Dev
843			Data Integration and Interface Control Documents (ICD)	1 day	Fri 3/1/19	Mon 3/4/19	842	844,845	IBM Dev
844			Updated and Completed Functional and Technical Requirements T	1 day	Mon 3/4/19	Tue 3/5/19	843	845	IBM BA
845			Demo & Retrospective	1 day	Tue 3/5/19	Wed 3/6/19	840,841,842,8	847	IBM Dev
846			**Sprint Approval R-5 S2**	**20 days**	**Wed 3/6/19**	**Wed 4/3/19**			
847			Submit Sprint Package	0 days	Wed 3/6/19	Wed 3/6/19	845	848	IBM Dev
848			Retro/Review Sprint Package	10 days	Wed 3/6/19	Wed 3/20/19	847	849	State Team
849			Incorporate Comments	5 days	Wed 3/20/19	Wed 3/27/19	848	850	IBM Dev
850			Final Review of Sprint Package	5 days	Wed 3/27/19	Wed 4/3/19	849	851	State Team

ID		WBS	Task Name	Duration	Start	Finish	Predecessors	Successors	Resource Names
851			Accept Sprint Package	0 days	Wed 4/3/19	Wed 4/3/19	850	2072	State Team
852			**R-5 Sprint 3 - First Medicaid UAT**	**106.5 days**	**Thu 11/1/18**	**Wed 4/3/19**			
853			Sprint Planning/Visioning Meeting	0.5 days	Thu 11/1/18	Thu 11/1/18	818	854	IBM Dev
854			Create Working Software (% complete tracked by burndown)	80 days	Thu 11/1/18	Tue 2/26/19	853	856	IBM Dev
855			**Create R-5 S3 Package**	**5 days**	**Tue 2/26/19**	**Tue 3/5/19**			
856			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Tue 2/26/19	Wed 2/27/19	854	857,861	IBM BA
857			Functional Design Document (FDD)	1 day	Wed 2/27/19	Thu 2/28/19	856	858,861	IBM BA
858			Update Technical Design Document	1 day	Thu 2/28/19	Fri 3/1/19	857	859,861	IBM Dev
859			Data Integration and Interface Control Documents (ICD)	1 day	Fri 3/1/19	Mon 3/4/19	858	860,861	IBM Dev
860			Updated and Completed Functional and Technical Requirements T	1 day	Mon 3/4/19	Tue 3/5/19	859	861	IBM BA
861			Demo & Retrospective	1 day	Tue 3/5/19	Wed 3/6/19	856,857,858,8	863	IBM Dev
862			**Sprint Approval R-5 S3**	**20 days**	**Wed 3/6/19**	**Wed 4/3/19**			
863			Submit Sprint Package	0 days	Wed 3/6/19	Wed 3/6/19	861	864	IBM Dev
864			Retro/Review Sprint Package	10 days	Wed 3/6/19	Wed 3/20/19	863	865	State Team
865			Incorporate Comments	5 days	Wed 3/20/19	Wed 3/27/19	864	866	IBM Dev
866			Final Review of Sprint Package	5 days	Wed 3/27/19	Wed 4/3/19	865	867	State Team
867			Accept Sprint Package	0 days	Wed 4/3/19	Wed 4/3/19	866	2072	State Team
868			**R-5 Sprint 4 - Refugee (Rules Collection)**	**56.5 days**	**Thu 11/1/18**	**Tue 1/22/19**			
869			Sprint Planning/Visioning Meeting	0.5 days	Thu 11/1/18	Thu 11/1/18	818	870	IBM Dev
870			Create Working Software (% complete tracked by burndown)	30 days	Thu 11/1/18	Fri 12/14/18	869	872	IBM Dev
871			**Create R-5 S4 Package**	**5 days**	**Fri 12/14/18**	**Fri 12/21/18**			
872			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Fri 12/14/18	Mon 12/17/18	870	873,877	IBM BA
873			Functional Design Document (FDD)	1 day	Mon 12/17/18	Tue 12/18/18	872	874,877	IBM BA
874			Update Technical Design Document	1 day	Tue 12/18/18	Wed 12/19/18	873	875,877	IBM Dev
875			Data Integration and Interface Control Documents (ICD)	1 day	Wed 12/19/18	Thu 12/20/18	874	876,877	IBM Dev
876			Updated and Completed Functional and Technical Requirements T	1 day	Thu 12/20/18	Fri 12/21/18	875	877	IBM BA
877			Demo & Retrospective	1 day	Fri 12/21/18	Mon 12/24/18	872,873,874,8	879	IBM Dev
878			**Sprint Approval R-5 S4**	**20 days**	**Mon 12/24/18**	**Tue 1/22/19**			
879			Submit Sprint Package	0 days	Mon 12/24/18	Mon 12/24/18	877	880	IBM Dev
880			Retro/Review Sprint Package	10 days	Mon 12/24/18	Mon 1/7/19	879	881	State Team
881			Incorporate Comments	5 days	Mon 1/7/19	Mon 1/14/19	880	882	IBM Dev
882			Final Review of Sprint Package	5 days	Mon 1/14/19	Tue 1/22/19	881	883	State Team
883			Accept Sprint Package	0 days	Tue 1/22/19	Tue 1/22/19	882	2072,885	State Team
884			**R-5 Sprint 5 - Refugee (Eligiblility)**	**71.5 days**	**Tue 1/22/19**	**Thu 5/2/19**			
885			Sprint Planning/Visioning Meeting	0.5 days	Tue 1/22/19	Tue 1/22/19	818,883	886	IBM Dev
886			Create Working Software (% complete tracked by burndown)	45 days	Wed 1/23/19	Wed 3/27/19	885	888	IBM Dev
887			**Create R-5 S5 Package**	**5 days**	**Thu 3/28/19**	**Wed 4/3/19**			
888			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Thu 3/28/19	Thu 3/28/19	886	889,893	IBM BA
889			Functional Design Document (FDD)	1 day	Fri 3/29/19	Fri 3/29/19	888	890,893	IBM BA
890			Update Technical Design Document	1 day	Mon 4/1/19	Mon 4/1/19	889	891,893	IBM Dev
891			Data Integration and Interface Control Documents (ICD)	1 day	Tue 4/2/19	Tue 4/2/19	890	892,893	IBM Dev
892			Updated and Completed Functional and Technical Requirements T	1 day	Wed 4/3/19	Wed 4/3/19	891	893	IBM BA
893			Demo & Retrospective	1 day	Thu 4/4/19	Thu 4/4/19	888,889,890,8	895	IBM Dev
894			**Sprint Approval R-5 S5**	**20 days**	**Thu 4/4/19**	**Thu 5/2/19**			
895			Submit Sprint Package	0 days	Thu 4/4/19	Thu 4/4/19	893	896	IBM Dev
896			Retro/Review Sprint Package	10 days	Fri 4/5/19	Thu 4/18/19	895	897	State Team
897			Incorporate Comments	5 days	Fri 4/19/19	Thu 4/25/19	896	898	IBM Dev
898			Final Review of Sprint Package	5 days	Fri 4/26/19	Thu 5/2/19	897	899	State Team
899			Accept Sprint Package	0 days	Thu 5/2/19	Thu 5/2/19	898	2072,901	State Team
900			**R-5 Sprint 6 - Refugee (Redetermination)**	**71.5 days**	**Fri 5/3/19**	**Tue 8/13/19**			

ID		WBS	Task Name	Duration	Start	Finish	Predecessors	Successors	Resource Names
901			Sprint Planning/Visioning Meeting	0.5 days	Fri 5/3/19	Fri 5/3/19	818,899	902	IBM Dev
902			Create Working Software (% complete tracked by burndown)	45 days	Fri 5/3/19	Mon 7/8/19	901	904	IBM Dev
903			**Create R-5 S6 Package**	**5 days**	**Mon 7/8/19**	**Mon 7/15/19**			
904			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Mon 7/8/19	Tue 7/9/19	902	905,909	IBM BA
905			Functional Design Document (FDD)	1 day	Tue 7/9/19	Wed 7/10/19	904	906,909	IBM BA
906			Update Technical Design Document	1 day	Wed 7/10/19	Thu 7/11/19	905	907,909	IBM Dev
907			Data Integration and Interface Control Documents (ICD)	1 day	Thu 7/11/19	Fri 7/12/19	906	908,909	IBM Dev
908			Updated and Completed Functional and Technical Requirements T	1 day	Fri 7/12/19	Mon 7/15/19	907	909	IBM BA
909			Demo & Retrospective	1 day	Mon 7/15/19	Tue 7/16/19	904,905,906,9	911	IBM Dev
910			**Sprint Approval R-5 S6**	**20 days**	**Tue 7/16/19**	**Tue 8/13/19**			
911			Submit Sprint Package	0 days	Tue 7/16/19	Tue 7/16/19	909	912	IBM Dev
912			Retro/Review Sprint Package	10 days	Tue 7/16/19	Tue 7/30/19	911	913	State Team
913			Incorporate Comments	5 days	Tue 7/30/19	Tue 8/6/19	912	914	IBM Dev
914			Final Review of Sprint Package	5 days	Tue 8/6/19	Tue 8/13/19	913	915	State Team
915			Accept Sprint Package	0 days	Tue 8/13/19	Tue 8/13/19	914	2072,917	State Team
916			**R-5 Sprint 7 - Refugee (Change in Circumstance)**	**71.5 days**	**Tue 8/13/19**	**Thu 11/21/19**			
917			Sprint Planning/Visioning Meeting	0.5 days	Tue 8/13/19	Tue 8/13/19	818,915	918,933	IBM Dev
918			Create Working Software (% complete tracked by burndown)	45 days	Wed 8/14/19	Wed 10/16/19	917	920	IBM Dev
919			**Create R-5 S7 Package**	**5 days**	**Thu 10/17/19**	**Wed 10/23/19**			
920			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Thu 10/17/19	Thu 10/17/19	918	921,925	IBM BA
921			Functional Design Document (FDD)	1 day	Fri 10/18/19	Fri 10/18/19	920	922,925	IBM BA
922			Update Technical Design Document	1 day	Mon 10/21/19	Mon 10/21/19	921	923,925	IBM Dev
923			Data Integration and Interface Control Documents (ICD)	1 day	Tue 10/22/19	Tue 10/22/19	922	924,925	IBM Dev
924			Updated and Completed Functional and Technical Requirements T	1 day	Wed 10/23/19	Wed 10/23/19	923	925	IBM BA
925			Demo & Retrospective	1 day	Thu 10/24/19	Thu 10/24/19	920,921,922,9	927	IBM Dev
926			**Sprint Approval R-5 S7**	**20 days**	**Thu 10/24/19**	**Thu 11/21/19**			
927			Submit Sprint Package	0 days	Thu 10/24/19	Thu 10/24/19	925	928	IBM Dev
928			Retro/Review Sprint Package	10 days	Fri 10/25/19	Thu 11/7/19	927	929	State Team
929			Incorporate Comments	5 days	Fri 11/8/19	Thu 11/14/19	928	930	IBM Dev
930			Final Review of Sprint Package	5 days	Fri 11/15/19	Thu 11/21/19	929	931	State Team
931			Accept Sprint Package	0 days	Thu 11/21/19	Thu 11/21/19	930	2072	State Team
932			**R-5 Sprint 8 - Refugee (Reporting)**	**51.5 days**	**Wed 8/14/19**	**Fri 10/25/19**			
933			Sprint Planning/Visioning Meeting	0.5 days	Wed 8/14/19	Wed 8/14/19	818,917	934	IBM Dev
934			Create Working Software (% complete tracked by burndown)	45 days	Wed 8/14/19	Thu 10/17/19	933	936	IBM Dev
935			**Create R-5 S8 Package**	**5 days**	**Thu 10/17/19**	**Thu 10/24/19**			
936			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Thu 10/17/19	Fri 10/18/19	934	937,941	IBM BA
937			Functional Design Document (FDD)	1 day	Fri 10/18/19	Mon 10/21/19	936	938,941	IBM BA
938			Update Technical Design Document	1 day	Mon 10/21/19	Tue 10/22/19	937	939,941	IBM Dev
939			Data Integration and Interface Control Documents (ICD)	1 day	Tue 10/22/19	Wed 10/23/19	938	940,941	IBM Dev
940			Updated and Completed Functional and Technical Requirements T	1 day	Wed 10/23/19	Thu 10/24/19	939	941	IBM BA
941			Demo & Retrospective	1 day	Thu 10/24/19	Fri 10/25/19	936,937,938,9		IBM Dev
942			**Sprint Approval R-5 S8**	**20 days**	**Thu 8/22/19**	**Fri 9/20/19**			
943			Submit Sprint Package	0 days	Thu 8/22/19	Thu 8/22/19	829	944	IBM Dev
944			Retro/Review Sprint Package	10 days	Thu 8/22/19	Fri 9/6/19	943	945	State Team
945			Incorporate Comments	5 days	Fri 9/6/19	Fri 9/13/19	944	946	IBM Dev
946			Final Review of Sprint Package	5 days	Fri 9/13/19	Fri 9/20/19	945	947	State Team
947			Accept Sprint Package	0 days	Fri 9/20/19	Fri 9/20/19	946	2072,949	State Team
948			**R-5 Sprint 9 - Refugee (MMIS Integration)**	**71.5 days**	**Fri 9/20/19**	**Tue 12/31/19**			
949			Sprint Planning/Visioning Meeting	0.5 days	Fri 9/20/19	Fri 9/20/19	818,947	950	IBM Dev
950			Create Working Software (% complete tracked by burndown)	45 days	Mon 9/23/19	Fri 11/22/19	949	952	IBM Dev

ID		WBS	Task Name	Duration	Start	Finish	Predecessors	Successors	Resource Names
951			**Create R-5 S9 Package**	**5 days**	**Mon 11/25/19**	**Mon 12/2/19**			
952			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Mon 11/25/19	Mon 11/25/19	950	953,957	IBM BA
953			Functional Design Document (FDD)	1 day	Tue 11/26/19	Tue 11/26/19	952	954,957	IBM BA
954			Update Technical Design Document	1 day	Wed 11/27/19	Wed 11/27/19	953	955,957	IBM Dev
955			Data Integration and Interface Control Documents (ICD)	1 day	Fri 11/29/19	Fri 11/29/19	954	956,957	IBM Dev
956			Updated and Completed Functional and Technical Requirements T	1 day	Mon 12/2/19	Mon 12/2/19	955	957	IBM BA
957			Demo & Retrospective	1 day	Tue 12/3/19	Tue 12/3/19	952,953,954,9	959	IBM Dev
958			**Sprint Approval R-5 S9**	**20 days**	**Tue 12/3/19**	**Tue 12/31/19**			
959			Submit Sprint Package	0 days	Tue 12/3/19	Tue 12/3/19	957	960	IBM Dev
960			Retro/Review Sprint Package	10 days	Wed 12/4/19	Tue 12/17/19	959	961	State Team
961			Incorporate Comments	5 days	Wed 12/18/19	Tue 12/24/19	960	962	IBM Dev
962			Final Review of Sprint Package	5 days	Wed 12/25/19	Tue 12/31/19	961	963	State Team
963			Accept Sprint Package	0 days	Tue 12/31/19	Tue 12/31/19	962	2072	State Team
964			**R-5 Sprint 10 - Qualified Medicare Beneficiary (QMB - Rules Collection)**	**66.5 days**	**Thu 11/1/18**	**Tue 2/5/19**			
965			Sprint Planning/Visioning Meeting	0.5 days	Thu 11/1/18	Thu 11/1/18	818	966	IBM Dev
966			Create Working Software (% complete tracked by burndown)	40 days	Thu 11/1/18	Fri 12/28/18	965	968	IBM Dev
967			**Create R-5 S10 Package**	**5 days**	**Fri 12/28/18**	**Fri 1/4/19**			
968			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Fri 12/28/18	Mon 12/31/18	966	969,973	IBM BA
969			Functional Design Document (FDD)	1 day	Mon 12/31/18	Tue 1/1/19	968	970,973	IBM BA
970			Update Technical Design Document	1 day	Tue 1/1/19	Wed 1/2/19	969	971,973	IBM Dev
971			Data Integration and Interface Control Documents (ICD)	1 day	Wed 1/2/19	Thu 1/3/19	970	972,973	IBM Dev
972			Updated and Completed Functional and Technical Requirements T	1 day	Thu 1/3/19	Fri 1/4/19	971	973	IBM BA
973			Demo & Retrospective	1 day	Fri 1/4/19	Mon 1/7/19	968,969,970,9	975	IBM Dev
974			**Sprint Approval R-5 S10**	**20 days**	**Mon 1/7/19**	**Tue 2/5/19**			
975			Submit Sprint Package	0 days	Mon 1/7/19	Mon 1/7/19	973	976	IBM Dev
976			Retro/Review Sprint Package	10 days	Mon 1/7/19	Tue 1/22/19	975	977	State Team
977			Incorporate Comments	5 days	Tue 1/22/19	Tue 1/29/19	976	978	IBM Dev
978			Final Review of Sprint Package	5 days	Tue 1/29/19	Tue 2/5/19	977	979	State Team
979			Accept Sprint Package	0 days	Tue 2/5/19	Tue 2/5/19	978	2072,981	State Team
980			**R-5 Sprint 11 - Qualified Medicare Beneficiary (QMB - Eligibility)**	**66.5 days**	**Tue 2/5/19**	**Thu 5/9/19**			
981			Sprint Planning/Visioning Meeting	0.5 days	Tue 2/5/19	Tue 2/5/19	818,979	982	IBM Dev
982			Create Working Software (% complete tracked by burndown)	40 days	Wed 2/6/19	Wed 4/3/19	981	984	IBM Dev
983			**Create R-5 S11 Package**	**5 days**	**Thu 4/4/19**	**Wed 4/10/19**			
984			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Thu 4/4/19	Thu 4/4/19	982	985,989	IBM BA
985			Functional Design Document (FDD)	1 day	Fri 4/5/19	Fri 4/5/19	984	986,989	IBM BA
986			Update Technical Design Document	1 day	Mon 4/8/19	Mon 4/8/19	985	987,989	IBM Dev
987			Data Integration and Interface Control Documents (ICD)	1 day	Tue 4/9/19	Tue 4/9/19	986	988,989	IBM Dev
988			Updated and Completed Functional and Technical Requirements T	1 day	Wed 4/10/19	Wed 4/10/19	987	989	IBM BA
989			Demo & Retrospective	1 day	Thu 4/11/19	Thu 4/11/19	984,985,986,9	991	IBM Dev
990			**Sprint Approval R-5 S11**	**20 days**	**Thu 4/11/19**	**Thu 5/9/19**			
991			Submit Sprint Package	0 days	Thu 4/11/19	Thu 4/11/19	989	992	IBM Dev
992			Retro/Review Sprint Package	10 days	Fri 4/12/19	Thu 4/25/19	991	993	State Team
993			Incorporate Comments	5 days	Fri 4/26/19	Thu 5/2/19	992	994	IBM Dev
994			Final Review of Sprint Package	5 days	Fri 5/3/19	Thu 5/9/19	993	995	State Team
995			Accept Sprint Package	0 days	Thu 5/9/19	Thu 5/9/19	994	2072,997	State Team
996			**R-5 Sprint 12 - Qualified Medicare Beneficiary (QMB - Redetermination)**	**66.5 days**	**Fri 5/10/19**	**Tue 8/13/19**			
997			Sprint Planning/Visioning Meeting	0.5 days	Fri 5/10/19	Fri 5/10/19	818,995	998	IBM Dev
998			Create Working Software (% complete tracked by burndown)	40 days	Fri 5/10/19	Mon 7/8/19	997	1000	IBM Dev
999			**Create R-5 S12 Package**	**5 days**	**Mon 7/8/19**	**Mon 7/15/19**			
1000			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Mon 7/8/19	Tue 7/9/19	998	1001,1005	IBM BA

ID		WBS	Task Name	Duration	Start	Finish	Predecessors	Successors	Resource Names
1001			Functional Design Document (FDD)	1 day	Tue 7/9/19	Wed 7/10/19	1000	1002,1005	IBM BA
1002			Update Technical Design Document	1 day	Wed 7/10/19	Thu 7/11/19	1001	1003,1005	IBM Dev
1003			Data Integration and Interface Control Documents (ICD)	1 day	Thu 7/11/19	Fri 7/12/19	1002	1004,1005	IBM Dev
1004			Updated and Completed Functional and Technical Requirements T	1 day	Fri 7/12/19	Mon 7/15/19	1003	1005	IBM BA
1005			Demo & Retrospective	1 day	Mon 7/15/19	Tue 7/16/19	1000,1001,10(	1007	IBM Dev
1006			**Sprint Approval R-5 S12**	**20 days**	**Tue 7/16/19**	**Tue 8/13/19**			
1007			Submit Sprint Package	0 days	Tue 7/16/19	Tue 7/16/19	1005	1008	IBM Dev
1008			Retro/Review Sprint Package	10 days	Tue 7/16/19	Tue 7/30/19	1007	1009	State Team
1009			Incorporate Comments	5 days	Tue 7/30/19	Tue 8/6/19	1008	1010	IBM Dev
1010			Final Review of Sprint Package	5 days	Tue 8/6/19	Tue 8/13/19	1009	1011	State Team
1011			Accept Sprint Package	0 days	Tue 8/13/19	Tue 8/13/19	1010	2072,1013	State Team
1012			**R-5 Sprint 13 - Qualified Medicare Beneficiary (QMB - Change in Circums**	**66.5 days**	**Tue 8/13/19**	**Thu 11/14/19**			
1013			Sprint Planning/Visioning Meeting	0.5 days	Tue 8/13/19	Tue 8/13/19	818,1011	1014	IBM Dev
1014			Create Working Software (% complete tracked by burndown)	40 days	Wed 8/14/19	Wed 10/9/19	1013	1016	IBM Dev
1015			**Create R-5 S13 Package**	**5 days**	**Thu 10/10/19**	**Wed 10/16/19**			
1016			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Thu 10/10/19	Thu 10/10/19	1014	1017,1021	IBM BA
1017			Functional Design Document (FDD)	1 day	Fri 10/11/19	Fri 10/11/19	1016	1018,1021	IBM BA
1018			Update Technical Design Document	1 day	Mon 10/14/19	Mon 10/14/19	1017	1019,1021	IBM Dev
1019			Data Integration and Interface Control Documents (ICD)	1 day	Tue 10/15/19	Tue 10/15/19	1018	1020,1021	IBM Dev
1020			Updated and Completed Functional and Technical Requirements T	1 day	Wed 10/16/19	Wed 10/16/19	1019	1021	IBM BA
1021			Demo & Retrospective	1 day	Thu 10/17/19	Thu 10/17/19	1016,1017,10:	1023	IBM Dev
1022			**Sprint Approval R-5 S13**	**20 days**	**Thu 10/17/19**	**Thu 11/14/19**			
1023			Submit Sprint Package	0 days	Thu 10/17/19	Thu 10/17/19	1021	1024	IBM Dev
1024			Retro/Review Sprint Package	10 days	Fri 10/18/19	Thu 10/31/19	1023	1025	State Team
1025			Incorporate Comments	5 days	Fri 11/1/19	Thu 11/7/19	1024	1026	IBM Dev
1026			Final Review of Sprint Package	5 days	Fri 11/8/19	Thu 11/14/19	1025	1027	State Team
1027			Accept Sprint Package	0 days	Thu 11/14/19	Thu 11/14/19	1026	2072	State Team
1028			**R-5 Sprint 14 - Qualified Medicare Beneficiary (QMB - Reporting)**	**66.5 days**	**Thu 11/1/18**	**Tue 2/5/19**			
1029			Sprint Planning/Visioning Meeting	0.5 days	Thu 11/1/18	Thu 11/1/18	818	1030	IBM Dev
1030			Create Working Software (% complete tracked by burndown)	40 days	Thu 11/1/18	Fri 12/28/18	1029	1032	IBM Dev
1031			**Create R-5 S14 Package**	**5 days**	**Fri 12/28/18**	**Fri 1/4/19**			
1032			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Fri 12/28/18	Mon 12/31/18	1030	1033,1037	IBM BA
1033			Functional Design Document (FDD)	1 day	Mon 12/31/18	Tue 1/1/19	1032	1034,1037	IBM BA
1034			Update Technical Design Document	1 day	Tue 1/1/19	Wed 1/2/19	1033	1035,1037	IBM Dev
1035			Data Integration and Interface Control Documents (ICD)	1 day	Wed 1/2/19	Thu 1/3/19	1034	1036,1037	IBM Dev
1036			Updated and Completed Functional and Technical Requirements T	1 day	Thu 1/3/19	Fri 1/4/19	1035	1037	IBM BA
1037			Demo & Retrospective	1 day	Fri 1/4/19	Mon 1/7/19	1032,1033,10:	1039	IBM Dev
1038			**Sprint Approval R-5 S14**	**20 days**	**Mon 1/7/19**	**Tue 2/5/19**			
1039			Submit Sprint Package	0 days	Mon 1/7/19	Mon 1/7/19	1037	1040	IBM Dev
1040			Retro/Review Sprint Package	10 days	Mon 1/7/19	Tue 1/22/19	1039	1041	State Team
1041			Incorporate Comments	5 days	Tue 1/22/19	Tue 1/29/19	1040	1042	IBM Dev
1042			Final Review of Sprint Package	5 days	Tue 1/29/19	Tue 2/5/19	1041	1043	State Team
1043			Accept Sprint Package	0 days	Tue 2/5/19	Tue 2/5/19	1042	2072,1045	State Team
1044			**R-5 Sprint 15 - Qualified Medicare Beneficiary (QMB - MMIS Integration)**	**76.5 days**	**Tue 2/5/19**	**Thu 5/23/19**			
1045			Sprint Planning/Visioning Meeting	0.5 days	Tue 2/5/19	Tue 2/5/19	818,1043	1046	IBM Dev
1046			Create Working Software (% complete tracked by burndown)	50 days	Wed 2/6/19	Wed 4/17/19	1045	1048	IBM Dev
1047			**Create R-5 S15 Package**	**5 days**	**Thu 4/18/19**	**Wed 4/24/19**			
1048			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Thu 4/18/19	Thu 4/18/19	1046	1049,1053	IBM BA
1049			Functional Design Document (FDD)	1 day	Fri 4/19/19	Fri 4/19/19	1048	1050,1053	IBM BA
1050			Update Technical Design Document	1 day	Mon 4/22/19	Mon 4/22/19	1049	1051,1053	IBM Dev

ID		WBS	Task Name	Duration	Start	Finish	Predecessors	Successors	Resource Names
1051			Data Integration and Interface Control Documents (ICD)	1 day	Tue 4/23/19	Tue 4/23/19	1050	1052,1053	IBM Dev
1052			Updated and Completed Functional and Technical Requirements T	1 day	Wed 4/24/19	Wed 4/24/19	1051	1053	IBM BA
1053			Demo & Retrospective	1 day	Thu 4/25/19	Thu 4/25/19	1048,1049,105	1055	IBM Dev
1054			**Sprint Approval R-5 S15**	**20 days**	**Thu 4/25/19**	**Thu 5/23/19**			
1055			Submit Sprint Package	0 days	Thu 4/25/19	Thu 4/25/19	1053	1056	IBM Dev
1056			Retro/Review Sprint Package	10 days	Fri 4/26/19	Thu 5/9/19	1055	1057	State Team
1057			Incorporate Comments	5 days	Fri 5/10/19	Thu 5/16/19	1056	1058	IBM Dev
1058			Final Review of Sprint Package	5 days	Fri 5/17/19	Thu 5/23/19	1057	1059	State Team
1059			Accept Sprint Package	0 days	Thu 5/23/19	Thu 5/23/19	1058	2072	State Team
1060			**R-5 Sprint 16 - Social Security Insurance (Reporting)**	**61.5 days**	**Thu 11/1/18**	**Tue 1/29/19**			
1061			Sprint Planning/Visioning Meeting	0.5 days	Thu 11/1/18	Thu 11/1/18	818	1062	IBM Dev
1062			Create Working Software (% complete tracked by burndown)	35 days	Thu 11/1/18	Fri 12/21/18	1061	1064	IBM Dev
1063			**Create R-5 S16 Package**	**5 days**	**Fri 12/21/18**	**Fri 12/28/18**			
1064			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Fri 12/21/18	Mon 12/24/18	1062	1065,1069	IBM BA
1065			Functional Design Document (FDD)	1 day	Mon 12/24/18	Tue 12/25/18	1064	1066,1069	IBM BA
1066			Update Technical Design Document	1 day	Tue 12/25/18	Wed 12/26/18	1065	1067,1069	IBM Dev
1067			Data Integration and Interface Control Documents (ICD)	1 day	Wed 12/26/18	Thu 12/27/18	1066	1068,1069	IBM Dev
1068			Updated and Completed Functional and Technical Requirements T	1 day	Thu 12/27/18	Fri 12/28/18	1067	1069	IBM BA
1069			Demo & Retrospective	1 day	Fri 12/28/18	Mon 12/31/18	1064,1065,106	1071	IBM Dev
1070			**Sprint Approval R-5 S16**	**20 days**	**Mon 12/31/18**	**Tue 1/29/19**			
1071			Submit Sprint Package	0 days	Mon 12/31/18	Mon 12/31/18	1069	1072	IBM Dev
1072			Retro/Review Sprint Package	10 days	Mon 12/31/18	Mon 1/14/19	1071	1073	State Team
1073			Incorporate Comments	5 days	Mon 1/14/19	Tue 1/22/19	1072	1074	IBM Dev
1074			Final Review of Sprint Package	5 days	Tue 1/22/19	Tue 1/29/19	1073	1075	State Team
1075			Accept Sprint Package	0 days	Tue 1/29/19	Tue 1/29/19	1074	2072,1077	State Team
1076			**R-5 Sprint 17 - Social Security Insurance (MMIS Integration)**	**66.5 days**	**Tue 1/29/19**	**Thu 5/2/19**			
1077			Sprint Planning/Visioning Meeting	0.5 days	Tue 1/29/19	Tue 1/29/19	818,1075	1078	IBM Dev
1078			Create Working Software (% complete tracked by burndown)	40 days	Wed 1/30/19	Wed 3/27/19	1077	1080	IBM Dev
1079			**Create R-5 S17 Package**	**5 days**	**Thu 3/28/19**	**Wed 4/3/19**			
1080			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Thu 3/28/19	Thu 3/28/19	1078	1081,1085	IBM BA
1081			Functional Design Document (FDD)	1 day	Fri 3/29/19	Fri 3/29/19	1080	1082,1085	IBM BA
1082			Update Technical Design Document	1 day	Mon 4/1/19	Mon 4/1/19	1081	1083,1085	IBM Dev
1083			Data Integration and Interface Control Documents (ICD)	1 day	Tue 4/2/19	Tue 4/2/19	1082	1084,1085	IBM Dev
1084			Updated and Completed Functional and Technical Requirements T	1 day	Wed 4/3/19	Wed 4/3/19	1083	1085	IBM BA
1085			Demo & Retrospective	1 day	Thu 4/4/19	Thu 4/4/19	1080,1081,108	1087	IBM Dev
1086			**Sprint Approval R-5 S17**	**20 days**	**Thu 4/4/19**	**Thu 5/2/19**			
1087			Submit Sprint Package	0 days	Thu 4/4/19	Thu 4/4/19	1085	1088	IBM Dev
1088			Retro/Review Sprint Package	10 days	Fri 4/5/19	Thu 4/18/19	1087	1089	State Team
1089			Incorporate Comments	5 days	Fri 4/19/19	Thu 4/25/19	1088	1090	IBM Dev
1090			Final Review of Sprint Package	5 days	Fri 4/26/19	Thu 5/2/19	1089	1091	State Team
1091			Accept Sprint Package	0 days	Thu 5/2/19	Thu 5/2/19	1090	2072	State Team
1092			**R-5 Sprint 18 - Specified Medicare Beneficiary (SMB - Rules Collection)**	**56.5 days**	**Thu 11/1/18**	**Tue 1/22/19**			
1093			Sprint Planning/Visioning Meeting	0.5 days	Thu 11/1/18	Thu 11/1/18	818	1094	IBM Dev
1094			Create Working Software (% complete tracked by burndown)	30 days	Thu 11/1/18	Fri 12/14/18	1093	1096	IBM Dev
1095			**Create R-5 S18 Package**	**5 days**	**Fri 12/14/18**	**Fri 12/21/18**			
1096			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Fri 12/14/18	Mon 12/17/18	1094	1097,1101	IBM BA
1097			Functional Design Document (FDD)	1 day	Mon 12/17/18	Tue 12/18/18	1096	1098,1101	IBM BA
1098			Update Technical Design Document	1 day	Tue 12/18/18	Wed 12/19/18	1097	1099,1101	IBM Dev
1099			Data Integration and Interface Control Documents (ICD)	1 day	Wed 12/19/18	Thu 12/20/18	1098	1100,1101	IBM Dev
1100			Updated and Completed Functional and Technical Requirements T	1 day	Thu 12/20/18	Fri 12/21/18	1099	1101	IBM BA

ID		WBS	Task Name	Duration	Start	Finish	Predecessors	Successors	Resource Names
1101			Demo & Retrospective	1 day	Fri 12/21/18	Mon 12/24/18	1096,1097,109	1103	IBM Dev
1102			**Sprint Approval R-5 S18**	**20 days**	**Mon 12/24/18**	**Tue 1/22/19**			
1103			Submit Sprint Package	0 days	Mon 12/24/18	Mon 12/24/18	1101	1104	IBM Dev
1104			Retro/Review Sprint Package	10 days	Mon 12/24/18	Mon 1/7/19	1103	1105	State Team
1105			Incorporate Comments	5 days	Mon 1/7/19	Mon 1/14/19	1104	1106	IBM Dev
1106			Final Review of Sprint Package	5 days	Mon 1/14/19	Tue 1/22/19	1105	1107	State Team
1107			Accept Sprint Package	0 days	Tue 1/22/19	Tue 1/22/19	1106	2072,1109	State Team
1108			**R-5 Sprint 19 - Specified Medicare Beneficiary (SMB - Eligibility)**	**56.5 days**	**Tue 1/22/19**	**Thu 4/11/19**			
1109			Sprint Planning/Visioning Meeting	0.5 days	Tue 1/22/19	Tue 1/22/19	818,1107	1110	IBM Dev
1110			Create Working Software (% complete tracked by burndown)	30 days	Wed 1/23/19	Wed 3/6/19	1109	1112	IBM Dev
1111			**Create R-5 S19 Package**	**5 days**	**Thu 3/7/19**	**Wed 3/13/19**			
1112			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Thu 3/7/19	Thu 3/7/19	1110	1113,1117	IBM BA
1113			Functional Design Document (FDD)	1 day	Fri 3/8/19	Fri 3/8/19	1112	1114,1117	IBM BA
1114			Update Technical Design Document	1 day	Mon 3/11/19	Mon 3/11/19	1113	1115,1117	IBM Dev
1115			Data Integration and Interface Control Documents (ICD)	1 day	Tue 3/12/19	Tue 3/12/19	1114	1116,1117	IBM Dev
1116			Updated and Completed Functional and Technical Requirements T	1 day	Wed 3/13/19	Wed 3/13/19	1115	1117	IBM BA
1117			Demo & Retrospective	1 day	Thu 3/14/19	Thu 3/14/19	1112,1113,111	1119	IBM Dev
1118			**Sprint Approval R-5 S19**	**20 days**	**Thu 3/14/19**	**Thu 4/11/19**			
1119			Submit Sprint Package	0 days	Thu 3/14/19	Thu 3/14/19	1117	1120	IBM Dev
1120			Retro/Review Sprint Package	10 days	Fri 3/15/19	Thu 3/28/19	1119	1121	State Team
1121			Incorporate Comments	5 days	Fri 3/29/19	Thu 4/4/19	1120	1122	IBM Dev
1122			Final Review of Sprint Package	5 days	Fri 4/5/19	Thu 4/11/19	1121	1123	State Team
1123			Accept Sprint Package	0 days	Thu 4/11/19	Thu 4/11/19	1122	2072,1125	State Team
1124			**R-5 Sprint 20 - Specificed Medicare Beneficiary (SMB - Redetermination)**	**56.5 days**	**Fri 4/12/19**	**Tue 7/2/19**			
1125			Sprint Planning/Visioning Meeting	0.5 days	Fri 4/12/19	Fri 4/12/19	818,1123	1126	IBM Dev
1126			Create Working Software (% complete tracked by burndown)	30 days	Fri 4/12/19	Fri 5/24/19	1125	1128	IBM Dev
1127			**Create R-5 S20 Package**	**5 days**	**Fri 5/24/19**	**Mon 6/3/19**			
1128			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Fri 5/24/19	Tue 5/28/19	1126	1129,1133	IBM BA
1129			Functional Design Document (FDD)	1 day	Tue 5/28/19	Wed 5/29/19	1128	1130,1133	IBM BA
1130			Update Technical Design Document	1 day	Wed 5/29/19	Thu 5/30/19	1129	1131,1133	IBM Dev
1131			Data Integration and Interface Control Documents (ICD)	1 day	Thu 5/30/19	Fri 5/31/19	1130	1132,1133	IBM Dev
1132			Updated and Completed Functional and Technical Requirements T	1 day	Fri 5/31/19	Mon 6/3/19	1131	1133	IBM BA
1133			Demo & Retrospective	1 day	Mon 6/3/19	Tue 6/4/19	1128,1129,113	1135	IBM Dev
1134			**Sprint Approval R-5 S20**	**20 days**	**Tue 6/4/19**	**Tue 7/2/19**			
1135			Submit Sprint Package	0 days	Tue 6/4/19	Tue 6/4/19	1133	1136	IBM Dev
1136			Retro/Review Sprint Package	10 days	Tue 6/4/19	Tue 6/18/19	1135	1137	State Team
1137			Incorporate Comments	5 days	Tue 6/18/19	Tue 6/25/19	1136	1138	IBM Dev
1138			Final Review of Sprint Package	5 days	Tue 6/25/19	Tue 7/2/19	1137	1139	State Team
1139			Accept Sprint Package	0 days	Tue 7/2/19	Tue 7/2/19	1138	2072,1141	State Team
1140			**R-5 Sprint 21 - Specified Medicare Beneficiary (SMB - Change in Circumst**	**56.5 days**	**Tue 7/2/19**	**Thu 9/19/19**			
1141			Sprint Planning/Visioning Meeting	0.5 days	Tue 7/2/19	Tue 7/2/19	818,1139	1142	IBM Dev
1142			Create Working Software (% complete tracked by burndown)	30 days	Wed 7/3/19	Tue 8/13/19	1141	1144	IBM Dev
1143			**Create R-5 S21 Package**	**5 days**	**Wed 8/14/19**	**Tue 8/20/19**			
1144			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Wed 8/14/19	Wed 8/14/19	1142	1145,1149	IBM BA
1145			Functional Design Document (FDD)	1 day	Thu 8/15/19	Thu 8/15/19	1144	1146,1149	IBM BA
1146			Update Technical Design Document	1 day	Fri 8/16/19	Fri 8/16/19	1145	1147,1149	IBM Dev
1147			Data Integration and Interface Control Documents (ICD)	1 day	Mon 8/19/19	Mon 8/19/19	1146	1148,1149	IBM Dev
1148			Updated and Completed Functional and Technical Requirements T	1 day	Tue 8/20/19	Tue 8/20/19	1147	1149	IBM BA
1149			Demo & Retrospective	1 day	Wed 8/21/19	Wed 8/21/19	1144,1145,114	1151	IBM Dev
1150			**Sprint Approval R-5 S21**	**20 days**	**Wed 8/21/19**	**Thu 9/19/19**			

ID		WBS	Task Name	Duration	Start	Finish	Predecessors	Successors	Resource Names
1151			Submit Sprint Package	0 days	Wed 8/21/19	Wed 8/21/19	1149	1152	IBM Dev
1152			Retro/Review Sprint Package	10 days	Thu 8/22/19	Thu 9/5/19	1151	1153	State Team
1153			Incorporate Comments	5 days	Fri 9/6/19	Thu 9/12/19	1152	1154	IBM Dev
1154			Final Review of Sprint Package	5 days	Fri 9/13/19	Thu 9/19/19	1153	1155	State Team
1155			Accept Sprint Package	0 days	Thu 9/19/19	Thu 9/19/19	1154	2072,1157	State Team
1156			**R-5 Sprint 22 - Specified Medicare Beneficiary (SMB - Reporting)**	**56.5 days**	**Fri 9/20/19**	**Tue 12/10/19**			
1157			Sprint Planning/Visioning Meeting	0.5 days	Fri 9/20/19	Fri 9/20/19	818,1155	1158	IBM Dev
1158			Create Working Software (% complete tracked by burndown)	30 days	Fri 9/20/19	Fri 11/1/19	1157	1160	IBM Dev
1159			**Create R-5 S22 Package**	**5 days**	**Fri 11/1/19**	**Fri 11/8/19**			
1160			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Fri 11/1/19	Mon 11/4/19	1158	1161,1165	IBM BA
1161			Functional Design Document (FDD)	1 day	Mon 11/4/19	Tue 11/5/19	1160	1162,1165	IBM BA
1162			Update Technical Design Document	1 day	Tue 11/5/19	Wed 11/6/19	1161	1163,1165	IBM Dev
1163			Data Integration and Interface Control Documents (ICD)	1 day	Wed 11/6/19	Thu 11/7/19	1162	1164,1165	IBM Dev
1164			Updated and Completed Functional and Technical Requirements T	1 day	Thu 11/7/19	Fri 11/8/19	1163	1165	IBM BA
1165			Demo & Retrospective	1 day	Fri 11/8/19	Mon 11/11/19	1160,1161,11(	1167	IBM Dev
1166			**Sprint Approval R-5 S22**	**20 days**	**Mon 11/11/19**	**Tue 12/10/19**			
1167			Submit Sprint Package	0 days	Mon 11/11/19	Mon 11/11/19	1165	1168,1173	IBM Dev
1168			Retro/Review Sprint Package	10 days	Mon 11/11/19	Mon 11/25/19	1167	1169	State Team
1169			Incorporate Comments	5 days	Mon 11/25/19	Tue 12/3/19	1168	1170	IBM Dev
1170			Final Review of Sprint Package	5 days	Tue 12/3/19	Tue 12/10/19	1169	1171	State Team
1171			Accept Sprint Package	0 days	Tue 12/10/19	Tue 12/10/19	1170	2072	State Team
1172			**R-5 Sprint 23 - Specified Medicare Beneficiary (SMB - MMIS Integration)**	**56.5 days**	**Mon 11/11/19**	**Thu 1/30/20**			
1173			Sprint Planning/Visioning Meeting	0.5 days	Mon 11/11/19	Mon 11/11/19	818,1167	1174	IBM Dev
1174			Create Working Software (% complete tracked by burndown)	30 days	Tue 11/12/19	Tue 12/24/19	1173	1176	IBM Dev
1175			**Create R-5 S23 Package**	**5 days**	**Wed 12/25/19**	**Tue 12/31/19**			
1176			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Wed 12/25/19	Wed 12/25/19	1174	1177,1181	IBM BA
1177			Functional Design Document (FDD)	1 day	Thu 12/26/19	Thu 12/26/19	1176	1178,1181	IBM BA
1178			Update Technical Design Document	1 day	Fri 12/27/19	Fri 12/27/19	1177	1179,1181	IBM Dev
1179			Data Integration and Interface Control Documents (ICD)	1 day	Mon 12/30/19	Mon 12/30/19	1178	1180,1181	IBM Dev
1180			Updated and Completed Functional and Technical Requirements T	1 day	Tue 12/31/19	Tue 12/31/19	1179	1181	IBM BA
1181			Demo & Retrospective	1 day	Wed 1/1/20	Wed 1/1/20	1176,1177,11	1183	IBM Dev
1182			**Sprint Approval R-5 S23**	**20 days**	**Wed 1/1/20**	**Thu 1/30/20**			
1183			Submit Sprint Package	0 days	Wed 1/1/20	Wed 1/1/20	1181	1184	IBM Dev
1184			Retro/Review Sprint Package	10 days	Thu 1/2/20	Wed 1/15/20	1183	1185	State Team
1185			Incorporate Comments	5 days	Thu 1/16/20	Thu 1/23/20	1184	1186	IBM Dev
1186			Final Review of Sprint Package	5 days	Fri 1/24/20	Thu 1/30/20	1185	1187	State Team
1187			Accept Sprint Package	0 days	Thu 1/30/20	Thu 1/30/20	1186	2072	State Team
1188			**R-5 Sprint 24 - Foster Care/Adoption (Rules Collection)**	**56.5 days**	**Thu 11/1/18**	**Tue 1/22/19**			
1189			Sprint Planning/Visioning Meeting	0.5 days	Thu 11/1/18	Thu 11/1/18	818	1190	IBM Dev
1190			Create Working Software (% complete tracked by burndown)	30 days	Thu 11/1/18	Fri 12/14/18	1189	1192	IBM Dev
1191			**Create R-5 S24 Package**	**5 days**	**Fri 12/14/18**	**Fri 12/21/18**			
1192			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Fri 12/14/18	Mon 12/17/18	1190	1193,1197	IBM BA
1193			Functional Design Document (FDD)	1 day	Mon 12/17/18	Tue 12/18/18	1192	1194,1197	IBM BA
1194			Update Technical Design Document	1 day	Tue 12/18/18	Wed 12/19/18	1193	1195,1197	IBM Dev
1195			Data Integration and Interface Control Documents (ICD)	1 day	Wed 12/19/18	Thu 12/20/18	1194	1196,1197	IBM Dev
1196			Updated and Completed Functional and Technical Requirements T	1 day	Thu 12/20/18	Fri 12/21/18	1195	1197	IBM BA
1197			Demo & Retrospective	1 day	Fri 12/21/18	Mon 12/24/18	1192,1193,11	1199	IBM Dev
1198			**Sprint Approval R-5 S24**	**20 days**	**Mon 12/24/18**	**Tue 1/22/19**			
1199			Submit Sprint Package	0 days	Mon 12/24/18	Mon 12/24/18	1197	1200	IBM Dev
1200			Retro/Review Sprint Package	10 days	Mon 12/24/18	Mon 1/7/19	1199	1201	State Team

ID		WBS	Task Name	Duration	Start	Finish	Predecessors	Successors	Resource Names
1201			Incorporate Comments	5 days	Mon 1/7/19	Mon 1/14/19	1200	1202	IBM Dev
1202			Final Review of Sprint Package	5 days	Mon 1/14/19	Tue 1/22/19	1201	1203	State Team
1203			Accept Sprint Package	0 days	Tue 1/22/19	Tue 1/22/19	1202	2072,1205	State Team
1204			**R-5 Sprint 25 - Foster Care/Adoption (Eligibility)**	**106.5 days**	**Tue 1/22/19**	**Fri 6/21/19**			
1205			Sprint Planning/Visioning Meeting	0.5 days	Tue 1/22/19	Tue 1/22/19	818,1203	1206	IBM Dev
1206			Create Working Software (% complete tracked by burndown)	80 days	Wed 1/23/19	Wed 5/15/19	1205	1208	IBM Dev
1207			**Create R-5 S25 Package**	**5 days**	**Thu 5/16/19**	**Wed 5/22/19**			
1208			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Thu 5/16/19	Thu 5/16/19	1206	1209,1213	IBM BA
1209			Functional Design Document (FDD)	1 day	Fri 5/17/19	Fri 5/17/19	1208	1210,1213	IBM BA
1210			Update Technical Design Document	1 day	Mon 5/20/19	Mon 5/20/19	1209	1211,1213	IBM Dev
1211			Data Integration and Interface Control Documents (ICD)	1 day	Tue 5/21/19	Tue 5/21/19	1210	1212,1213	IBM Dev
1212			Updated and Completed Functional and Technical Requirements T	1 day	Wed 5/22/19	Wed 5/22/19	1211	1213	IBM BA
1213			Demo & Retrospective	1 day	Thu 5/23/19	Thu 5/23/19	1208,1209,12:	1215	IBM Dev
1214			**Sprint Approval R-5 S25**	**20 days**	**Thu 5/23/19**	**Fri 6/21/19**			
1215			Submit Sprint Package	0 days	Thu 5/23/19	Thu 5/23/19	1213	1216	IBM Dev
1216			Retro/Review Sprint Package	10 days	Fri 5/24/19	Fri 6/7/19	1215	1217	State Team
1217			Incorporate Comments	5 days	Mon 6/10/19	Fri 6/14/19	1216	1218	IBM Dev
1218			Final Review of Sprint Package	5 days	Mon 6/17/19	Fri 6/21/19	1217	1219	State Team
1219			Accept Sprint Package	0 days	Fri 6/21/19	Fri 6/21/19	1218	2072,1221	State Team
1220			**R-5 Sprint 26 - Foster Care/Adoption (Redetermination)**	**106.5 days**	**Mon 6/24/19**	**Wed 11/20/19**			
1221			Sprint Planning/Visioning Meeting	0.5 days	Mon 6/24/19	Mon 6/24/19	818,1219	1222	IBM Dev
1222			Create Working Software (% complete tracked by burndown)	80 days	Mon 6/24/19	Tue 10/15/19	1221	1224	IBM Dev
1223			**Create R-5 S26 Package**	**5 days**	**Tue 10/15/19**	**Tue 10/22/19**			
1224			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Tue 10/15/19	Wed 10/16/19	1222	1225,1229	IBM BA
1225			Functional Design Document (FDD)	1 day	Wed 10/16/19	Thu 10/17/19	1224	1226,1229	IBM BA
1226			Update Technical Design Document	1 day	Thu 10/17/19	Fri 10/18/19	1225	1227,1229	IBM Dev
1227			Data Integration and Interface Control Documents (ICD)	1 day	Fri 10/18/19	Mon 10/21/19	1226	1228,1229	IBM Dev
1228			Updated and Completed Functional and Technical Requirements T	1 day	Mon 10/21/19	Tue 10/22/19	1227	1229	IBM BA
1229			Demo & Retrospective	1 day	Tue 10/22/19	Wed 10/23/19	1224,1225,12:	1231	IBM Dev
1230			**Sprint Approval R-5 S26**	**20 days**	**Wed 10/23/19**	**Wed 11/20/19**			
1231			Submit Sprint Package	0 days	Wed 10/23/19	Wed 10/23/19	1229	1232	IBM Dev
1232			Retro/Review Sprint Package	10 days	Wed 10/23/19	Wed 11/6/19	1231	1233	State Team
1233			Incorporate Comments	5 days	Wed 11/6/19	Wed 11/13/19	1232	1234	IBM Dev
1234			Final Review of Sprint Package	5 days	Wed 11/13/19	Wed 11/20/19	1233	1235	State Team
1235			Accept Sprint Package	0 days	Wed 11/20/19	Wed 11/20/19	1234	2072	State Team
1236			**R-5 Sprint 27 - Qualified Individual (QI-1 - Rules Collection)**	**56.5 days**	**Thu 11/1/18**	**Tue 1/22/19**			
1237			Sprint Planning/Visioning Meeting	0.5 days	Thu 11/1/18	Thu 11/1/18	818	1238	IBM Dev
1238			Create Working Software (% complete tracked by burndown)	30 days	Thu 11/1/18	Fri 12/14/18	1237	1240	IBM Dev
1239			**Create R-5 S27 Package**	**5 days**	**Fri 12/14/18**	**Fri 12/21/18**			
1240			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Fri 12/14/18	Mon 12/17/18	1238	1241,1245	IBM BA
1241			Functional Design Document (FDD)	1 day	Mon 12/17/18	Tue 12/18/18	1240	1242,1245	IBM BA
1242			Update Technical Design Document	1 day	Tue 12/18/18	Wed 12/19/18	1241	1243,1245	IBM Dev
1243			Data Integration and Interface Control Documents (ICD)	1 day	Wed 12/19/18	Thu 12/20/18	1242	1244,1245	IBM Dev
1244			Updated and Completed Functional and Technical Requirements T	1 day	Thu 12/20/18	Fri 12/21/18	1243	1245	IBM BA
1245			Demo & Retrospective	1 day	Fri 12/21/18	Mon 12/24/18	1240,1241,12<	1247	IBM Dev
1246			**Sprint Approval R-5 S27**	**20 days**	**Mon 12/24/18**	**Tue 1/22/19**			
1247			Submit Sprint Package	0 days	Mon 12/24/18	Mon 12/24/18	1245	1248	IBM Dev
1248			Retro/Review Sprint Package	10 days	Mon 12/24/18	Mon 1/7/19	1247	1249	State Team
1249			Incorporate Comments	5 days	Mon 1/7/19	Mon 1/14/19	1248	1250	IBM Dev
1250			Final Review of Sprint Package	5 days	Mon 1/14/19	Tue 1/22/19	1249	1251	State Team

ID		WBS	Task Name	Duration	Start	Finish	Predecessors	Successors	Resource Names
1251			Accept Sprint Package	0 days	Tue 1/22/19	Tue 1/22/19	1250	2072,1253	State Team
1252			**R-5 Sprint 28 - Qualified Individual (QI-1 - Eligibility)**	**56.5 days**	**Tue 1/22/19**	**Thu 4/11/19**			
1253			Sprint Planning/Visioning Meeting	0.5 days	Tue 1/22/19	Tue 1/22/19	818,1251	1254	IBM Dev
1254			Create Working Software (% complete tracked by burndown)	30 days	Wed 1/23/19	Wed 3/6/19	1253	1256	IBM Dev
1255			**Create R-5 S28 Package**	**5 days**	**Thu 3/7/19**	**Wed 3/13/19**			
1256			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Thu 3/7/19	Thu 3/7/19	1254	1257,1261	IBM BA
1257			Functional Design Document (FDD)	1 day	Fri 3/8/19	Fri 3/8/19	1256	1258,1261	IBM BA
1258			Update Technical Design Document	1 day	Mon 3/11/19	Mon 3/11/19	1257	1259,1261	IBM Dev
1259			Data Integration and Interface Control Documents (ICD)	1 day	Tue 3/12/19	Tue 3/12/19	1258	1260,1261	IBM Dev
1260			Updated and Completed Functional and Technical Requirements T	1 day	Wed 3/13/19	Wed 3/13/19	1259	1261	IBM BA
1261			Demo & Retrospective	1 day	Thu 3/14/19	Thu 3/14/19	1256,1257,125	1263	IBM Dev
1262			**Sprint Approval R-5 S28**	**20 days**	**Thu 3/14/19**	**Thu 4/11/19**			
1263			Submit Sprint Package	0 days	Thu 3/14/19	Thu 3/14/19	1261	1264	IBM Dev
1264			Retro/Review Sprint Package	10 days	Fri 3/15/19	Thu 3/28/19	1263	1265	State Team
1265			Incorporate Comments	5 days	Fri 3/29/19	Thu 4/4/19	1264	1266	IBM Dev
1266			Final Review of Sprint Package	5 days	Fri 4/5/19	Thu 4/11/19	1265	1267	State Team
1267			Accept Sprint Package	0 days	Thu 4/11/19	Thu 4/11/19	1266	2072,1269	State Team
1268			**R-5 Sprint 29 - Qualified Individual (QI-1 - Redetermination)**	**56.5 days**	**Fri 4/12/19**	**Tue 7/2/19**			
1269			Sprint Planning/Visioning Meeting	0.5 days	Fri 4/12/19	Fri 4/12/19	818,1267	1270	IBM Dev
1270			Create Working Software (% complete tracked by burndown)	30 days	Fri 4/12/19	Fri 5/24/19	1269	1272	IBM Dev
1271			**Create R-5 S29 Package**	**5 days**	**Fri 5/24/19**	**Mon 6/3/19**			
1272			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Fri 5/24/19	Tue 5/28/19	1270	1273,1277	IBM BA
1273			Functional Design Document (FDD)	1 day	Tue 5/28/19	Wed 5/29/19	1272	1274,1277	IBM BA
1274			Update Technical Design Document	1 day	Wed 5/29/19	Thu 5/30/19	1273	1275,1277	IBM Dev
1275			Data Integration and Interface Control Documents (ICD)	1 day	Thu 5/30/19	Fri 5/31/19	1274	1276,1277	IBM Dev
1276			Updated and Completed Functional and Technical Requirements T	1 day	Fri 5/31/19	Mon 6/3/19	1275	1277	IBM BA
1277			Demo & Retrospective	1 day	Mon 6/3/19	Tue 6/4/19	1272,1273,127	1279	IBM Dev
1278			**Sprint Approval R-5 S29**	**20 days**	**Tue 6/4/19**	**Tue 7/2/19**			
1279			Submit Sprint Package	0 days	Tue 6/4/19	Tue 6/4/19	1277	1280	IBM Dev
1280			Retro/Review Sprint Package	10 days	Tue 6/4/19	Tue 6/18/19	1279	1281	State Team
1281			Incorporate Comments	5 days	Tue 6/18/19	Tue 6/25/19	1280	1282	IBM Dev
1282			Final Review of Sprint Package	5 days	Tue 6/25/19	Tue 7/2/19	1281	1283	State Team
1283			Accept Sprint Package	0 days	Tue 7/2/19	Tue 7/2/19	1282	2072,1285	State Team
1284			**R-5 Sprint 30 - Qualified Individual (QI-1 - Change in Circumstance)**	**46.5 days**	**Tue 7/2/19**	**Thu 9/5/19**			
1285			Sprint Planning/Visioning Meeting	0.5 days	Tue 7/2/19	Tue 7/2/19	818,1283	1286	IBM Dev
1286			Create Working Software (% complete tracked by burndown)	20 days	Wed 7/3/19	Tue 7/30/19	1285	1288	IBM Dev
1287			**Create R-5 S30 Package**	**5 days**	**Wed 7/31/19**	**Tue 8/6/19**			
1288			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Wed 7/31/19	Wed 7/31/19	1286	1289,1293	IBM BA
1289			Functional Design Document (FDD)	1 day	Thu 8/1/19	Thu 8/1/19	1288	1290,1293	IBM BA
1290			Update Technical Design Document	1 day	Fri 8/2/19	Fri 8/2/19	1289	1291,1293	IBM Dev
1291			Data Integration and Interface Control Documents (ICD)	1 day	Mon 8/5/19	Mon 8/5/19	1290	1292,1293	IBM Dev
1292			Updated and Completed Functional and Technical Requirements T	1 day	Tue 8/6/19	Tue 8/6/19	1291	1293	IBM BA
1293			Demo & Retrospective	1 day	Wed 8/7/19	Wed 8/7/19	1288,1289,129	1295	IBM Dev
1294			**Sprint Approval R-5 S30**	**20 days**	**Wed 8/7/19**	**Thu 9/5/19**			
1295			Submit Sprint Package	0 days	Wed 8/7/19	Wed 8/7/19	1293	1296	IBM Dev
1296			Retro/Review Sprint Package	10 days	Thu 8/8/19	Wed 8/21/19	1295	1297	State Team
1297			Incorporate Comments	5 days	Thu 8/22/19	Wed 8/28/19	1296	1298	IBM Dev
1298			Final Review of Sprint Package	5 days	Thu 8/29/19	Thu 9/5/19	1297	1299	State Team
1299			Accept Sprint Package	0 days	Thu 9/5/19	Thu 9/5/19	1298	2072,1301	State Team
1300			**R-5 Sprint 31 - Qualified Individual (QI-1 - Reporting)**	**56.5 days**	**Fri 9/6/19**	**Mon 11/25/19**			

ID		WBS	Task Name	Duration	Start	Finish	Predecessors	Successors	Resource Names
1301			Sprint Planning/Visioning Meeting	0.5 days	Fri 9/6/19	Fri 9/6/19	818,1299	1302	IBM Dev
1302			Create Working Software (% complete tracked by burndown)	30 days	Fri 9/6/19	Fri 10/18/19	1301	1304	IBM Dev
1303			**Create R-5 S31 Package**	**5 days**	**Fri 10/18/19**	**Fri 10/25/19**			
1304			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Fri 10/18/19	Mon 10/21/19	1302	1305,1309	IBM BA
1305			Functional Design Document (FDD)	1 day	Mon 10/21/19	Tue 10/22/19	1304	1306,1309	IBM BA
1306			Update Technical Design Document	1 day	Tue 10/22/19	Wed 10/23/19	1305	1307,1309	IBM Dev
1307			Data Integration and Interface Control Documents (ICD)	1 day	Wed 10/23/19	Thu 10/24/19	1306	1308,1309	IBM Dev
1308			Updated and Completed Functional and Technical Requirements T	1 day	Thu 10/24/19	Fri 10/25/19	1307	1309	IBM BA
1309			Demo & Retrospective	1 day	Fri 10/25/19	Mon 10/28/19	1304,1305,13(	1311	IBM Dev
1310			**Sprint Approval R-5 S31**	**20 days**	**Mon 10/28/19**	**Mon 11/25/19**			
1311			Submit Sprint Package	0 days	Mon 10/28/19	Mon 10/28/19	1309	1312	IBM Dev
1312			Retro/Review Sprint Package	10 days	Mon 10/28/19	Mon 11/11/19	1311	1313	State Team
1313			Incorporate Comments	5 days	Mon 11/11/19	Mon 11/18/19	1312	1314	IBM Dev
1314			Final Review of Sprint Package	5 days	Mon 11/18/19	Mon 11/25/19	1313	1315	State Team
1315			Accept Sprint Package	0 days	Mon 11/25/19	Mon 11/25/19	1314	2072,1317	State Team
1316			**R-5 Sprint 32 - Qualified Individual (QI-1 - MMIS Integration)**	**56.5 days**	**Mon 11/25/19**	**Thu 2/13/20**			
1317			Sprint Planning/Visioning Meeting	0.5 days	Mon 11/25/19	Mon 11/25/19	818,1315	1318	IBM Dev
1318			Create Working Software (% complete tracked by burndown)	30 days	Tue 11/26/19	Tue 1/7/20	1317	1320	IBM Dev
1319			**Create R-5 S32 Package**	**5 days**	**Wed 1/8/20**	**Tue 1/14/20**			
1320			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Wed 1/8/20	Wed 1/8/20	1318	1321,1325	IBM BA
1321			Functional Design Document (FDD)	1 day	Thu 1/9/20	Thu 1/9/20	1320	1322,1325	IBM BA
1322			Update Technical Design Document	1 day	Fri 1/10/20	Fri 1/10/20	1321	1323,1325	IBM Dev
1323			Data Integration and Interface Control Documents (ICD)	1 day	Mon 1/13/20	Mon 1/13/20	1322	1324,1325	IBM Dev
1324			Updated and Completed Functional and Technical Requirements T	1 day	Tue 1/14/20	Tue 1/14/20	1323	1325	IBM BA
1325			Demo & Retrospective	1 day	Wed 1/15/20	Wed 1/15/20	1320,1321,13;	1327	IBM Dev
1326			**Sprint Approval R-5 S32**	**20 days**	**Wed 1/15/20**	**Thu 2/13/20**			
1327			Submit Sprint Package	0 days	Wed 1/15/20	Wed 1/15/20	1325	1328	IBM Dev
1328			Retro/Review Sprint Package	10 days	Thu 1/16/20	Thu 1/30/20	1327	1329	State Team
1329			Incorporate Comments	5 days	Fri 1/31/20	Thu 2/6/20	1328	1330	IBM Dev
1330			Final Review of Sprint Package	5 days	Fri 2/7/20	Thu 2/13/20	1329	1331	State Team
1331			Accept Sprint Package	0 days	Thu 2/13/20	Thu 2/13/20	1330	2072	State Team
1332			**R-5 Sprint 33 - Qualified Disabled Working Individual (QDWI - Rules Coll**	**56.5 days**	**Thu 11/1/18**	**Tue 1/22/19**			
1333			Sprint Planning/Visioning Meeting	0.5 days	Thu 11/1/18	Thu 11/1/18	818	1334	IBM Dev
1334			Create Working Software (% complete tracked by burndown)	30 days	Thu 11/1/18	Fri 12/14/18	1333	1336	IBM Dev
1335			**Create R-5 S33 Package**	**5 days**	**Fri 12/14/18**	**Fri 12/21/18**			
1336			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Fri 12/14/18	Mon 12/17/18	1334	1337,1341	IBM BA
1337			Functional Design Document (FDD)	1 day	Mon 12/17/18	Tue 12/18/18	1336	1338,1341	IBM BA
1338			Update Technical Design Document	1 day	Tue 12/18/18	Wed 12/19/18	1337	1339,1341	IBM Dev
1339			Data Integration and Interface Control Documents (ICD)	1 day	Wed 12/19/18	Thu 12/20/18	1338	1340,1341	IBM Dev
1340			Updated and Completed Functional and Technical Requirements T	1 day	Thu 12/20/18	Fri 12/21/18	1339	1341	IBM BA
1341			Demo & Retrospective	1 day	Fri 12/21/18	Mon 12/24/18	1336,1337,13:	1343	IBM Dev
1342			**Sprint Approval R-5 S33**	**20 days**	**Mon 12/24/18**	**Tue 1/22/19**			
1343			Submit Sprint Package	0 days	Mon 12/24/18	Mon 12/24/18	1341	1344,1349	IBM Dev
1344			Retro/Review Sprint Package	10 days	Mon 12/24/18	Mon 1/7/19	1343	1345	State Team
1345			Incorporate Comments	5 days	Mon 1/7/19	Mon 1/14/19	1344	1346	IBM Dev
1346			Final Review of Sprint Package	5 days	Mon 1/14/19	Tue 1/22/19	1345	1347	State Team
1347			Accept Sprint Package	0 days	Tue 1/22/19	Tue 1/22/19	1346	2072	State Team
1348			**R-5 Sprint 34 - Qualified Disabled Working Individual (QDWI - Eligibility)**	**56.5 days**	**Mon 12/24/18**	**Thu 3/14/19**			
1349			Sprint Planning/Visioning Meeting	0.5 days	Mon 12/24/18	Mon 12/24/18	818,1343	1350	IBM Dev
1350			Create Working Software (% complete tracked by burndown)	30 days	Tue 12/25/18	Tue 2/5/19	1349	1352	IBM Dev

ID		WBS	Task Name	Duration	Start	Finish	Predecessors	Successors	Resource Names
1351			**Create R-5 S34 Package**	**5 days**	**Wed 2/6/19**	**Tue 2/12/19**			
1352			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Wed 2/6/19	Wed 2/6/19	1350	1353,1357	IBM BA
1353			Functional Design Document (FDD)	1 day	Thu 2/7/19	Thu 2/7/19	1352	1354,1357	IBM BA
1354			Update Technical Design Document	1 day	Fri 2/8/19	Fri 2/8/19	1353	1355,1357	IBM Dev
1355			Data Integration and Interface Control Documents (ICD)	1 day	Mon 2/11/19	Mon 2/11/19	1354	1356,1357	IBM Dev
1356			Updated and Completed Functional and Technical Requirements T	1 day	Tue 2/12/19	Tue 2/12/19	1355	1357	IBM BA
1357			Demo & Retrospective	1 day	Wed 2/13/19	Wed 2/13/19	1352,1353,13	1359	IBM Dev
1358			**Sprint Approval R-5 S34**	**20 days**	**Wed 2/13/19**	**Thu 3/14/19**			
1359			Submit Sprint Package	0 days	Wed 2/13/19	Wed 2/13/19	1357	1360,1365	IBM Dev
1360			Retro/Review Sprint Package	10 days	Thu 2/14/19	Thu 2/28/19	1359	1361	State Team
1361			Incorporate Comments	5 days	Fri 3/1/19	Thu 3/7/19	1360	1362	IBM Dev
1362			Final Review of Sprint Package	5 days	Fri 3/8/19	Thu 3/14/19	1361	1363	State Team
1363			Accept Sprint Package	0 days	Thu 3/14/19	Thu 3/14/19	1362	2072	State Team
1364			**R-5 Sprint 35 - Qualified Disabled Working Individual (QDWI - Redetermi**	**56.5 days**	**Thu 2/14/19**	**Mon 5/6/19**			
1365			Sprint Planning/Visioning Meeting	0.5 days	Thu 2/14/19	Thu 2/14/19	818,1359	1366	IBM Dev
1366			Create Working Software (% complete tracked by burndown)	30 days	Thu 2/14/19	Fri 3/29/19	1365	1368	IBM Dev
1367			**Create R-5 S35 Package**	**5 days**	**Fri 3/29/19**	**Fri 4/5/19**			
1368			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Fri 3/29/19	Mon 4/1/19	1366	1369,1373	IBM BA
1369			Functional Design Document (FDD)	1 day	Mon 4/1/19	Tue 4/2/19	1368	1370,1373	IBM BA
1370			Update Technical Design Document	1 day	Tue 4/2/19	Wed 4/3/19	1369	1371,1373	IBM Dev
1371			Data Integration and Interface Control Documents (ICD)	1 day	Wed 4/3/19	Thu 4/4/19	1370	1372,1373	IBM Dev
1372			Updated and Completed Functional and Technical Requirements T	1 day	Thu 4/4/19	Fri 4/5/19	1371	1373	IBM BA
1373			Demo & Retrospective	1 day	Fri 4/5/19	Mon 4/8/19	1368,1369,13	1375	IBM Dev
1374			**Sprint Approval R-5 S35**	**20 days**	**Mon 4/8/19**	**Mon 5/6/19**			
1375			Submit Sprint Package	0 days	Mon 4/8/19	Mon 4/8/19	1373	1376,1381	IBM Dev
1376			Retro/Review Sprint Package	10 days	Mon 4/8/19	Mon 4/22/19	1375	1377	State Team
1377			Incorporate Comments	5 days	Mon 4/22/19	Mon 4/29/19	1376	1378	IBM Dev
1378			Final Review of Sprint Package	5 days	Mon 4/29/19	Mon 5/6/19	1377	1379	State Team
1379			Accept Sprint Package	0 days	Mon 5/6/19	Mon 5/6/19	1378	2072	State Team
1380			**R-5 Sprint 36 - Qualified Disabled Working Individual (QDWI - Change in**	**56.5 days**	**Mon 4/8/19**	**Wed 6/26/19**			
1381			Sprint Planning/Visioning Meeting	0.5 days	Mon 4/8/19	Mon 4/8/19	818,1375	1382	IBM Dev
1382			Create Working Software (% complete tracked by burndown)	30 days	Tue 4/9/19	Mon 5/20/19	1381	1384	IBM Dev
1383			**Create R-5 S36 Package**	**5 days**	**Tue 5/21/19**	**Tue 5/28/19**			
1384			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Tue 5/21/19	Tue 5/21/19	1382	1385,1389	IBM BA
1385			Functional Design Document (FDD)	1 day	Wed 5/22/19	Wed 5/22/19	1384	1386,1389	IBM BA
1386			Update Technical Design Document	1 day	Thu 5/23/19	Thu 5/23/19	1385	1387,1389	IBM Dev
1387			Data Integration and Interface Control Documents (ICD)	1 day	Fri 5/24/19	Fri 5/24/19	1386	1388,1389	IBM Dev
1388			Updated and Completed Functional and Technical Requirements T	1 day	Tue 5/28/19	Tue 5/28/19	1387	1389	IBM BA
1389			Demo & Retrospective	1 day	Wed 5/29/19	Wed 5/29/19	1384,1385,13	1391	IBM Dev
1390			**Sprint Approval R-5 S36**	**20 days**	**Wed 5/29/19**	**Wed 6/26/19**			
1391			Submit Sprint Package	0 days	Wed 5/29/19	Wed 5/29/19	1389	1392,1397	IBM Dev
1392			Retro/Review Sprint Package	10 days	Thu 5/30/19	Wed 6/12/19	1391	1393	State Team
1393			Incorporate Comments	5 days	Thu 6/13/19	Wed 6/19/19	1392	1394	IBM Dev
1394			Final Review of Sprint Package	5 days	Thu 6/20/19	Wed 6/26/19	1393	1395	State Team
1395			Accept Sprint Package	0 days	Wed 6/26/19	Wed 6/26/19	1394	2072	State Team
1396			**R-5 Sprint 37 - Qualified Disabled Working Individual (QDWI - Reporting)**	**56.5 days**	**Thu 5/30/19**	**Fri 8/16/19**			
1397			Sprint Planning/Visioning Meeting	0.5 days	Thu 5/30/19	Thu 5/30/19	818,1391	1398	IBM Dev
1398			Create Working Software (% complete tracked by burndown)	30 days	Thu 5/30/19	Thu 7/11/19	1397	1400	IBM Dev
1399			**Create R-5 S37 Package**	**5 days**	**Thu 7/11/19**	**Thu 7/18/19**			
1400			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Thu 7/11/19	Fri 7/12/19	1398	1401,1405	IBM BA

ID		WBS	Task Name	Duration	Start	Finish	Predecessors	Successors	Resource Names
1401			Functional Design Document (FDD)	1 day	Fri 7/12/19	Mon 7/15/19	1400	1402,1405	IBM BA
1402			Update Technical Design Document	1 day	Mon 7/15/19	Tue 7/16/19	1401	1403,1405	IBM Dev
1403			Data Integration and Interface Control Documents (ICD)	1 day	Tue 7/16/19	Wed 7/17/19	1402	1404,1405	IBM Dev
1404			Updated and Completed Functional and Technical Requirements T	1 day	Wed 7/17/19	Thu 7/18/19	1403	1405	IBM BA
1405			Demo & Retrospective	1 day	Thu 7/18/19	Fri 7/19/19	1400,1401,14(	1407	IBM Dev
1406			**Sprint Approval R-5 S37**	**20 days**	**Fri 7/19/19**	**Fri 8/16/19**			
1407			Submit Sprint Package	0 days	Fri 7/19/19	Fri 7/19/19	1405	1408	IBM Dev
1408			Retro/Review Sprint Package	10 days	Fri 7/19/19	Fri 8/2/19	1407	1409	State Team
1409			Incorporate Comments	5 days	Fri 8/2/19	Fri 8/9/19	1408	1410	IBM Dev
1410			Final Review of Sprint Package	5 days	Fri 8/9/19	Fri 8/16/19	1409	1411	State Team
1411			Accept Sprint Package	0 days	Fri 8/16/19	Fri 8/16/19	1410	2072,1413	State Team
1412			**R-5 Sprint 38 - Qualified Disabled Working Individual (QDWI - MMIS Inte**	**56.5 days**	**Fri 8/16/19**	**Tue 11/5/19**			
1413			Sprint Planning/Visioning Meeting	0.5 days	Fri 8/16/19	Fri 8/16/19	818,1411	1414	IBM Dev
1414			Create Working Software (% complete tracked by burndown)	30 days	Mon 8/19/19	Mon 9/30/19	1413	1416	IBM Dev
1415			**Create R-5 S38 Package**	**5 days**	**Tue 10/1/19**	**Mon 10/7/19**			
1416			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Tue 10/1/19	Tue 10/1/19	1414	1417,1421	IBM BA
1417			Functional Design Document (FDD)	1 day	Wed 10/2/19	Wed 10/2/19	1416	1418,1421	IBM BA
1418			Update Technical Design Document	1 day	Thu 10/3/19	Thu 10/3/19	1417	1419,1421	IBM Dev
1419			Data Integration and Interface Control Documents (ICD)	1 day	Fri 10/4/19	Fri 10/4/19	1418	1420,1421	IBM Dev
1420			Updated and Completed Functional and Technical Requirements T	1 day	Mon 10/7/19	Mon 10/7/19	1419	1421	IBM BA
1421			Demo & Retrospective	1 day	Tue 10/8/19	Tue 10/8/19	1416,1417,14:	1423	IBM Dev
1422			**Sprint Approval R-5 S38**	**20 days**	**Tue 10/8/19**	**Tue 11/5/19**			
1423			Submit Sprint Package	0 days	Tue 10/8/19	Tue 10/8/19	1421	1424	IBM Dev
1424			Retro/Review Sprint Package	10 days	Wed 10/9/19	Tue 10/22/19	1423	1425	State Team
1425			Incorporate Comments	5 days	Wed 10/23/19	Tue 10/29/19	1424	1426	IBM Dev
1426			Final Review of Sprint Package	5 days	Wed 10/30/19	Tue 11/5/19	1425	1427	State Team
1427			Accept Sprint Package	0 days	Tue 11/5/19	Tue 11/5/19	1426	2072,1429	State Team
1428			**R-5 Sprint 39 - Qualified Disabled Working Individual (QDWI - Second M**	**56.5 days**	**Wed 11/6/19**	**Mon 1/27/20**			
1429			Sprint Planning/Visioning Meeting	0.5 days	Wed 11/6/19	Wed 11/6/19	818,1427	1430	IBM Dev
1430			Create Working Software (% complete tracked by burndown)	30 days	Wed 11/6/19	Thu 12/19/19	1429	1432	IBM Dev
1431			**Create R-5 S39 Package**	**5 days**	**Thu 12/19/19**	**Thu 12/26/19**			
1432			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Thu 12/19/19	Fri 12/20/19	1430	1433,1437	IBM BA
1433			Functional Design Document (FDD)	1 day	Fri 12/20/19	Mon 12/23/19	1432	1434,1437	IBM BA
1434			Update Technical Design Document	1 day	Mon 12/23/19	Tue 12/24/19	1433	1435,1437	IBM Dev
1435			Data Integration and Interface Control Documents (ICD)	1 day	Tue 12/24/19	Wed 12/25/19	1434	1436,1437	IBM Dev
1436			Updated and Completed Functional and Technical Requirements T	1 day	Wed 12/25/19	Thu 12/26/19	1435	1437	IBM BA
1437			Demo & Retrospective	1 day	Thu 12/26/19	Fri 12/27/19	1432,1433,14:	1439	IBM Dev
1438			**Sprint Approval R-5 S39**	**20 days**	**Fri 12/27/19**	**Mon 1/27/20**			
1439			Submit Sprint Package	0 days	Fri 12/27/19	Fri 12/27/19	1437	1440	IBM Dev
1440			Retro/Review Sprint Package	10 days	Fri 12/27/19	Fri 1/10/20	1439	1441	State Team
1441			Incorporate Comments	5 days	Fri 1/10/20	Fri 1/17/20	1440	1442	IBM Dev
1442			Final Review of Sprint Package	5 days	Fri 1/17/20	Mon 1/27/20	1441	1443	State Team
1443			Accept Sprint Package	0 days	Mon 1/27/20	Mon 1/27/20	1442	2072	State Team
1444			**R-5 Sprint 40 - Emergency (Rules Collection)**	**56.5 days**	**Thu 11/1/18**	**Tue 1/22/19**			
1445			Sprint Planning/Visioning Meeting	0.5 days	Thu 11/1/18	Thu 11/1/18	818	1446	IBM Dev
1446			Create Working Software (% complete tracked by burndown)	30 days	Thu 11/1/18	Fri 12/14/18	1445	1448	IBM Dev
1447			**Create R-5 S40 Package**	**5 days**	**Fri 12/14/18**	**Fri 12/21/18**			
1448			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Fri 12/14/18	Mon 12/17/18	1446	1449,1453	IBM BA
1449			Functional Design Document (FDD)	1 day	Mon 12/17/18	Tue 12/18/18	1448	1450,1453	IBM BA
1450			Update Technical Design Document	1 day	Tue 12/18/18	Wed 12/19/18	1449	1451,1453	IBM Dev

ID		WBS	Task Name	Duration	Start	Finish	Predecessors	Successors	Resource Names
1451			Data Integration and Interface Control Documents (ICD)	1 day	Wed 12/19/18	Thu 12/20/18	1450	1452,1453	IBM Dev
1452			Updated and Completed Functional and Technical Requirements T	1 day	Thu 12/20/18	Fri 12/21/18	1451	1453	IBM BA
1453			Demo & Retrospective	1 day	Fri 12/21/18	Mon 12/24/18	1448,1449,145	1455	IBM Dev
1454			**Sprint Approval R-5 S40**	**20 days**	**Mon 12/24/18**	**Tue 1/22/19**			
1455			Submit Sprint Package	0 days	Mon 12/24/18	Mon 12/24/18	1453	1456	IBM Dev
1456			Retro/Review Sprint Package	10 days	Mon 12/24/18	Mon 1/7/19	1455	1457	State Team
1457			Incorporate Comments	5 days	Mon 1/7/19	Mon 1/14/19	1456	1458	IBM Dev
1458			Final Review of Sprint Package	5 days	Mon 1/14/19	Tue 1/22/19	1457	1459	State Team
1459			Accept Sprint Package	0 days	Tue 1/22/19	Tue 1/22/19	1458	2072,1461	State Team
1460			**R-5 Sprint 41 - Emergency (Eligibility)**	**66.5 days**	**Tue 1/22/19**	**Thu 4/25/19**			
1461			Sprint Planning/Visioning Meeting	0.5 days	Tue 1/22/19	Tue 1/22/19	818,1459	1462	IBM Dev
1462			Create Working Software (% complete tracked by burndown)	40 days	Wed 1/23/19	Wed 3/20/19	1461	1464	IBM Dev
1463			**Create R-5 S41 Package**	**5 days**	**Thu 3/21/19**	**Wed 3/27/19**			
1464			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Thu 3/21/19	Thu 3/21/19	1462	1465,1469	IBM BA
1465			Functional Design Document (FDD)	1 day	Fri 3/22/19	Fri 3/22/19	1464	1466,1469	IBM BA
1466			Update Technical Design Document	1 day	Mon 3/25/19	Mon 3/25/19	1465	1467,1469	IBM Dev
1467			Data Integration and Interface Control Documents (ICD)	1 day	Tue 3/26/19	Tue 3/26/19	1466	1468,1469	IBM Dev
1468			Updated and Completed Functional and Technical Requirements T	1 day	Wed 3/27/19	Wed 3/27/19	1467	1469	IBM BA
1469			Demo & Retrospective	1 day	Thu 3/28/19	Thu 3/28/19	1464,1465,146	1471	IBM Dev
1470			**Sprint Approval R-5 S41**	**20 days**	**Thu 3/28/19**	**Thu 4/25/19**			
1471			Submit Sprint Package	0 days	Thu 3/28/19	Thu 3/28/19	1469	1472,1477	IBM Dev
1472			Retro/Review Sprint Package	10 days	Fri 3/29/19	Thu 4/11/19	1471	1473	State Team
1473			Incorporate Comments	5 days	Fri 4/12/19	Thu 4/18/19	1472	1474	IBM Dev
1474			Final Review of Sprint Package	5 days	Fri 4/19/19	Thu 4/25/19	1473	1475	State Team
1475			Accept Sprint Package	0 days	Thu 4/25/19	Thu 4/25/19	1474	2072	State Team
1476			**R-5 Sprint 42 - Emergency (Redetermination)**	**66.5 days**	**Fri 3/29/19**	**Tue 7/2/19**			
1477			Sprint Planning/Visioning Meeting	0.5 days	Fri 3/29/19	Fri 3/29/19	818,1471	1478	IBM Dev
1478			Create Working Software (% complete tracked by burndown)	40 days	Fri 3/29/19	Fri 5/24/19	1477	1480	IBM Dev
1479			**Create R-5 S42 Package**	**5 days**	**Fri 5/24/19**	**Mon 6/3/19**			
1480			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Fri 5/24/19	Tue 5/28/19	1478	1481,1485	IBM BA
1481			Functional Design Document (FDD)	1 day	Tue 5/28/19	Wed 5/29/19	1480	1482,1485	IBM BA
1482			Update Technical Design Document	1 day	Wed 5/29/19	Thu 5/30/19	1481	1483,1485	IBM Dev
1483			Data Integration and Interface Control Documents (ICD)	1 day	Thu 5/30/19	Fri 5/31/19	1482	1484,1485	IBM Dev
1484			Updated and Completed Functional and Technical Requirements T	1 day	Fri 5/31/19	Mon 6/3/19	1483	1485	IBM BA
1485			Demo & Retrospective	1 day	Mon 6/3/19	Tue 6/4/19	1480,1481,148	1487	IBM Dev
1486			**Sprint Approval R-5 S42**	**20 days**	**Tue 6/4/19**	**Tue 7/2/19**			
1487			Submit Sprint Package	0 days	Tue 6/4/19	Tue 6/4/19	1485	1488,1493	IBM Dev
1488			Retro/Review Sprint Package	10 days	Tue 6/4/19	Tue 6/18/19	1487	1489	State Team
1489			Incorporate Comments	5 days	Tue 6/18/19	Tue 6/25/19	1488	1490	IBM Dev
1490			Final Review of Sprint Package	5 days	Tue 6/25/19	Tue 7/2/19	1489	1491	State Team
1491			Accept Sprint Package	0 days	Tue 7/2/19	Tue 7/2/19	1490	2072	State Team
1492			**R-5 Sprint 43 - Emergency (Change in Circumstance)**	**66.5 days**	**Tue 6/4/19**	**Thu 9/5/19**			
1493			Sprint Planning/Visioning Meeting	0.5 days	Tue 6/4/19	Tue 6/4/19	818,1487	1494	IBM Dev
1494			Create Working Software (% complete tracked by burndown)	40 days	Wed 6/5/19	Tue 7/30/19	1493	1496	IBM Dev
1495			**Create R-5 S43 Package**	**5 days**	**Wed 7/31/19**	**Tue 8/6/19**			
1496			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Wed 7/31/19	Wed 7/31/19	1494	1497,1501	IBM BA
1497			Functional Design Document (FDD)	1 day	Thu 8/1/19	Thu 8/1/19	1496	1498,1501	IBM BA
1498			Update Technical Design Document	1 day	Fri 8/2/19	Fri 8/2/19	1497	1499,1501	IBM Dev
1499			Data Integration and Interface Control Documents (ICD)	1 day	Mon 8/5/19	Mon 8/5/19	1498	1500,1501	IBM Dev
1500			Updated and Completed Functional and Technical Requirements T	1 day	Tue 8/6/19	Tue 8/6/19	1499	1501	IBM BA

ID		WBS	Task Name	Duration	Start	Finish	Predecessors	Successors	Resource Names
1501			Demo & Retrospective	1 day	Wed 8/7/19	Wed 8/7/19	1496,1497,14(	1503	IBM Dev
1502			**Sprint Approval R-5 S43**	**20 days**	**Wed 8/7/19**	**Thu 9/5/19**			
1503			Submit Sprint Package	0 days	Wed 8/7/19	Wed 8/7/19	1501	1504,1509	IBM Dev
1504			Retro/Review Sprint Package	10 days	Thu 8/8/19	Wed 8/21/19	1503	1505	State Team
1505			Incorporate Comments	5 days	Thu 8/22/19	Wed 8/28/19	1504	1506	IBM Dev
1506			Final Review of Sprint Package	5 days	Thu 8/29/19	Thu 9/5/19	1505	1507	State Team
1507			Accept Sprint Package	0 days	Thu 9/5/19	Thu 9/5/19	1506	2072	State Team
1508			**R-5 Sprint 44 - Emergency (Reporting)**	**66.5 days**	**Thu 8/8/19**	**Mon 11/11/19**			
1509			Sprint Planning/Visioning Meeting	0.5 days	Thu 8/8/19	Thu 8/8/19	818,1503	1510	IBM Dev
1510			Create Working Software (% complete tracked by burndown)	40 days	Thu 8/8/19	Fri 10/4/19	1509	1512	IBM Dev
1511			**Create R-5 S44 Package**	**5 days**	**Fri 10/4/19**	**Fri 10/11/19**			
1512			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Fri 10/4/19	Mon 10/7/19	1510	1513,1517	IBM BA
1513			Functional Design Document (FDD)	1 day	Mon 10/7/19	Tue 10/8/19	1512	1514,1517	IBM BA
1514			Update Technical Design Document	1 day	Tue 10/8/19	Wed 10/9/19	1513	1515,1517	IBM Dev
1515			Data Integration and Interface Control Documents (ICD)	1 day	Wed 10/9/19	Thu 10/10/19	1514	1516,1517	IBM Dev
1516			Updated and Completed Functional and Technical Requirements T	1 day	Thu 10/10/19	Fri 10/11/19	1515	1517	IBM BA
1517			Demo & Retrospective	1 day	Fri 10/11/19	Mon 10/14/19	1512,1513,15:	1519	IBM Dev
1518			**Sprint Approval R-5 S44**	**20 days**	**Mon 10/14/19**	**Mon 11/11/19**			
1519			Submit Sprint Package	0 days	Mon 10/14/19	Mon 10/14/19	1517	1520,1525	IBM Dev
1520			Retro/Review Sprint Package	10 days	Mon 10/14/19	Mon 10/28/19	1519	1521	State Team
1521			Incorporate Comments	5 days	Mon 10/28/19	Mon 11/4/19	1520	1522	IBM Dev
1522			Final Review of Sprint Package	5 days	Mon 11/4/19	Mon 11/11/19	1521	1523	State Team
1523			Accept Sprint Package	0 days	Mon 11/11/19	Mon 11/11/19	1522	2072	State Team
1524			**R-5 Sprint 45 - Emergency (MMIS Integraton)**	**61.5 days**	**Mon 10/14/19**	**Wed 1/8/20**			
1525			Sprint Planning/Visioning Meeting	0.5 days	Mon 10/14/19	Mon 10/14/19	818,1519	1526	IBM Dev
1526			Create Working Software (% complete tracked by burndown)	35 days	Tue 10/15/19	Tue 12/3/19	1525	1528	IBM Dev
1527			**Create R-5 S45 Package**	**5 days**	**Wed 12/4/19**	**Tue 12/10/19**			
1528			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Wed 12/4/19	Wed 12/4/19	1526	1529,1533	IBM BA
1529			Functional Design Document (FDD)	1 day	Thu 12/5/19	Thu 12/5/19	1528	1530,1533	IBM BA
1530			Update Technical Design Document	1 day	Fri 12/6/19	Fri 12/6/19	1529	1531,1533	IBM Dev
1531			Data Integration and Interface Control Documents (ICD)	1 day	Mon 12/9/19	Mon 12/9/19	1530	1532,1533	IBM Dev
1532			Updated and Completed Functional and Technical Requirements T	1 day	Tue 12/10/19	Tue 12/10/19	1531	1533	IBM BA
1533			Demo & Retrospective	1 day	Wed 12/11/19	Wed 12/11/19	1528,1529,15:	1535	IBM Dev
1534			**Sprint Approval R-5 S45**	**20 days**	**Wed 12/11/19**	**Wed 1/8/20**			
1535			Submit Sprint Package	0 days	Wed 12/11/19	Wed 12/11/19	1533	1536	IBM Dev
1536			Retro/Review Sprint Package	10 days	Thu 12/12/19	Wed 12/25/19	1535	1537	State Team
1537			Incorporate Comments	5 days	Thu 12/26/19	Wed 1/1/20	1536	1538	IBM Dev
1538			Final Review of Sprint Package	5 days	Thu 1/2/20	Wed 1/8/20	1537	1539	State Team
1539			Accept Sprint Package	0 days	Wed 1/8/20	Wed 1/8/20	1538	2072	State Team
1540			**R-5 Sprint 46 - Assistance to the Aged, Blind, and Disabled (Rules Collect**	**56.5 days**	**Thu 11/1/18**	**Tue 1/22/19**			
1541			Sprint Planning/Visioning Meeting	0.5 days	Thu 11/1/18	Thu 11/1/18	818	1542	IBM Dev
1542			Create Working Software (% complete tracked by burndown)	30 days	Thu 11/1/18	Fri 12/14/18	1541	1544	IBM Dev
1543			**Create R-5 S46 Package**	**5 days**	**Fri 12/14/18**	**Fri 12/21/18**			
1544			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Fri 12/14/18	Mon 12/17/18	1542	1545,1549	IBM BA
1545			Functional Design Document (FDD)	1 day	Mon 12/17/18	Tue 12/18/18	1544	1546,1549	IBM BA
1546			Update Technical Design Document	1 day	Tue 12/18/18	Wed 12/19/18	1545	1547,1549	IBM Dev
1547			Data Integration and Interface Control Documents (ICD)	1 day	Wed 12/19/18	Thu 12/20/18	1546	1548,1549	IBM Dev
1548			Updated and Completed Functional and Technical Requirements T	1 day	Thu 12/20/18	Fri 12/21/18	1547	1549	IBM BA
1549			Demo & Retrospective	1 day	Fri 12/21/18	Mon 12/24/18	1544,1545,15(	1551	IBM Dev
1550			**Sprint Approval R-5 S46**	**20 days**	**Mon 12/24/18**	**Tue 1/22/19**			

ID		WBS	Task Name	Duration	Start	Finish	Predecessors	Successors	Resource Names
1551			Submit Sprint Package	0 days	Mon 12/24/18	Mon 12/24/18	1549	1552,1557	IBM Dev
1552			Retro/Review Sprint Package	10 days	Mon 12/24/18	Mon 1/7/19	1551	1553	State Team
1553			Incorporate Comments	5 days	Mon 1/7/19	Mon 1/14/19	1552	1554	IBM Dev
1554			Final Review of Sprint Package	5 days	Mon 1/14/19	Tue 1/22/19	1553	1555	State Team
1555			Accept Sprint Package	0 days	Tue 1/22/19	Tue 1/22/19	1554	2072	State Team
1556			**R-5 Sprint 47 - Assistance to the Aged, Blind, and Disabled (Eligibility)**	**66.5 days**	**Mon 12/24/18**	**Thu 3/28/19**			
1557			Sprint Planning/Visioning Meeting	0.5 days	Mon 12/24/18	Mon 12/24/18	818,1551	1558	IBM Dev
1558			Create Working Software (% complete tracked by burndown)	40 days	Tue 12/25/18	Wed 2/20/19	1557	1560	IBM Dev
1559			**Create R-5 S47 Package**	**5 days**	**Thu 2/21/19**	**Wed 2/27/19**			
1560			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Thu 2/21/19	Thu 2/21/19	1558	1561,1565	IBM BA
1561			Functional Design Document (FDD)	1 day	Fri 2/22/19	Fri 2/22/19	1560	1562,1565	IBM BA
1562			Update Technical Design Document	1 day	Mon 2/25/19	Mon 2/25/19	1561	1563,1565	IBM Dev
1563			Data Integration and Interface Control Documents (ICD)	1 day	Tue 2/26/19	Tue 2/26/19	1562	1564,1565	IBM Dev
1564			Updated and Completed Functional and Technical Requirements T	1 day	Wed 2/27/19	Wed 2/27/19	1563	1565	IBM BA
1565			Demo & Retrospective	1 day	Thu 2/28/19	Thu 2/28/19	1560,1561,156	1567	IBM Dev
1566			**Sprint Approval R-5 S47**	**20 days**	**Thu 2/28/19**	**Thu 3/28/19**			
1567			Submit Sprint Package	0 days	Thu 2/28/19	Thu 2/28/19	1565	1568,1573	IBM Dev
1568			Retro/Review Sprint Package	10 days	Fri 3/1/19	Thu 3/14/19	1567	1569	State Team
1569			Incorporate Comments	5 days	Fri 3/15/19	Thu 3/21/19	1568	1570	IBM Dev
1570			Final Review of Sprint Package	5 days	Fri 3/22/19	Thu 3/28/19	1569	1571	State Team
1571			Accept Sprint Package	0 days	Thu 3/28/19	Thu 3/28/19	1570	2072	State Team
1572			**R-5 Sprint 48 - Assistance to the Aged, Blind, and Disabled (Redetermina**	**66.5 days**	**Fri 3/1/19**	**Tue 6/4/19**			
1573			Sprint Planning/Visioning Meeting	0.5 days	Fri 3/1/19	Fri 3/1/19	818,1567	1574	IBM Dev
1574			Create Working Software (% complete tracked by burndown)	40 days	Fri 3/1/19	Fri 4/26/19	1573	1576	IBM Dev
1575			**Create R-5 S48 Package**	**5 days**	**Fri 4/26/19**	**Fri 5/3/19**			
1576			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Fri 4/26/19	Mon 4/29/19	1574	1577,1581	IBM BA
1577			Functional Design Document (FDD)	1 day	Mon 4/29/19	Tue 4/30/19	1576	1578,1581	IBM BA
1578			Update Technical Design Document	1 day	Tue 4/30/19	Wed 5/1/19	1577	1579,1581	IBM Dev
1579			Data Integration and Interface Control Documents (ICD)	1 day	Wed 5/1/19	Thu 5/2/19	1578	1580,1581	IBM Dev
1580			Updated and Completed Functional and Technical Requirements T	1 day	Thu 5/2/19	Fri 5/3/19	1579	1581	IBM BA
1581			Demo & Retrospective	1 day	Fri 5/3/19	Mon 5/6/19	1576,1577,157	1583	IBM Dev
1582			**Sprint Approval R-5 S48**	**20 days**	**Mon 5/6/19**	**Tue 6/4/19**			
1583			Submit Sprint Package	0 days	Mon 5/6/19	Mon 5/6/19	1581	1584,1589	IBM Dev
1584			Retro/Review Sprint Package	10 days	Mon 5/6/19	Mon 5/20/19	1583	1585	State Team
1585			Incorporate Comments	5 days	Mon 5/20/19	Tue 5/28/19	1584	1586	IBM Dev
1586			Final Review of Sprint Package	5 days	Tue 5/28/19	Tue 6/4/19	1585	1587	State Team
1587			Accept Sprint Package	0 days	Tue 6/4/19	Tue 6/4/19	1586	2072	State Team
1588			**R-5 Sprint 49 - Assistance to the Aged, Blind, and Disabled (Change in Cir**	**66.5 days**	**Mon 5/6/19**	**Wed 8/7/19**			
1589			Sprint Planning/Visioning Meeting	0.5 days	Mon 5/6/19	Mon 5/6/19	818,1583	1590	IBM Dev
1590			Create Working Software (% complete tracked by burndown)	40 days	Tue 5/7/19	Tue 7/2/19	1589	1592	IBM Dev
1591			**Create R-5 S49 Package**	**5 days**	**Wed 7/3/19**	**Tue 7/9/19**			
1592			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Wed 7/3/19	Wed 7/3/19	1590	1593,1597	IBM BA
1593			Functional Design Document (FDD)	1 day	Thu 7/4/19	Thu 7/4/19	1592	1594,1597	IBM BA
1594			Update Technical Design Document	1 day	Fri 7/5/19	Fri 7/5/19	1593	1595,1597	IBM Dev
1595			Data Integration and Interface Control Documents (ICD)	1 day	Mon 7/8/19	Mon 7/8/19	1594	1596,1597	IBM Dev
1596			Updated and Completed Functional and Technical Requirements T	1 day	Tue 7/9/19	Tue 7/9/19	1595	1597	IBM BA
1597			Demo & Retrospective	1 day	Wed 7/10/19	Wed 7/10/19	1592,1593,159	1599	IBM Dev
1598			**Sprint Approval R-5 S49**	**20 days**	**Wed 7/10/19**	**Wed 8/7/19**			
1599			Submit Sprint Package	0 days	Wed 7/10/19	Wed 7/10/19	1597	1600,1605	IBM Dev
1600			Retro/Review Sprint Package	10 days	Thu 7/11/19	Wed 7/24/19	1599	1601	State Team

ID		WBS	Task Name	Duration	Start	Finish	Predecessors	Successors	Resource Names
1601			Incorporate Comments	5 days	Thu 7/25/19	Wed 7/31/19	1600	1602	IBM Dev
1602			Final Review of Sprint Package	5 days	Thu 8/1/19	Wed 8/7/19	1601	1603	State Team
1603			Accept Sprint Package	0 days	Wed 8/7/19	Wed 8/7/19	1602	2072	State Team
1604			**R-5 Sprint 50 - Assistance to the Aged, Blind, and Disabled (Reporting)**	**66.5 days**	**Thu 7/11/19**	**Mon 10/14/19**			
1605			Sprint Planning/Visioning Meeting	0.5 days	Thu 7/11/19	Thu 7/11/19	818,1599	1606	IBM Dev
1606			Create Working Software (% complete tracked by burndown)	40 days	Thu 7/11/19	Fri 9/6/19	1605	1608	IBM Dev
1607			**Create R-5 S50 Package**	**5 days**	**Fri 9/6/19**	**Fri 9/13/19**			
1608			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Fri 9/6/19	Mon 9/9/19	1606	1609,1613	IBM BA
1609			Functional Design Document (FDD)	1 day	Mon 9/9/19	Tue 9/10/19	1608	1610,1613	IBM BA
1610			Update Technical Design Document	1 day	Tue 9/10/19	Wed 9/11/19	1609	1611,1613	IBM Dev
1611			Data Integration and Interface Control Documents (ICD)	1 day	Wed 9/11/19	Thu 9/12/19	1610	1612,1613	IBM Dev
1612			Updated and Completed Functional and Technical Requirements 1	1 day	Thu 9/12/19	Fri 9/13/19	1611	1613	IBM BA
1613			Demo & Retrospective	1 day	Fri 9/13/19	Mon 9/16/19	1608,1609,161	1615	IBM Dev
1614			**Sprint Approval R-5 S50**	**20 days**	**Mon 9/16/19**	**Mon 10/14/19**			
1615			Submit Sprint Package	0 days	Mon 9/16/19	Mon 9/16/19	1613	1616,1621	IBM Dev
1616			Retro/Review Sprint Package	10 days	Mon 9/16/19	Mon 9/30/19	1615	1617	State Team
1617			Incorporate Comments	5 days	Mon 9/30/19	Mon 10/7/19	1616	1618	IBM Dev
1618			Final Review of Sprint Package	5 days	Mon 10/7/19	Mon 10/14/19	1617	1619	State Team
1619			Accept Sprint Package	0 days	Mon 10/14/19	Mon 10/14/19	1618	2072	State Team
1620			**R-5 Sprint 51 - Assistance to the Aged, Blind, and Disabled (MMIS Integr**	**61.5 days**	**Mon 9/16/19**	**Wed 12/11/19**			
1621			Sprint Planning/Visioning Meeting	0.5 days	Mon 9/16/19	Mon 9/16/19	818,1615	1622	IBM Dev
1622			Create Working Software (% complete tracked by burndown)	35 days	Tue 9/17/19	Mon 11/4/19	1621	1624	IBM Dev
1623			**Create R-5 S51 Package**	**5 days**	**Tue 11/5/19**	**Mon 11/11/19**			
1624			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Tue 11/5/19	Tue 11/5/19	1622	1625,1629	IBM BA
1625			Functional Design Document (FDD)	1 day	Wed 11/6/19	Wed 11/6/19	1624	1626,1629	IBM BA
1626			Update Technical Design Document	1 day	Thu 11/7/19	Thu 11/7/19	1625	1627,1629	IBM Dev
1627			Data Integration and Interface Control Documents (ICD)	1 day	Fri 11/8/19	Fri 11/8/19	1626	1628,1629	IBM Dev
1628			Updated and Completed Functional and Technical Requirements 1	1 day	Mon 11/11/19	Mon 11/11/19	1627	1629	IBM BA
1629			Demo & Retrospective	1 day	Tue 11/12/19	Tue 11/12/19	1624,1625,162	1631	IBM Dev
1630			**Sprint Approval R-5 S51**	**20 days**	**Tue 11/12/19**	**Wed 12/11/19**			
1631			Submit Sprint Package	0 days	Tue 11/12/19	Tue 11/12/19	1629	1632	IBM Dev
1632			Retro/Review Sprint Package	10 days	Wed 11/13/19	Tue 11/26/19	1631	1633	State Team
1633			Incorporate Comments	5 days	Wed 11/27/19	Wed 12/4/19	1632	1634	IBM Dev
1634			Final Review of Sprint Package	5 days	Thu 12/5/19	Wed 12/11/19	1633	1635	State Team
1635			Accept Sprint Package	0 days	Wed 12/11/19	Wed 12/11/19	1634	2072	State Team
1636			**R-5 Sprint 52 - Long Term Care (Rules Collection)**	**56.5 days**	**Thu 11/1/18**	**Tue 1/22/19**			
1637			Sprint Planning/Visioning Meeting	0.5 days	Thu 11/1/18	Thu 11/1/18	818	1638	IBM Dev
1638			Create Working Software (% complete tracked by burndown)	30 days	Thu 11/1/18	Fri 12/14/18	1637	1640	IBM Dev
1639			**Create R-5 S52 Package**	**5 days**	**Fri 12/14/18**	**Fri 12/21/18**			
1640			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Fri 12/14/18	Mon 12/17/18	1638	1641,1645	IBM BA
1641			Functional Design Document (FDD)	1 day	Mon 12/17/18	Tue 12/18/18	1640	1642,1645	IBM BA
1642			Update Technical Design Document	1 day	Tue 12/18/18	Wed 12/19/18	1641	1643,1645	IBM Dev
1643			Data Integration and Interface Control Documents (ICD)	1 day	Wed 12/19/18	Thu 12/20/18	1642	1644,1645	IBM Dev
1644			Updated and Completed Functional and Technical Requirements 1	1 day	Thu 12/20/18	Fri 12/21/18	1643	1645	IBM BA
1645			Demo & Retrospective	1 day	Fri 12/21/18	Mon 12/24/18	1640,1641,164	1647	IBM Dev
1646			**Sprint Approval R-5 S52**	**20 days**	**Mon 12/24/18**	**Tue 1/22/19**			
1647			Submit Sprint Package	0 days	Mon 12/24/18	Mon 12/24/18	1645	1648,1653	IBM Dev
1648			Retro/Review Sprint Package	10 days	Mon 12/24/18	Mon 1/7/19	1647	1649	State Team
1649			Incorporate Comments	5 days	Mon 1/7/19	Mon 1/14/19	1648	1650	IBM Dev
1650			Final Review of Sprint Package	5 days	Mon 1/14/19	Tue 1/22/19	1649	1651	State Team

ID		WBS	Task Name	Duration	Start	Finish	Predecessors	Successors	Resource Names
1651			Accept Sprint Package	0 days	Tue 1/22/19	Tue 1/22/19	1650	2072	State Team
1652			**R-5 Sprint 53 - Long Term Care (Eligibility)**	**66.5 days**	**Mon 12/24/18**	**Thu 3/28/19**			
1653			Sprint Planning/Visioning Meeting	0.5 days	Mon 12/24/18	Mon 12/24/18	818,1647	1654	IBM Dev
1654			Create Working Software (% complete tracked by burndown)	40 days	Tue 12/25/18	Wed 2/20/19	1653	1656	IBM Dev
1655			**Create R-5 S53 Package**	**5 days**	**Thu 2/21/19**	**Wed 2/27/19**			
1656			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Thu 2/21/19	Thu 2/21/19	1654	1657,1661	IBM BA
1657			Functional Design Document (FDD)	1 day	Fri 2/22/19	Fri 2/22/19	1656	1658,1661	IBM BA
1658			Update Technical Design Document	1 day	Mon 2/25/19	Mon 2/25/19	1657	1659,1661	IBM Dev
1659			Data Integration and Interface Control Documents (ICD)	1 day	Tue 2/26/19	Tue 2/26/19	1658	1660,1661	IBM Dev
1660			Updated and Completed Functional and Technical Requirements T	1 day	Wed 2/27/19	Wed 2/27/19	1659	1661	IBM BA
1661			Demo & Retrospective	1 day	Thu 2/28/19	Thu 2/28/19	1656,1657,165	1663	IBM Dev
1662			**Sprint Approval R-5 S53**	**20 days**	**Thu 2/28/19**	**Thu 3/28/19**			
1663			Submit Sprint Package	0 days	Thu 2/28/19	Thu 2/28/19	1661	1664,1669	IBM Dev
1664			Retro/Review Sprint Package	10 days	Fri 3/1/19	Thu 3/14/19	1663	1665	State Team
1665			Incorporate Comments	5 days	Fri 3/15/19	Thu 3/21/19	1664	1666	IBM Dev
1666			Final Review of Sprint Package	5 days	Fri 3/22/19	Thu 3/28/19	1665	1667	State Team
1667			Accept Sprint Package	0 days	Thu 3/28/19	Thu 3/28/19	1666	2072	State Team
1668			**R-5 Sprint 54 - Long Term Care (Redetermination)**	**66.5 days**	**Fri 3/1/19**	**Tue 6/4/19**			
1669			Sprint Planning/Visioning Meeting	0.5 days	Fri 3/1/19	Fri 3/1/19	818,1663	1670	IBM Dev
1670			Create Working Software (% complete tracked by burndown)	40 days	Fri 3/1/19	Fri 4/26/19	1669	1672	IBM Dev
1671			**Create R-5 S54 Package**	**5 days**	**Fri 4/26/19**	**Fri 5/3/19**			
1672			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Fri 4/26/19	Mon 4/29/19	1670	1673,1677	IBM BA
1673			Functional Design Document (FDD)	1 day	Mon 4/29/19	Tue 4/30/19	1672	1674,1677	IBM BA
1674			Update Technical Design Document	1 day	Tue 4/30/19	Wed 5/1/19	1673	1675,1677	IBM Dev
1675			Data Integration and Interface Control Documents (ICD)	1 day	Wed 5/1/19	Thu 5/2/19	1674	1676,1677	IBM Dev
1676			Updated and Completed Functional and Technical Requirements T	1 day	Thu 5/2/19	Fri 5/3/19	1675	1677	IBM BA
1677			Demo & Retrospective	1 day	Fri 5/3/19	Mon 5/6/19	1672,1673,167	1679	IBM Dev
1678			**Sprint Approval R-5 S54**	**20 days**	**Mon 5/6/19**	**Tue 6/4/19**			
1679			Submit Sprint Package	0 days	Mon 5/6/19	Mon 5/6/19	1677	1680,1685	IBM Dev
1680			Retro/Review Sprint Package	10 days	Mon 5/6/19	Mon 5/20/19	1679	1681	State Team
1681			Incorporate Comments	5 days	Mon 5/20/19	Tue 5/28/19	1680	1682	IBM Dev
1682			Final Review of Sprint Package	5 days	Tue 5/28/19	Tue 6/4/19	1681	1683	State Team
1683			Accept Sprint Package	0 days	Tue 6/4/19	Tue 6/4/19	1682	2072	State Team
1684			**R-5 Sprint 55 - Long Term Care (Change in Circumstance)**	**66.5 days**	**Mon 5/6/19**	**Wed 8/7/19**			
1685			Sprint Planning/Visioning Meeting	0.5 days	Mon 5/6/19	Mon 5/6/19	818,1679	1686	IBM Dev
1686			Create Working Software (% complete tracked by burndown)	40 days	Tue 5/7/19	Tue 7/2/19	1685	1688	IBM Dev
1687			**Create R-5 S55 Package**	**5 days**	**Wed 7/3/19**	**Tue 7/9/19**			
1688			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Wed 7/3/19	Wed 7/3/19	1686	1689,1693	IBM BA
1689			Functional Design Document (FDD)	1 day	Thu 7/4/19	Thu 7/4/19	1688	1690,1693	IBM BA
1690			Update Technical Design Document	1 day	Fri 7/5/19	Fri 7/5/19	1689	1691,1693	IBM Dev
1691			Data Integration and Interface Control Documents (ICD)	1 day	Mon 7/8/19	Mon 7/8/19	1690	1692,1693	IBM Dev
1692			Updated and Completed Functional and Technical Requirements T	1 day	Tue 7/9/19	Tue 7/9/19	1691	1693	IBM BA
1693			Demo & Retrospective	1 day	Wed 7/10/19	Wed 7/10/19	1688,1689,169	1695	IBM Dev
1694			**Sprint Approval R-5 S55**	**20 days**	**Wed 7/10/19**	**Wed 8/7/19**			
1695			Submit Sprint Package	0 days	Wed 7/10/19	Wed 7/10/19	1693	1696,1701	IBM Dev
1696			Retro/Review Sprint Package	10 days	Thu 7/11/19	Wed 7/24/19	1695	1697	State Team
1697			Incorporate Comments	5 days	Thu 7/25/19	Wed 7/31/19	1696	1698	IBM Dev
1698			Final Review of Sprint Package	5 days	Thu 8/1/19	Wed 8/7/19	1697	1699	State Team
1699			Accept Sprint Package	0 days	Wed 8/7/19	Wed 8/7/19	1698	2072	State Team
1700			**R-5 Sprint 56 - Long Term Care (Overpayment Tracking)**	**66.5 days**	**Thu 7/11/19**	**Mon 10/14/19**			

ID		WBS	Task Name	Duration	Start	Finish	Predecessors	Successors	Resource Names
1701			Sprint Planning/Visioning Meeting	0.5 days	Thu 7/11/19	Thu 7/11/19	818,1695	1702	IBM Dev
1702			Create Working Software (% complete tracked by burndown)	40 days	Thu 7/11/19	Fri 9/6/19	1701	1704	IBM Dev
1703			**Create R-5 S56 Package**	**5 days**	**Fri 9/6/19**	**Fri 9/13/19**			
1704			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Fri 9/6/19	Mon 9/9/19	1702	1705,1709	IBM BA
1705			Functional Design Document (FDD)	1 day	Mon 9/9/19	Tue 9/10/19	1704	1706,1709	IBM BA
1706			Update Technical Design Document	1 day	Tue 9/10/19	Wed 9/11/19	1705	1707,1709	IBM Dev
1707			Data Integration and Interface Control Documents (ICD)	1 day	Wed 9/11/19	Thu 9/12/19	1706	1708,1709	IBM Dev
1708			Updated and Completed Functional and Technical Requirements T	1 day	Thu 9/12/19	Fri 9/13/19	1707	1709	IBM BA
1709			Demo & Retrospective	1 day	Fri 9/13/19	Mon 9/16/19	1704,1705,17(	1711	IBM Dev
1710			**Sprint Approval R-5 S56**	**20 days**	**Mon 9/16/19**	**Mon 10/14/19**			
1711			Submit Sprint Package	0 days	Mon 9/16/19	Mon 9/16/19	1709	1712,1717	IBM Dev
1712			Retro/Review Sprint Package	10 days	Mon 9/16/19	Mon 9/30/19	1711	1713	State Team
1713			Incorporate Comments	5 days	Mon 9/30/19	Mon 10/7/19	1712	1714	IBM Dev
1714			Final Review of Sprint Package	5 days	Mon 10/7/19	Mon 10/14/19	1713	1715	State Team
1715			Accept Sprint Package	0 days	Mon 10/14/19	Mon 10/14/19	1714	2072	State Team
1716			**R-5 Sprint 57 - Long Term Care (Reporting)**	**61.5 days**	**Mon 9/16/19**	**Wed 12/11/19**			
1717			Sprint Planning/Visioning Meeting	0.5 days	Mon 9/16/19	Mon 9/16/19	818,1711	1718	IBM Dev
1718			Create Working Software (% complete tracked by burndown)	35 days	Tue 9/17/19	Mon 11/4/19	1717	1720	IBM Dev
1719			**Create R-5 S57 Package**	**5 days**	**Tue 11/5/19**	**Mon 11/11/19**			
1720			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Tue 11/5/19	Tue 11/5/19	1718	1721,1725	IBM BA
1721			Functional Design Document (FDD)	1 day	Wed 11/6/19	Wed 11/6/19	1720	1722,1725	IBM BA
1722			Update Technical Design Document	1 day	Thu 11/7/19	Thu 11/7/19	1721	1723,1725	IBM Dev
1723			Data Integration and Interface Control Documents (ICD)	1 day	Fri 11/8/19	Fri 11/8/19	1722	1724,1725	IBM Dev
1724			Updated and Completed Functional and Technical Requirements T	1 day	Mon 11/11/19	Mon 11/11/19	1723	1725	IBM BA
1725			Demo & Retrospective	1 day	Tue 11/12/19	Tue 11/12/19	1720,1721,17:	1727	IBM Dev
1726			**Sprint Approval R-5 S57**	**20 days**	**Tue 11/12/19**	**Wed 12/11/19**			
1727			Submit Sprint Package	0 days	Tue 11/12/19	Tue 11/12/19	1725	1728	IBM Dev
1728			Retro/Review Sprint Package	10 days	Wed 11/13/19	Tue 11/26/19	1727	1729	State Team
1729			Incorporate Comments	5 days	Wed 11/27/19	Wed 12/4/19	1728	1730	IBM Dev
1730			Final Review of Sprint Package	5 days	Thu 12/5/19	Wed 12/11/19	1729	1731	State Team
1731			Accept Sprint Package	0 days	Wed 12/11/19	Wed 12/11/19	1730	2072	State Team
1732			**R-5 Sprint 58 - Medically Needy - Spend Down (Rules Collection)**	**56.5 days**	**Thu 11/1/18**	**Tue 1/22/19**			
1733			Sprint Planning/Visioning Meeting	0.5 days	Thu 11/1/18	Thu 11/1/18	818	1734	IBM Dev
1734			Create Working Software (% complete tracked by burndown)	30 days	Thu 11/1/18	Fri 12/14/18	1733	1736	IBM Dev
1735			**Create R-5 S58 Package**	**5 days**	**Fri 12/14/18**	**Fri 12/21/18**			
1736			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Fri 12/14/18	Mon 12/17/18	1734	1737,1741	IBM BA
1737			Functional Design Document (FDD)	1 day	Mon 12/17/18	Tue 12/18/18	1736	1738,1741	IBM BA
1738			Update Technical Design Document	1 day	Tue 12/18/18	Wed 12/19/18	1737	1739,1741	IBM Dev
1739			Data Integration and Interface Control Documents (ICD)	1 day	Wed 12/19/18	Thu 12/20/18	1738	1740,1741	IBM Dev
1740			Updated and Completed Functional and Technical Requirements T	1 day	Thu 12/20/18	Fri 12/21/18	1739	1741	IBM BA
1741			Demo & Retrospective	1 day	Fri 12/21/18	Mon 12/24/18	1736,1737,17:	1743	IBM Dev
1742			**Sprint Approval R-5 S58**	**20 days**	**Mon 12/24/18**	**Tue 1/22/19**			
1743			Submit Sprint Package	0 days	Mon 12/24/18	Mon 12/24/18	1741	1744,1749	IBM Dev
1744			Retro/Review Sprint Package	10 days	Mon 12/24/18	Mon 1/7/19	1743	1745	State Team
1745			Incorporate Comments	5 days	Mon 1/7/19	Mon 1/14/19	1744	1746	IBM Dev
1746			Final Review of Sprint Package	5 days	Mon 1/14/19	Tue 1/22/19	1745	1747	State Team
1747			Accept Sprint Package	0 days	Tue 1/22/19	Tue 1/22/19	1746	2072	State Team
1748			**R-5 Sprint 59 - Medically Needy - Spend Down (Eligibility)**	**66.5 days**	**Mon 12/24/18**	**Thu 3/28/19**			
1749			Sprint Planning/Visioning Meeting	0.5 days	Mon 12/24/18	Mon 12/24/18	818,1743	1750	IBM Dev
1750			Create Working Software (% complete tracked by burndown)	40 days	Tue 12/25/18	Wed 2/20/19	1749	1752	IBM Dev

ID		WBS	Task Name	Duration	Start	Finish	Predecessors	Successors	Resource Names
1751			**Create R-5 S59 Package**	**5 days**	**Thu 2/21/19**	**Wed 2/27/19**			
1752			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Thu 2/21/19	Thu 2/21/19	1750	1753,1757	IBM BA
1753			Functional Design Document (FDD)	1 day	Fri 2/22/19	Fri 2/22/19	1752	1754,1757	IBM BA
1754			Update Technical Design Document	1 day	Mon 2/25/19	Mon 2/25/19	1753	1755,1757	IBM Dev
1755			Data Integration and Interface Control Documents (ICD)	1 day	Tue 2/26/19	Tue 2/26/19	1754	1756,1757	IBM Dev
1756			Updated and Completed Functional and Technical Requirements T	1 day	Wed 2/27/19	Wed 2/27/19	1755	1757	IBM BA
1757			Demo & Retrospective	1 day	Thu 2/28/19	Thu 2/28/19	1752,1753,175	1759	IBM Dev
1758			**Sprint Approval R-5 S59**	**20 days**	**Thu 2/28/19**	**Thu 3/28/19**			
1759			Submit Sprint Package	0 days	Thu 2/28/19	Thu 2/28/19	1757	1760,1765	IBM Dev
1760			Retro/Review Sprint Package	10 days	Fri 3/1/19	Thu 3/14/19	1759	1761	State Team
1761			Incorporate Comments	5 days	Fri 3/15/19	Thu 3/21/19	1760	1762	IBM Dev
1762			Final Review of Sprint Package	5 days	Fri 3/22/19	Thu 3/28/19	1761	1763	State Team
1763			Accept Sprint Package	0 days	Thu 3/28/19	Thu 3/28/19	1762	2072	State Team
1764			**R-5 Sprint 60 - Medically Needy - Spend Down (Redetermination)**	**66.5 days**	**Fri 3/1/19**	**Tue 6/4/19**			
1765			Sprint Planning/Visioning Meeting	0.5 days	Fri 3/1/19	Fri 3/1/19	818,1759	1766	IBM Dev
1766			Create Working Software (% complete tracked by burndown)	40 days	Fri 3/1/19	Fri 4/26/19	1765	1768	IBM Dev
1767			**Create R-5 S60 Package**	**5 days**	**Fri 4/26/19**	**Fri 5/3/19**			
1768			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Fri 4/26/19	Mon 4/29/19	1766	1769,1773	IBM BA
1769			Functional Design Document (FDD)	1 day	Mon 4/29/19	Tue 4/30/19	1768	1770,1773	IBM BA
1770			Update Technical Design Document	1 day	Tue 4/30/19	Wed 5/1/19	1769	1771,1773	IBM Dev
1771			Data Integration and Interface Control Documents (ICD)	1 day	Wed 5/1/19	Thu 5/2/19	1770	1772,1773	IBM Dev
1772			Updated and Completed Functional and Technical Requirements T	1 day	Thu 5/2/19	Fri 5/3/19	1771	1773	IBM BA
1773			Demo & Retrospective	1 day	Fri 5/3/19	Mon 5/6/19	1768,1769,17	1775	IBM Dev
1774			**Sprint Approval R-5 S60**	**20 days**	**Mon 5/6/19**	**Tue 6/4/19**			
1775			Submit Sprint Package	0 days	Mon 5/6/19	Mon 5/6/19	1773	1776,1781	IBM Dev
1776			Retro/Review Sprint Package	10 days	Mon 5/6/19	Mon 5/20/19	1775	1777	State Team
1777			Incorporate Comments	5 days	Mon 5/20/19	Tue 5/28/19	1776	1778	IBM Dev
1778			Final Review of Sprint Package	5 days	Tue 5/28/19	Tue 6/4/19	1777	1779	State Team
1779			Accept Sprint Package	0 days	Tue 6/4/19	Tue 6/4/19	1778	2072	State Team
1780			**R-5 Sprint 61 - Medically Needy - Spend Down (Change in Circumstance)**	**66.5 days**	**Mon 5/6/19**	**Wed 8/7/19**			
1781			Sprint Planning/Visioning Meeting	0.5 days	Mon 5/6/19	Mon 5/6/19	818,1775	1782	IBM Dev
1782			Create Working Software (% complete tracked by burndown)	40 days	Tue 5/7/19	Tue 7/2/19	1781	1784	IBM Dev
1783			**Create R-5 S61 Package**	**5 days**	**Wed 7/3/19**	**Tue 7/9/19**			
1784			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Wed 7/3/19	Wed 7/3/19	1782	1785,1789	IBM BA
1785			Functional Design Document (FDD)	1 day	Thu 7/4/19	Thu 7/4/19	1784	1786,1789	IBM BA
1786			Update Technical Design Document	1 day	Fri 7/5/19	Fri 7/5/19	1785	1787,1789	IBM Dev
1787			Data Integration and Interface Control Documents (ICD)	1 day	Mon 7/8/19	Mon 7/8/19	1786	1788,1789	IBM Dev
1788			Updated and Completed Functional and Technical Requirements T	1 day	Tue 7/9/19	Tue 7/9/19	1787	1789	IBM BA
1789			Demo & Retrospective	1 day	Wed 7/10/19	Wed 7/10/19	1784,1785,178	1791	IBM Dev
1790			**Sprint Approval R-5 S61**	**20 days**	**Wed 7/10/19**	**Wed 8/7/19**			
1791			Submit Sprint Package	0 days	Wed 7/10/19	Wed 7/10/19	1789	1792	IBM Dev
1792			Retro/Review Sprint Package	10 days	Thu 7/11/19	Wed 7/24/19	1791	1793	State Team
1793			Incorporate Comments	5 days	Thu 7/25/19	Wed 7/31/19	1792	1794	IBM Dev
1794			Final Review of Sprint Package	5 days	Thu 8/1/19	Wed 8/7/19	1793	1795	State Team
1795			Accept Sprint Package	0 days	Wed 8/7/19	Wed 8/7/19	1794	2072	State Team
1796			**R-5 Sprint 62 - Medically Needy - Spend Down (Reporting)**	**66.5 days**	**Thu 11/1/18**	**Tue 2/5/19**			
1797			Sprint Planning/Visioning Meeting	0.5 days	Thu 11/1/18	Thu 11/1/18	818	1798	IBM Dev
1798			Create Working Software (% complete tracked by burndown)	40 days	Thu 11/1/18	Fri 12/28/18	1797	1800	IBM Dev
1799			**Create R-5 S62 Package**	**5 days**	**Fri 12/28/18**	**Fri 1/4/19**			
1800			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Fri 12/28/18	Mon 12/31/18	1798	1801,1805	IBM BA

ID		WBS	Task Name	Duration	Start	Finish	Predecessors	Successors	Resource Names
1801			Functional Design Document (FDD)	1 day	Mon 12/31/18	Tue 1/1/19	1800	1802,1805	IBM BA
1802			Update Technical Design Document	1 day	Tue 1/1/19	Wed 1/2/19	1801	1803,1805	IBM Dev
1803			Data Integration and Interface Control Documents (ICD)	1 day	Wed 1/2/19	Thu 1/3/19	1802	1804,1805	IBM Dev
1804			Updated and Completed Functional and Technical Requirements T	1 day	Thu 1/3/19	Fri 1/4/19	1803	1805	IBM BA
1805			Demo & Retrospective	1 day	Fri 1/4/19	Mon 1/7/19	1800,1801,18(	1807	IBM Dev
1806			**Sprint Approval R-5 S62**	**20 days**	**Mon 1/7/19**	**Tue 2/5/19**			
1807			Submit Sprint Package	0 days	Mon 1/7/19	Mon 1/7/19	1805	1808,1813	IBM Dev
1808			Retro/Review Sprint Package	10 days	Mon 1/7/19	Tue 1/22/19	1807	1809	State Team
1809			Incorporate Comments	5 days	Tue 1/22/19	Tue 1/29/19	1808	1810	IBM Dev
1810			Final Review of Sprint Package	5 days	Tue 1/29/19	Tue 2/5/19	1809	1811	State Team
1811			Accept Sprint Package	0 days	Tue 2/5/19	Tue 2/5/19	1810	2072	State Team
1812			**R-5 Sprint 63 - Medically Needy - Spend Down (MMIS Integration)**	**61.5 days**	**Mon 1/7/19**	**Thu 4/4/19**			
1813			Sprint Planning/Visioning Meeting	0.5 days	Mon 1/7/19	Mon 1/7/19	818,1807	1814	IBM Dev
1814			Create Working Software (% complete tracked by burndown)	35 days	Tue 1/8/19	Wed 2/27/19	1813	1816	IBM Dev
1815			**Create R-5 S63 Package**	**5 days**	**Thu 2/28/19**	**Wed 3/6/19**			
1816			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Thu 2/28/19	Thu 2/28/19	1814	1817,1821	IBM BA
1817			Functional Design Document (FDD)	1 day	Fri 3/1/19	Fri 3/1/19	1816	1818,1821	IBM BA
1818			Update Technical Design Document	1 day	Mon 3/4/19	Mon 3/4/19	1817	1819,1821	IBM Dev
1819			Data Integration and Interface Control Documents (ICD)	1 day	Tue 3/5/19	Tue 3/5/19	1818	1820,1821	IBM Dev
1820			Updated and Completed Functional and Technical Requirements T	1 day	Wed 3/6/19	Wed 3/6/19	1819	1821	IBM BA
1821			Demo & Retrospective	1 day	Thu 3/7/19	Thu 3/7/19	1816,1817,181	1823	IBM Dev
1822			**Sprint Approval R-5 S63**	**20 days**	**Thu 3/7/19**	**Thu 4/4/19**			
1823			Submit Sprint Package	0 days	Thu 3/7/19	Thu 3/7/19	1821	1824	IBM Dev
1824			Retro/Review Sprint Package	10 days	Fri 3/8/19	Thu 3/21/19	1823	1825	State Team
1825			Incorporate Comments	5 days	Fri 3/22/19	Thu 3/28/19	1824	1826	IBM Dev
1826			Final Review of Sprint Package	5 days	Fri 3/29/19	Thu 4/4/19	1825	1827	State Team
1827			Accept Sprint Package	0 days	Thu 4/4/19	Thu 4/4/19	1826	2072	State Team
1828			**R-5 Sprint 64 - Medically Needy - Exceptional (Rules Collection)**	**61.5 days**	**Thu 11/1/18**	**Tue 1/29/19**			
1829			Sprint Planning/Visioning Meeting	0.5 days	Thu 11/1/18	Thu 11/1/18	818	1830	IBM Dev
1830			Create Working Software (% complete tracked by burndown)	35 days	Thu 11/1/18	Fri 12/21/18	1829	1832	IBM Dev
1831			**Create R-5 S64 Package**	**5 days**	**Fri 12/21/18**	**Fri 12/28/18**			
1832			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Fri 12/21/18	Mon 12/24/18	1830	1833,1837	IBM BA
1833			Functional Design Document (FDD)	1 day	Mon 12/24/18	Tue 12/25/18	1832	1834,1837	IBM BA
1834			Update Technical Design Document	1 day	Tue 12/25/18	Wed 12/26/18	1833	1835,1837	IBM Dev
1835			Data Integration and Interface Control Documents (ICD)	1 day	Wed 12/26/18	Thu 12/27/18	1834	1836,1837	IBM Dev
1836			Updated and Completed Functional and Technical Requirements T	1 day	Thu 12/27/18	Fri 12/28/18	1835	1837	IBM BA
1837			Demo & Retrospective	1 day	Fri 12/28/18	Mon 12/31/18	1832,1833,18:	1839	IBM Dev
1838			**Sprint Approval R-5 S64**	**20 days**	**Mon 12/31/18**	**Tue 1/29/19**			
1839			Submit Sprint Package	0 days	Mon 12/31/18	Mon 12/31/18	1837	1840	IBM Dev
1840			Retro/Review Sprint Package	10 days	Mon 12/31/18	Mon 1/14/19	1839	1841	State Team
1841			Incorporate Comments	5 days	Mon 1/14/19	Tue 1/22/19	1840	1842	IBM Dev
1842			Final Review of Sprint Package	5 days	Tue 1/22/19	Tue 1/29/19	1841	1843	State Team
1843			Accept Sprint Package	0 days	Tue 1/29/19	Tue 1/29/19	1842	2072	State Team
1844			**R-5 Sprint 65 - Medically Needy - Exceptional (Eligibility)**	**61.5 days**	**Thu 11/1/18**	**Tue 1/29/19**			
1845			Sprint Planning/Visioning Meeting	0.5 days	Thu 11/1/18	Thu 11/1/18	818	1846	IBM Dev
1846			Create Working Software (% complete tracked by burndown)	35 days	Thu 11/1/18	Fri 12/21/18	1845	1848	IBM Dev
1847			**Create R-5 S65 Package**	**5 days**	**Fri 12/21/18**	**Fri 12/28/18**			
1848			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Fri 12/21/18	Mon 12/24/18	1846	1849,1853	IBM BA
1849			Functional Design Document (FDD)	1 day	Mon 12/24/18	Tue 12/25/18	1848	1850,1853	IBM BA
1850			Update Technical Design Document	1 day	Tue 12/25/18	Wed 12/26/18	1849	1851,1853	IBM Dev

ID		WBS	Task Name	Duration	Start	Finish	Predecessors	Successors	Resource Names
1851			Data Integration and Interface Control Documents (ICD)	1 day	Wed 12/26/18	Thu 12/27/18	1850	1852,1853	IBM Dev
1852			Updated and Completed Functional and Technical Requirements T	1 day	Thu 12/27/18	Fri 12/28/18	1851	1853	IBM BA
1853			Demo & Retrospective	1 day	Fri 12/28/18	Mon 12/31/18	1848,1849,18	1855	IBM Dev
1854			**Sprint Approval R-5 S65**	**20 days**	**Mon 12/31/18**	**Tue 1/29/19**			
1855			Submit Sprint Package	0 days	Mon 12/31/18	Mon 12/31/18	1853	1856	IBM Dev
1856			Retro/Review Sprint Package	10 days	Mon 12/31/18	Mon 1/14/19	1855	1857	State Team
1857			Incorporate Comments	5 days	Mon 1/14/19	Tue 1/22/19	1856	1858	IBM Dev
1858			Final Review of Sprint Package	5 days	Tue 1/22/19	Tue 1/29/19	1857	1859	State Team
1859			Accept Sprint Package	0 days	Tue 1/29/19	Tue 1/29/19	1858	2072	State Team
1860			**R-5 Sprint 66 - Medically Needy - Exceptional (Redetermination)**	**61.5 days**	**Thu 11/1/18**	**Tue 1/29/19**			
1861			Sprint Planning/Visioning Meeting	0.5 days	Thu 11/1/18	Thu 11/1/18	818	1862	IBM Dev
1862			Create Working Software (% complete tracked by burndown)	35 days	Thu 11/1/18	Fri 12/21/18	1861	1864	IBM Dev
1863			**Create R-5 S66 Package**	**5 days**	**Fri 12/21/18**	**Fri 12/28/18**			
1864			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Fri 12/21/18	Mon 12/24/18	1862	1865,1869	IBM BA
1865			Functional Design Document (FDD)	1 day	Mon 12/24/18	Tue 12/25/18	1864	1866,1869	IBM BA
1866			Update Technical Design Document	1 day	Tue 12/25/18	Wed 12/26/18	1865	1867,1869	IBM Dev
1867			Data Integration and Interface Control Documents (ICD)	1 day	Wed 12/26/18	Thu 12/27/18	1866	1868,1869	IBM Dev
1868			Updated and Completed Functional and Technical Requirements T	1 day	Thu 12/27/18	Fri 12/28/18	1867	1869	IBM BA
1869			Demo & Retrospective	1 day	Fri 12/28/18	Mon 12/31/18	1864,1865,18	1871	IBM Dev
1870			**Sprint Approval R-5 S66**	**20 days**	**Mon 12/31/18**	**Tue 1/29/19**			
1871			Submit Sprint Package	0 days	Mon 12/31/18	Mon 12/31/18	1869	1872	IBM Dev
1872			Retro/Review Sprint Package	10 days	Mon 12/31/18	Mon 1/14/19	1871	1873	State Team
1873			Incorporate Comments	5 days	Mon 1/14/19	Tue 1/22/19	1872	1874	IBM Dev
1874			Final Review of Sprint Package	5 days	Tue 1/22/19	Tue 1/29/19	1873	1875	State Team
1875			Accept Sprint Package	0 days	Tue 1/29/19	Tue 1/29/19	1874	2072	State Team
1876			**R-5 Sprint 67 - Medically Needy - Exceptional (Change in Circumstance)**	**61.5 days**	**Thu 11/1/18**	**Tue 1/29/19**			
1877			Sprint Planning/Visioning Meeting	0.5 days	Thu 11/1/18	Thu 11/1/18	818	1878	IBM Dev
1878			Create Working Software (% complete tracked by burndown)	35 days	Thu 11/1/18	Fri 12/21/18	1877	1880	IBM Dev
1879			**Create R-5 S67 Package**	**5 days**	**Fri 12/21/18**	**Fri 12/28/18**			
1880			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Fri 12/21/18	Mon 12/24/18	1878	1881,1885	IBM BA
1881			Functional Design Document (FDD)	1 day	Mon 12/24/18	Tue 12/25/18	1880	1882,1885	IBM BA
1882			Update Technical Design Document	1 day	Tue 12/25/18	Wed 12/26/18	1881	1883,1885	IBM Dev
1883			Data Integration and Interface Control Documents (ICD)	1 day	Wed 12/26/18	Thu 12/27/18	1882	1884,1885	IBM Dev
1884			Updated and Completed Functional and Technical Requirements T	1 day	Thu 12/27/18	Fri 12/28/18	1883	1885	IBM BA
1885			Demo & Retrospective	1 day	Fri 12/28/18	Mon 12/31/18	1880,1881,18	1887	IBM Dev
1886			**Sprint Approval R-5 S67**	**20 days**	**Mon 12/31/18**	**Tue 1/29/19**			
1887			Submit Sprint Package	0 days	Mon 12/31/18	Mon 12/31/18	1885	1888	IBM Dev
1888			Retro/Review Sprint Package	10 days	Mon 12/31/18	Mon 1/14/19	1887	1889	State Team
1889			Incorporate Comments	5 days	Mon 1/14/19	Tue 1/22/19	1888	1890	IBM Dev
1890			Final Review of Sprint Package	5 days	Tue 1/22/19	Tue 1/29/19	1889	1891	State Team
1891			Accept Sprint Package	0 days	Tue 1/29/19	Tue 1/29/19	1890	2072	State Team
1892			**R-5 Sprint 68 - Medically Needy - Exceptional (Reporting)**	**61.5 days**	**Thu 11/1/18**	**Tue 1/29/19**			
1893			Sprint Planning/Visioning Meeting	0.5 days	Thu 11/1/18	Thu 11/1/18	818	1894	IBM Dev
1894			Create Working Software (% complete tracked by burndown)	35 days	Thu 11/1/18	Fri 12/21/18	1893	1896	IBM Dev
1895			**Create R-5 S68 Package**	**5 days**	**Fri 12/21/18**	**Fri 12/28/18**			
1896			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Fri 12/21/18	Mon 12/24/18	1894	1897,1901	IBM BA
1897			Functional Design Document (FDD)	1 day	Mon 12/24/18	Tue 12/25/18	1896	1898,1901	IBM BA
1898			Update Technical Design Document	1 day	Tue 12/25/18	Wed 12/26/18	1897	1899,1901	IBM Dev
1899			Data Integration and Interface Control Documents (ICD)	1 day	Wed 12/26/18	Thu 12/27/18	1898	1900,1901	IBM Dev
1900			Updated and Completed Functional and Technical Requirements T	1 day	Thu 12/27/18	Fri 12/28/18	1899	1901	IBM BA

ID		WBS	Task Name	Duration	Start	Finish	Predecessors	Successors	Resource Names
1901			Demo & Retrospective	1 day	Fri 12/28/18	Mon 12/31/18	1896,1897,18	1903	IBM Dev
1902			**Sprint Approval R-5 S68**	**20 days**	**Mon 12/31/18**	**Tue 1/29/19**			
1903			Submit Sprint Package	0 days	Mon 12/31/18	Mon 12/31/18	1901	1904	IBM Dev
1904			Retro/Review Sprint Package	10 days	Mon 12/31/18	Mon 1/14/19	1903	1905	State Team
1905			Incorporate Comments	5 days	Mon 1/14/19	Tue 1/22/19	1904	1906	IBM Dev
1906			Final Review of Sprint Package	5 days	Tue 1/22/19	Tue 1/29/19	1905	1907	State Team
1907			Accept Sprint Package	0 days	Tue 1/29/19	Tue 1/29/19	1906	2072	State Team
1908			**R-5 Sprint 69 - Medically Needy - Exceptional (MMIS Integration)**	**61.5 days**	**Thu 11/1/18**	**Tue 1/29/19**			
1909			Sprint Planning/Visioning Meeting	0.5 days	Thu 11/1/18	Thu 11/1/18	818	1910	IBM Dev
1910			Create Working Software (% complete tracked by burndown)	35 days	Thu 11/1/18	Fri 12/21/18	1909	1912	IBM Dev
1911			**Create R-5 S69 Package**	**5 days**	**Fri 12/21/18**	**Fri 12/28/18**			
1912			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Fri 12/21/18	Mon 12/24/18	1910	1913,1917	IBM BA
1913			Functional Design Document (FDD)	1 day	Mon 12/24/18	Tue 12/25/18	1912	1914,1917	IBM BA
1914			Update Technical Design Document	1 day	Tue 12/25/18	Wed 12/26/18	1913	1915,1917	IBM Dev
1915			Data Integration and Interface Control Documents (ICD)	1 day	Wed 12/26/18	Thu 12/27/18	1914	1916,1917	IBM Dev
1916			Updated and Completed Functional and Technical Requirements T	1 day	Thu 12/27/18	Fri 12/28/18	1915	1917	IBM BA
1917			Demo & Retrospective	1 day	Fri 12/28/18	Mon 12/31/18	1912,1913,19	1919	IBM Dev
1918			**Sprint Approval R-5 S69**	**20 days**	**Mon 12/31/18**	**Tue 1/29/19**			
1919			Submit Sprint Package	0 days	Mon 12/31/18	Mon 12/31/18	1917	1920	IBM Dev
1920			Retro/Review Sprint Package	10 days	Mon 12/31/18	Mon 1/14/19	1919	1921	State Team
1921			Incorporate Comments	5 days	Mon 1/14/19	Tue 1/22/19	1920	1922	IBM Dev
1922			Final Review of Sprint Package	5 days	Tue 1/22/19	Tue 1/29/19	1921	1923	State Team
1923			Accept Sprint Package	0 days	Tue 1/29/19	Tue 1/29/19	1922	2072	State Team
1924			**R-5 Sprint 70 - Medicaid Savings Program (MSP - Rules Collection)**	**61.5 days**	**Thu 11/1/18**	**Tue 1/29/19**			
1925			Sprint Planning/Visioning Meeting	0.5 days	Thu 11/1/18	Thu 11/1/18	818	1926	IBM Dev
1926			Create Working Software (% complete tracked by burndown)	35 days	Thu 11/1/18	Fri 12/21/18	1925	1928	IBM Dev
1927			**Create R-5 S70 Package**	**5 days**	**Fri 12/21/18**	**Fri 12/28/18**			
1928			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Fri 12/21/18	Mon 12/24/18	1926	1929,1933	IBM BA
1929			Functional Design Document (FDD)	1 day	Mon 12/24/18	Tue 12/25/18	1928	1930,1933	IBM BA
1930			Update Technical Design Document	1 day	Tue 12/25/18	Wed 12/26/18	1929	1931,1933	IBM Dev
1931			Data Integration and Interface Control Documents (ICD)	1 day	Wed 12/26/18	Thu 12/27/18	1930	1932,1933	IBM Dev
1932			Updated and Completed Functional and Technical Requirements T	1 day	Thu 12/27/18	Fri 12/28/18	1931	1933	IBM BA
1933			Demo & Retrospective	1 day	Fri 12/28/18	Mon 12/31/18	1928,1929,19	1935	IBM Dev
1934			**Sprint Approval R-5 S71**	**20 days**	**Mon 12/31/18**	**Tue 1/29/19**			
1935			Submit Sprint Package	0 days	Mon 12/31/18	Mon 12/31/18	1933	1936,1941	IBM Dev
1936			Retro/Review Sprint Package	10 days	Mon 12/31/18	Mon 1/14/19	1935	1937	State Team
1937			Incorporate Comments	5 days	Mon 1/14/19	Tue 1/22/19	1936	1938	IBM Dev
1938			Final Review of Sprint Package	5 days	Tue 1/22/19	Tue 1/29/19	1937	1939	State Team
1939			Accept Sprint Package	0 days	Tue 1/29/19	Tue 1/29/19	1938	2072	State Team
1940			**R-5 Sprint 71 - Medicaid Savings Program (MSP - Eligibility)**	**66.5 days**	**Mon 12/31/18**	**Thu 4/4/19**			
1941			Sprint Planning/Visioning Meeting	0.5 days	Mon 12/31/18	Mon 12/31/18	818,1935	1942	IBM Dev
1942			Create Working Software (% complete tracked by burndown)	40 days	Tue 1/1/19	Wed 2/27/19	1941	1944	IBM Dev
1943			**Create R-5 S71 Package**	**5 days**	**Thu 2/28/19**	**Wed 3/6/19**			
1944			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Thu 2/28/19	Thu 2/28/19	1942	1945,1949	IBM BA
1945			Functional Design Document (FDD)	1 day	Fri 3/1/19	Fri 3/1/19	1944	1946,1949	IBM BA
1946			Update Technical Design Document	1 day	Mon 3/4/19	Mon 3/4/19	1945	1947,1949	IBM Dev
1947			Data Integration and Interface Control Documents (ICD)	1 day	Tue 3/5/19	Tue 3/5/19	1946	1948,1949	IBM Dev
1948			Updated and Completed Functional and Technical Requirements T	1 day	Wed 3/6/19	Wed 3/6/19	1947	1949	IBM BA
1949			Demo & Retrospective	1 day	Thu 3/7/19	Thu 3/7/19	1944,1945,19	1951	IBM Dev
1950			**Sprint Approval R-S S71**	**20 days**	**Thu 3/7/19**	**Thu 4/4/19**			

ID		WBS	Task Name	Duration	Start	Finish	Predecessors	Successors	Resource Names
1951			Submit Sprint Package	0 days	Thu 3/7/19	Thu 3/7/19	1949	1952,1957	IBM Dev
1952			Retro/Review Sprint Package	10 days	Fri 3/8/19	Thu 3/21/19	1951	1953	State Team
1953			Incorporate Comments	5 days	Fri 3/22/19	Thu 3/28/19	1952	1954	IBM Dev
1954			Final Review of Sprint Package	5 days	Fri 3/29/19	Thu 4/4/19	1953	1955	State Team
1955			Accept Sprint Package	0 days	Thu 4/4/19	Thu 4/4/19	1954	2072	State Team
1956			**R-5 Sprint 72 - Medicaid Savings Program (MSP - Redetermination)**	**66.5 days**	**Fri 3/8/19**	**Tue 6/11/19**			
1957			Sprint Planning/Visioning Meeting	0.5 days	Fri 3/8/19	Fri 3/8/19	818,1951	1958	IBM Dev
1958			Create Working Software (% complete tracked by burndown)	40 days	Fri 3/8/19	Fri 5/3/19	1957	1960	IBM Dev
1959			**Create R-5 S72 Package**	**5 days**	**Fri 5/3/19**	**Fri 5/10/19**			
1960			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Fri 5/3/19	Mon 5/6/19	1958	1961,1965	IBM BA
1961			Functional Design Document (FDD)	1 day	Mon 5/6/19	Tue 5/7/19	1960	1962,1965	IBM BA
1962			Update Technical Design Document	1 day	Tue 5/7/19	Wed 5/8/19	1961	1963,1965	IBM Dev
1963			Data Integration and Interface Control Documents (ICD)	1 day	Wed 5/8/19	Thu 5/9/19	1962	1964,1965	IBM Dev
1964			Updated and Completed Functional and Technical Requirements T	1 day	Thu 5/9/19	Fri 5/10/19	1963	1965	IBM BA
1965			Demo & Retrospective	1 day	Fri 5/10/19	Mon 5/13/19	1960,1961,19(	1967	IBM Dev
1966			**Sprint Approval R-5 S72**	**20 days**	**Mon 5/13/19**	**Tue 6/11/19**			
1967			Submit Sprint Package	0 days	Mon 5/13/19	Mon 5/13/19	1965	1968,1973	IBM Dev
1968			Retro/Review Sprint Package	10 days	Mon 5/13/19	Tue 5/28/19	1967	1969	State Team
1969			Incorporate Comments	5 days	Tue 5/28/19	Tue 6/4/19	1968	1970	IBM Dev
1970			Final Review of Sprint Package	5 days	Tue 6/4/19	Tue 6/11/19	1969	1971	State Team
1971			Accept Sprint Package	0 days	Tue 6/11/19	Tue 6/11/19	1970	2072	State Team
1972			**R-5 Sprint 73 - Medicaid Savings Program (MSP - Change in Circumstance**	**66.5 days**	**Mon 5/13/19**	**Wed 8/14/19**			
1973			Sprint Planning/Visioning Meeting	0.5 days	Mon 5/13/19	Mon 5/13/19	818,1967	1974	IBM Dev
1974			Create Working Software (% complete tracked by burndown)	40 days	Tue 5/14/19	Tue 7/9/19	1973	1976	IBM Dev
1975			**Create R-5 S73 Package**	**5 days**	**Wed 7/10/19**	**Tue 7/16/19**			
1976			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Wed 7/10/19	Wed 7/10/19	1974	1977,1981	IBM BA
1977			Functional Design Document (FDD)	1 day	Thu 7/11/19	Thu 7/11/19	1976	1978,1981	IBM BA
1978			Update Technical Design Document	1 day	Fri 7/12/19	Fri 7/12/19	1977	1979,1981	IBM Dev
1979			Data Integration and Interface Control Documents (ICD)	1 day	Mon 7/15/19	Mon 7/15/19	1978	1980,1981	IBM Dev
1980			Updated and Completed Functional and Technical Requirements T	1 day	Tue 7/16/19	Tue 7/16/19	1979	1981	IBM BA
1981			Demo & Retrospective	1 day	Wed 7/17/19	Wed 7/17/19	1976,1977,197	1983	IBM Dev
1982			**Sprint Approval R-5 S73**	**20 days**	**Wed 7/17/19**	**Wed 8/14/19**			
1983			Submit Sprint Package	0 days	Wed 7/17/19	Wed 7/17/19	1981	1984,1989	IBM Dev
1984			Retro/Review Sprint Package	10 days	Thu 7/18/19	Wed 7/31/19	1983	1985	State Team
1985			Incorporate Comments	5 days	Thu 8/1/19	Wed 8/7/19	1984	1986	IBM Dev
1986			Final Review of Sprint Package	5 days	Thu 8/8/19	Wed 8/14/19	1985	1987	State Team
1987			Accept Sprint Package	0 days	Wed 8/14/19	Wed 8/14/19	1986	2072	State Team
1988			**R-5 Sprint 74 - Medicaid Savings Program (MSP - Reporting)**	**66.5 days**	**Thu 7/18/19**	**Mon 10/21/19**			
1989			Sprint Planning/Visioning Meeting	0.5 days	Thu 7/18/19	Thu 7/18/19	818,1983	1990	IBM Dev
1990			Create Working Software (% complete tracked by burndown)	40 days	Thu 7/18/19	Fri 9/13/19	1989	1992	IBM Dev
1991			**Create R-5 S74 Package**	**5 days**	**Fri 9/13/19**	**Fri 9/20/19**			
1992			Requirements Validation and updates to RTM, BPA and Use Cases	1 day	Fri 9/13/19	Mon 9/16/19	1990	1993,1997	IBM BA
1993			Functional Design Document (FDD)	1 day	Mon 9/16/19	Tue 9/17/19	1992	1994,1997	IBM BA
1994			Update Technical Design Document	1 day	Tue 9/17/19	Wed 9/18/19	1993	1995,1997	IBM Dev
1995			Data Integration and Interface Control Documents (ICD)	1 day	Wed 9/18/19	Thu 9/19/19	1994	1996,1997	IBM Dev
1996			Updated and Completed Functional and Technical Requirements T	1 day	Thu 9/19/19	Fri 9/20/19	1995	1997	IBM BA
1997			Demo & Retrospective	1 day	Fri 9/20/19	Mon 9/23/19	1992,1993,19!	1999	IBM Dev
1998			**Sprint Approval R-5 S74**	**20 days**	**Mon 9/23/19**	**Mon 10/21/19**			
1999			Submit Sprint Package	0 days	Mon 9/23/19	Mon 9/23/19	1997	2000	IBM Dev
2000			Retro/Review Sprint Package	10 days	Mon 9/23/19	Mon 10/7/19	1999	2001	State Team

ID		WBS	Task Name	Duration	Start	Finish	Predecessors	Successors	Resource Names
2001			Incorporate Comments	5 days	Mon 10/7/19	Mon 10/14/19	2000	2002	IBM Dev
2002			Final Review of Sprint Package	5 days	Mon 10/14/19	Mon 10/21/19	2001	2003	State Team
2003			Accept Sprint Package	0 days	Mon 10/21/19	Mon 10/21/19	2002	2072	State Team
2004			**Release 5 - Deployment**	**12 days**	**Mon 3/16/20**	**Tue 3/31/20**			
2005			**Release 5 - Deployment**	**12 days**	**Mon 3/16/20**	**Tue 3/31/20**			
2006			Release 5- First Deployment	12 days	Mon 3/16/20	Tue 3/31/20	2072	2094	IBM Dev
2007		**1.1.5**	**Data Conversion**	**415.5 days**	**Mon 8/27/18**	**Fri 4/10/20**			
2008		**1.1.5.1**	**Data Conversion Testing Report and Results**	**415.5 days**	**Mon 8/27/18**	**Fri 4/10/20**			
2009		**1.1.5.1.1**	**Submit Release 1 - Data Conversion Testing Report**	**20 days**	**Mon 8/27/18**	**Tue 9/25/18**			
2010		1.1.5.1.1.1	Submit to State	0 days	Mon 8/27/18	Mon 8/27/18	2064	75SF-40 day	IBM Dev
2011		1.1.5.1.1.2	State Review	10 days	Mon 8/27/18	Tue 9/11/18	2010	2012	State Team
2012		1.1.5.1.1.3	State Comments Received	0 days	Tue 9/11/18	Tue 9/11/18	2011	2013	IBM Dev
2013		1.1.5.1.1.4	Remediation and Integration of State Comments	5 days	Tue 9/11/18	Tue 9/18/18	2012	2014	IBM Dev
2014		1.1.5.1.1.5	Final Review	5 days	Tue 9/18/18	Tue 9/25/18	2013	2015	State Team
2015		1.1.5.1.1.6	Obtain final State Approval	0 days	Tue 9/25/18	Tue 9/25/18	2014		IBM Dev
2016		**1.1.5.1.2**	**Submit Release 2 - Data Conversion Testing Report**	**20 days**	**Wed 12/5/18**	**Wed 1/2/19**			**IBM Dev**
2017		1.1.5.1.1.1	Submit to State	0 days	Wed 12/5/18	Wed 12/5/18	2066	82SF-40 day	IBM Dev
2018		1.1.5.1.1.2	State Review	10 days	Wed 12/5/18	Wed 12/19/18	2017	2019	State Team
2019		1.1.5.1.1.3	State Comments Received	0 days	Wed 12/19/18	Wed 12/19/18	2018	2020	IBM Dev
2020		1.1.5.1.1.4	Remediation and Integration of State Comments	5 days	Wed 12/19/18	Wed 12/26/18	2019	2021	IBM Dev
2021		1.1.5.1.1.5	Final Review	5 days	Wed 12/26/18	Wed 1/2/19	2020	2022	State Team
2022		1.1.5.1.1.6	Obtain final State Approval	0 days	Wed 1/2/19	Wed 1/2/19	2021		IBM Dev
2023		**1.1.5.1.3**	**Submit Release 3 - Data Conversion Testing Report**	**20 days**	**Tue 2/19/19**	**Tue 3/19/19**			**IBM Dev**
2024		1.1.5.1.1.1	Submit to State	0 days	Tue 2/19/19	Tue 2/19/19	2068	82SF-40 day	IBM Dev
2025		1.1.5.1.1.2	State Review	10 days	Wed 2/20/19	Tue 3/5/19	2024	2026	State Team
2026		1.1.5.1.1.3	State Comments Received	0 days	Tue 3/5/19	Tue 3/5/19	2025	2027	IBM Dev
2027		1.1.5.1.1.4	Remediation and Integration of State Comments	5 days	Wed 3/6/19	Tue 3/12/19	2026	2028	IBM Dev
2028		1.1.5.1.1.5	Final Review	5 days	Wed 3/13/19	Tue 3/19/19	2027	2029	State Team
2029		1.1.5.1.1.6	Obtain final State Approval	0 days	Tue 3/19/19	Tue 3/19/19	2028		IBM Dev
2030		**1.1.5.1.4**	**Submit Release 4 - Data Conversion Testing Report**	**20 days**	**Thu 8/15/19**	**Fri 9/13/19**			**IBM Dev**
2031		1.1.5.1.1.1	Submit to State	0 days	Thu 8/15/19	Thu 8/15/19	2070	96SF-40 day	IBM Dev
2032		1.1.5.1.1.2	State Review	10 days	Thu 8/15/19	Thu 8/29/19	2031	2033	State Team
2033		1.1.5.1.1.3	State Comments Received	0 days	Thu 8/29/19	Thu 8/29/19	2032	2034	IBM Dev
2034		1.1.5.1.1.4	Remediation and Integration of State Comments	5 days	Thu 8/29/19	Fri 9/6/19	2033	2035	IBM Dev
2035		1.1.5.1.1.5	Final Review	5 days	Fri 9/6/19	Fri 9/13/19	2034	2036	State Team
2036		1.1.5.1.1.6	Obtain final State Approval	0 days	Fri 9/13/19	Fri 9/13/19	2035		IBM Dev
2037		**1.1.5.1.5**	**Submit Release 5 - Data Conversion Testing Report**	**20 days**	**Fri 3/13/20**	**Fri 4/10/20**	**2072**	**103SF-40 da**	**IBM Dev**
2038		1.1.5.1.1.1	Submit to State	0 days	Fri 3/13/20	Fri 3/13/20	2072	103SF-40 da	IBM Dev
2039		1.1.5.1.1.2	State Review	10 days	Mon 3/16/20	Fri 3/27/20	2066	2040	State Team
2040		1.1.5.1.1.3	State Comments Received	0 days	Fri 3/27/20	Fri 3/27/20	2039	2041	IBM Dev
2041		1.1.5.1.1.4	Remediation and Integration of State Comments	5 days	Mon 3/30/20	Fri 4/3/20	2040	2042	IBM Dev
2042		1.1.5.1.1.5	Final Review	5 days	Mon 4/6/20	Fri 4/10/20	2041	2043	State Team
2043		1.1.5.1.1.6	Obtain final State Approval	0 days	Fri 4/10/20	Fri 4/10/20	2042		IBM Dev
2044		**1.1.6**	**Testing**	**455.5 days**	**Mon 6/4/18**	**Fri 3/13/20**			
2045		**1.1.6.1**	**Complete SIT Readiness Checklist**	**406.5 days**	**Fri 6/29/18**	**Fri 1/31/20**			
2046		1.1.6.1.1	Release 1 SIT Readiness Checklist	1 day	Fri 6/29/18	Mon 7/2/18	2064SF-10 day		IBM QA
2047		1.1.6.1.2	Release 2 SIT Readiness Checklist	1 day	Mon 10/22/18	Tue 10/23/18	2066SF-10 day		IBM QA
2048		1.1.6.1.3	Release 3 SIT Readiness Checklist	1 day	Fri 1/4/19	Mon 1/7/19	2068SF-10 day		IBM QA
2049		1.1.6.1.4	Release 4 SIT Readiness Checklist	1 day	Wed 7/3/19	Thu 7/4/19	2070SF-10 day		IBM QA
2050		1.1.6.1.5	Release 5 SIT Readiness Checklist	1 day	Thu 1/30/20	Fri 1/31/20	2072SF-10 day		IBM QA

ID		WBS	Task Name	Duration	Start	Finish	Predecessors	Successors	Resource Names
2051		**1.1.6.2**	**SIT Testing Report and Results**	**435.5 days**	**Mon 6/4/18**	**Thu 2/13/20**			
2052		1.1.6.2.1	Release 1 SIT Testing Report and Results	30 days	Mon 6/4/18	Mon 7/16/18	2064SS-30 day	2058	IBM QA
2053		1.1.6.2.2	Release 2 SIT Testing Report and Results	30 days	Tue 9/25/18	Tue 11/6/18	2066SS-30 day	2059	IBM QA
2054		1.1.6.2.3	Release 3 SIT Testing Report and Results	30 days	Mon 12/10/18	Fri 1/18/19	2068SS-30 day	2060	IBM QA
2055		1.1.6.2.4	Release 4 SIT Testing Report and Results	30 days	Thu 6/6/19	Thu 7/18/19	2070SS-30 day	2061	IBM QA
2056		1.1.6.2.5	Release 5 SIT Testing Report and Results	30 days	Thu 1/2/20	Thu 2/13/20	2072SS-30 day	2062	IBM QA
2057		**1.1.6.3**	**Complete UAT Readiness Checklist**	**406.5 days**	**Mon 7/16/18**	**Fri 2/14/20**			
2058		1.1.6.3.1	Release 1 UAT Readiness Checklist	1 day	Mon 7/16/18	Tue 7/17/18	2052		IBM QA
2059		1.1.6.3.2	Release 2 UAT Readiness Checklist	1 day	Tue 11/6/18	Wed 11/7/18	2053		IBM QA
2060		1.1.6.3.3	Release 3 UAT Readiness Checklist	1 day	Tue 1/22/19	Tue 1/22/19	2054		IBM QA
2061		1.1.6.3.4	Release 4 UAT Readiness Checklist	1 day	Thu 7/18/19	Fri 7/19/19	2055		IBM QA
2062			Release 5 UAT Readiness Checklist	1 day	Fri 2/14/20	Fri 2/14/20	2056		IBM QA
2063		**1.1.6.4**	**Release 1 - UAT**	**30 days**	**Mon 7/16/18**	**Mon 8/27/18**			
2064			Release 1 UAT	30 days	Mon 7/16/18	Mon 8/27/18	171,187,203,2	333,2074,2C	IBM QA
2065		**1.1.6.5**	**Release 2 - UAT**	**20 days**	**Tue 11/6/18**	**Wed 12/5/18**			
2066			Release 2 UAT	20 days	Tue 11/6/18	Wed 12/5/18	352,368,384,4	418,2075,2C	IBM QA
2067		**1.1.6.6**	**Release 3 - UAT**	**20 days**	**Tue 1/22/19**	**Tue 2/19/19**			
2068			Release 3 UAT	20 days	Tue 1/22/19	Tue 2/19/19	438,454,470,4	634,2076,2C	IBM QA
2069		**1.1.6.7**	**Release 4 - UAT**	**20 days**	**Thu 7/18/19**	**Thu 8/15/19**		**816**	
2070			Release 4 UAT	20 days	Thu 7/18/19	Thu 8/15/19	653,669,685,7	2055SS-30 d	IBM QA
2071		**1.1.6.8**	**Release 5 - UAT**	**20 days**	**Fri 2/14/20**	**Fri 3/13/20**			
2072			Release 5 UAT	20 days	Fri 2/14/20	Fri 3/13/20	835,851,867,8	2006,2056S	IBM QA
2073		**1.1.6.9**	**UAT Testing Report and Results**	**395.5 days**	**Mon 8/27/18**	**Fri 3/13/20**			
2074			Release 1 UAT Testing Report and Results	0 days	Mon 8/27/18	Mon 8/27/18	2064		IBM QA
2075			Release 2 UAT Testing Report and Results	0 days	Wed 12/5/18	Wed 12/5/18	2066		IBM QA
2076			Release 3 UAT Testing Report and Results	0 days	Tue 2/19/19	Tue 2/19/19	2068		IBM QA
2077			Release 4 UAT Testing Report and Results	0 days	Thu 8/15/19	Thu 8/15/19	2070		IBM QA
2078			Release 5 UAT Testing Report and Results	0 days	Fri 3/13/20	Fri 3/13/20	2072		IBM QA
2079		**1.1.7**	**Organizational Change Management, Training, and Knowledge Transfer (OCM, T, &**	**483 days**	**Wed 6/13/18**	**Thu 4/30/20**			
2080		1.1.7.1	OCM/Training - Release 1 (Client Portal & Integrated Application)	77 days	Wed 6/13/18	Fri 9/28/18			IBM OCM/Training
2081		1.1.7.2	OCM/Training - Point Release 2 (Integrated Application Interface)	83 days	Mon 10/15/18	Fri 2/8/19			IBM OCM/Training
2082		**1.1.7.3**	**OCM/Training - Release 3 (SNAP)**	**192 days**	**Mon 12/17/18**	**Mon 9/16/19**			
2083			OCM/Training - Release 3 (SNAP) Portion 1	63 days	Mon 12/17/18	Fri 3/15/19			IBM OCM/Training
2084			OCM/Training - Release 3 (SNAP) Portion 2	75 days	Mon 6/3/19	Mon 9/16/19			IBM OCM/Training
2085		1.1.7.4	OCM/Training- Release 4 (TANF)	75 days	Mon 6/3/19	Mon 9/16/19			IBM OCM/Training
2086		1.1.7.5	OCM/Training - Release 5 (Medicaid)	77 days	Mon 1/13/20	Thu 4/30/20			IBM OCM/Training
2087		**1.1.8**	**Pilot, Roll-out, and Go-Live**	**395.5 days**	**Thu 9/13/18**	**Tue 3/31/20**			
2088		1.1.8.1	Release 1 - Client Portal & Integrated Application Go Live	0 days	Thu 9/13/18	Thu 9/13/18	333	32,2096,21C	IBM Dev
2089		1.1.8.2	Release 2 - Integrated Application Interface Go Live	0 days	Fri 12/21/18	Fri 12/21/18	418	33,2097,21C	IBM Dev
2090		1.1.8.3	Release 3 - SNAP Go Live	0 days	Tue 3/5/19	Tue 3/5/19	634	34,2098,211	IBM Dev
2091		**1.1.8.4**	**Release 3 - Pilot Implementation**	**60 days**	**Wed 3/6/19**	**Wed 5/29/19**			
2092			Release 3 - Pilot Implementation	60 days	Wed 3/6/19	Wed 5/29/19	634	617	IBM Dev
2093		1.1.8.5	Release 4 - TANF Go Live	0 days	Thu 8/29/19	Thu 8/29/19	816	35,2099,211	IBM Dev
2094		1.1.8.6	Release 5 - Medicaid Go Live	0 days	Tue 3/31/20	Tue 3/31/20	2006	36,2100,212	IBM Dev
2095		**1.1.9**	**Warrany Support**	**652.5 days**	**Thu 9/13/18**	**Mon 3/29/21**			
2096		1.1.9.1	Warranty Support - Release 1 - Client Portal & Integrated Application	257 days	Thu 9/13/18	Mon 9/16/19	2088		IBM M&O
2097		1.1.9.2	Warranty Support - Release 2 - Integrated Application Interface	257 days	Fri 12/21/18	Tue 12/24/19	2089		IBM M&O
2098		1.1.9.3	Warranty Support - Release 3 - SNAP	257 days	Wed 3/6/19	Thu 3/5/20	2090		IBM M&O
2099		1.1.9.4	Warranty Support - Release 4 - TANF	257 days	Thu 8/29/19	Mon 8/31/20	2093		IBM M&O
2100		1.1.9.5	Warranty Support - Release 5 - Medicaid	257 days	Wed 4/1/20	Mon 3/29/21	2094		IBM M&O

ID		WBS	Task Name	Duration	Start	Finish	Predecessors	Successors	Resource Names
2101		**1.2**	**M&O**	**445.5 days**	**Thu 9/13/18**	**Wed 6/10/20**			
2102		**1.2.1**	**M&O Release 1 - Client Portal & Integrated Application**	**45 days**	**Thu 9/13/18**	**Thu 11/15/18**			
2103		1.2.1.1	Sprint Overall Transition Planning (OTP)	10 days	Thu 9/13/18	Thu 9/27/18	2088	2104	IBM M&O
2104		1.2.1.2	Release 1 - Sprint 1 M&O	20 days	Thu 9/27/18	Thu 10/25/18	2103	2105,2106	IBM M&O
2105		1.2.1.3	Release 1 - Sprint 2 M&O	15 days	Thu 10/25/18	Thu 11/15/18	2104	2106	IBM M&O
2106		1.2.1.4	Release 1 - Steady State	0 days	Thu 11/15/18	Thu 11/15/18	2104,2105		IBM M&O
2107		**1.2.2**	**M&O Release 2 - Integrated Application Interface**	**40 days**	**Fri 12/21/18**	**Tue 2/19/19**			
2108		1.2.2.1	Sprint Overall Transition Planning (OTP)	10 days	Fri 12/21/18	Fri 1/4/19	2089	2109	IBM M&O
2109		1.2.2.2	Release 2 - Sprint 1 M&O	15 days	Fri 1/4/19	Mon 1/28/19	2108	2110,2111	IBM M&O
2110		1.2.2.3	Release 2 - Sprint 2 M&O	15 days	Mon 1/28/19	Tue 2/19/19	2109	2111	IBM M&O
2111		1.2.2.4	Release 2 - Steady State	0 days	Tue 2/19/19	Tue 2/19/19	2109,2110		IBM M&O
2112		**1.2.3**	**M&O Release 3 - SNAP**	**50 days**	**Wed 3/6/19**	**Tue 5/14/19**			
2113		1.2.3.1	Sprint Overall Transition Planning (OTP)	10 days	Wed 3/6/19	Tue 3/19/19	2090	2114	IBM M&O
2114		1.2.3.2	Release 3 - Sprint 1 M&O	20 days	Wed 3/20/19	Tue 4/16/19	2113	2115,2116	IBM M&O
2115		1.2.3.3	Release 3 - Sprint 2 M&O	20 days	Wed 4/17/19	Tue 5/14/19	2114	2116	IBM M&O
2116		1.2.3.4	Release 3 - Steady State	0 days	Tue 5/14/19	Tue 5/14/19	2114,2115		IBM M&O
2117		**1.2.4**	**M&O Release 4 - TANF**	**50 days**	**Thu 8/29/19**	**Fri 11/8/19**			
2118		1.2.4.1	Sprint Overall Transition Planning (OTP)	10 days	Thu 8/29/19	Fri 9/13/19	2093	2119	IBM M&O
2119		1.2.4.2	Release 4 - Sprint 1 M&O	20 days	Fri 9/13/19	Fri 10/11/19	2118	2120,2121	IBM M&O
2120		1.2.4.3	Release 4 - Sprint 2 M&O	20 days	Fri 10/11/19	Fri 11/8/19	2119	2121	IBM M&O
2121		1.2.4.4	Release 4 - Steady State	0 days	Fri 11/8/19	Fri 11/8/19	2119,2120		IBM M&O
2122		**1.2.5**	**M&O Release 5 - Medicaid**	**50 days**	**Wed 4/1/20**	**Wed 6/10/20**			
2123		1.2.5.1	Sprint Overall Transition Planning (OTP)	10 days	Wed 4/1/20	Tue 4/14/20	2094	2124	IBM M&O
2124		1.2.5.2	Release 5 - Sprint 1 M&O	20 days	Wed 4/15/20	Tue 5/12/20	2123	2125,2126	IBM M&O
2125		1.2.5.3	Release 5 - Sprint 2 M&O	20 days	Wed 5/13/20	Wed 6/10/20	2124	2126	IBM M&O
2126		1.2.5.4	Release 5 - Steady State	0 days	Wed 6/10/20	Wed 6/10/20	2124,2125		IBM M&O

State of Arkansas Terms & Conditions of this RFP and Any Resulting Contract

Response Template RFP #: SP-17-0012

Template T-15

State of Arkansas Terms & Conditions of this RFP and Any Resulting Contract

Including Response Template Instructions

RFP #: SP-17-0012

Table of Contents

1.0 Instructions

The Vendor **must** review and sign Template T-15, "Terms & Conditions of this RFP and Any Resulting Contract" in multiple sections in order to note the Vendor's acknowledgement of and intent to comply with all Mandatory Terms and Conditions, including General Contractual Requirements and Standard Terms and Conditions.

All signatures in this template are required to be wet signatures (in ink, not electronic).

2.0 General Contractual Requirements

Vendors must strictly adhere to the Mandatory Terms and Conditions, including General Contractual Requirements, of this RFP. Failure to follow any instruction within this RFP may, at the State's sole discretion, result in the disqualification of the Vendor's Proposal. Rejection of the Mandatory Terms and Conditions, including General Contractual Requirements, in whole or in part, is grounds for the State's rejection of a bidder's proposal.

Payment and Invoice Provisions

- All invoices **shall** be forwarded to:

  Arkansas Department of Human Services

  Division of Medical Services

  Financial Activities

  P.O. Box 1437, Slot S416

  Little Rock, AR 72203
- Payment will be made in accordance with applicable State of Arkansas accounting procedures upon acceptance goods and services by the agency.
- The State shall not be invoiced in advance of delivery and acceptance of any goods or services.
- Payment will be made only after the vendor has successfully satisfied the agency as to the reliability and effectiveness of the goods or services purchased as a whole.
- The vendor should invoice the agency by an itemized list of charges. The agency's Purchase Order Number and/or the Contract Number should be referenced on each invoice.
- Other sections of this *Bid Solicitation* may contain additional Requirements for invoicing.
- Selected vendor **must** be registered to receive payment and future *Bid Solicitation* notifications. Vendors may register on-line at https://www.ark.org/vendor/index.html.

2.1 General Information

- The State **shall not** lease any equipment or software for a period of time which continues past the end of a fiscal year unless the contract allows for cancellation by the State Procurement Official upon a 30-day written notice to the vendor/lessor.
- The State **shall not** contract with another party to indemnify and defend that party for any liability and damages.

- The State **shall not** pay damages, legal expenses, or other costs and expenses of any other party.
- The State **shall not** continue a contract once any equipment subject to the contract has been repossessed.
- Any litigation involving the State **must** take place in Pulaski County, Arkansas.
- The State **shall not** agree to any provision of a contract which violates the laws or constitution of the State of Arkansas.
- The State **shall not** enter a contract which grants to another party any remedies other than the following:
  - The right to possession.
  - The right to accrued payments.
  - The right to expenses of de-installation.
  - The right to expenses of repair to return the equipment to normal working order, normal wear and tear excluded.
  - The right to recover only amounts due at the time of repossession and any unamortized nonrecurring cost as allowed by Arkansas Law.
- The laws of the State of Arkansas **shall** govern this contract.
- A contract **shall not** be effective prior to award being made by a State Procurement Official and any legislative review, if necessary.
- In a contract with another party, the State will accept the risk of loss of the equipment or software and pay for any destruction, loss, or damage of the equipment or software while the State has such risk, if:
  - The extent of liability for such risk is based upon the purchase price of the equipment or software at the time of any loss, and
  - The contract has required the State to carry insurance for such risk.

2.2 Conditions of the Contract

- The vendor **shall** at all times observe and comply with federal and State of Arkansas laws, local laws, ordinances, orders, and regulations existing at the time of, or enacted subsequent to the execution of a resulting contract which in any manner affect the completion of the work.
- The vendor **shall** indemnify and save harmless the agency and all its officers, representatives, agents, and employees against any claim or liability arising from or based upon the violation of any such law, ordinance, regulation, order or decree by an employee, representative, or subcontractor of the vendor.

2.3 Statement of Liability

- The State will demonstrate reasonable care but will not be liable in the event of loss, destruction, or theft of vendor-owned equipment or software and technical and business or operations literature to be delivered or to be used in the installation of deliverables and services. The vendor **shall** retain total liability for equipment, software and technical and business or operations literature. The State **shall** not at any time be responsible for or accept liability for any vendor-owned items.

- The vendor's liability for damages to the State **shall** be limited to the value of the Contract or $5,000,000, whichever is higher. The foregoing limitation of liability **shall not** apply to claims for infringement of United States patent, copyright, trademarks or trade secrets; to claims for personal injury or damage to property caused by the gross negligence or willful misconduct of the vendor; to claims covered by other specific provisions of the Contract calling for damages; or to court costs or attorney's fees awarded by a court in addition to damages after litigation based on the Contract. The vendor and the State **shall not** be liable to each other, regardless of the form of action, for consequential, incidental, indirect, or special damages. This limitation of liability **shall not** apply to claims for infringement of United States patent, copyright, trademark or trade secrets; to claims for personal injury or damage to property caused by the gross negligence or willful misconduct of the vendor; to claims covered by other specific provisions of the Contract calling for damages; or to court costs or attorney's fees awarded by a court in addition to damages after litigation based on the Contract.
- Language in these terms and conditions **shall not** be construed or deemed as the State's waiver of its right of sovereign immunity. The vendor agrees that any claims against the State, whether sounding in tort or in contract, **shall** be brought before the Arkansas Claims Commission as provided by Arkansas law, and **shall** be governed accordingly.

2.4 Record Retention

- The vendor **shall** maintain all pertinent financial and accounting records and evidence pertaining to the contract in accordance with generally accepted principles of accounting and as specified by the State of Arkansas Law. Upon request, access to financial and accounting records **shall** be granted to State or Federal Government entities or any of their duly authorized representatives.
- Financial and accounting records **shall** be made available, upon request, to the State of Arkansas's designee(s) at any time during the contract period and any extension thereof, and for five (5) years from expiration date and final payment on the contract or extension thereof.
- Other sections of this *Bid Solicitation* may contain additional Requirements regarding record retention.

2.5 Price Escalation

- Price increases may be considered at the time of contract renewal.
- The vendor **must** provide to OSP a written request for the price increase. The request **must** include supporting documentation demonstrating that the increase in contract price is based on an increase in market price. OSP **shall** have the right to require additional information pertaining to the requested increase.
- Increases **shall not** be considered to increase profit or margins.
- OSP **shall** have the right to approve or deny the request.

2.6 Confidentiality

- The vendor, vendor's subsidiaries, and vendor's employees, including subcontractors of the vendor, **shall** be bound to all laws and to all Requirements set forth in this *Bid Solicitation* concerning the confidentiality and secure handling of information of which they may become aware of during the course of providing services under a resulting contract.
- Consistent or uncorrected breaches of confidentiality is grounds for cancellation of the contract. The State **shall** have the right to cancel the contract on these grounds.
- Previous sections of this *Bid Solicitation* may contain additional confidentiality Requirements.

2.7 Contract Interpretation

- If the State and vendor interpret contract provisions or specifications differently, either party may request clarification. However, if mutual agreement cannot be reached, the determination of the State **shall** be final and controlling.

2.8 Cancellation

- In the event the State no longer needs the service or commodity specified in the contract or purchase order for any reason, including without limitation, program changes, changes in laws, rules, or regulations, relocation of offices, or lack of appropriated funding, the State **shall** give the vendor written notice of cancellation, specifying the terms and the effective date of contact termination. The effective date of termination **shall** be 30 days from the date of notification, unless a longer timeframe is specified in the notification.
- Upon default of a vendor, the State **shall** agree to pay only sums due for goods and services received and accepted up to cancellation of the contract.

2.9 Severability

- If any provision of the contract, including items incorporated by reference, is declared or found to be illegal, unenforceable, or void, then both the agency and the vendor **shall** be relieved of all obligations arising under such provision. If the remainder of the contract is capable of performance, it **shall not** be affected by such declaration or finding and **shall** be fully performed.

2.10 Vendor's Acknowledgement of General Contractual Requirements

Please provide a signature stipulating the Vendor's acknowledgement of these General Contractual Requirements.

Print Name/Signature of Authorized Personnel	Date

3.0 Standard Terms and Conditions

Vendors must strictly adhere to the Standard Terms and Conditions of this RFP. Rejection of the Standard Terms and Conditions, in whole or in part, may be cause for the State's rejection of a bidder's proposal.

- **GENERAL**: Any special terms and conditions included in this solicitation **shall** override these Standard Terms and Conditions. The Standard Terms and Conditions and any special terms and conditions **shall** become part of any contract entered into if any or all parts of the bid are accepted by the State of Arkansas.
- **ACCEPTANCE AND REJECTION**: The State **shall** have the right to accept or reject all or any part of a bid, accept or reject all or any and all bids, to waive minor technicalities or irregularities, and to award the bid to the bidder that the State feels will best serve the interest of the State.
- **BID SUBMISSION**: Original Proposal Packets **must** be submitted to the Office of State Procurement on or before the date and time specified for bid opening. The Proposal Packet **must** contain all documents, information, and attachments as specifically and expressly required in the *Bid Solicitation*. The bid **must** be typed or printed in ink. The signature **must** be in ink. Unsigned bids **shall** be disqualified. The person signing the bid should show title or authority to bind his firm in a contract. Multiple proposals **must** be placed in separate packages and be completely and properly identified. Late bids **shall not** be considered under any circumstances.
- **PRICES**: Bid unit price F.O.B. destination. In case of errors in extension, unit prices **shall** govern. Prices **shall** be firm and **shall not** be subject to escalation unless otherwise specified in the *Bid Solicitation*. Unless otherwise specified, the bid **must** be firm for acceptance for thirty days from the bid opening date. "Discount from list" bids are not acceptable unless requested in the *Bid Solicitation*.
- **QUANTITIES**: Quantities stated in a *Bid Solicitation* for term contracts are estimates only, and are not guaranteed. Vendor **must** bid unit price on the estimated quantity and unit of measure specified. The State may order more or less than the estimated quantity on term contracts. Quantities stated on firm contracts are actual Requirements of the ordering agency.
- **BRAND NAME REFERENCES**: Unless otherwise specified in the *Bid Solicitation*, any catalog brand name or manufacturer reference used in the *Bid Solicitation* is descriptive only, not restrictive, and used to indicate the type and quality desired. Bids on brands of like nature and quality will be considered. If bidding on other than referenced specifications, the bid **must** show the manufacturer, brand, or trade name, and other descriptions, and should include the manufacturer's illustrations and complete descriptions of the product offered. The State **shall** have the right to determine whether a substitute offered is equivalent to and meets the standards of the item specified, and the State may require the vendor to supply additional descriptive material. The vendor **shall** guarantee that the product offered will meet or exceed specifications identified in this *Bid Solicitation*. Vendors not bidding an alternate to the referenced brand name or manufacturer **shall** be required to furnish the product according to brand names, numbers, etc., as specified in the solicitation.
- **GUARANTY**: All items bid **shall** be newly manufactured, in first-class condition, latest model and design, including, where applicable, containers suitable for shipment and storage, unless otherwise indicated in the *Bid Solicitation*. The vendor hereby

guarantees that everything furnished hereunder **shall** be free from defects in design, workmanship and material, that if sold by drawing, sample or specification, it **shall** conform thereto and **shall** serve the function for which it was furnished. The vendor **shall** further guarantee that if the items furnished hereunder are to be installed by the vendor, such items **shall** function properly when installed. The vendor **shall** guarantee that all applicable laws have been complied with relating to construction, packaging, labeling and registration. The vendor's obligations under this paragraph **shall** survive for a period of one year from the date of delivery, unless otherwise specified herein.

- **SAMPLES**: Samples or demonstrators, when requested, **must** be furnished free of expense to the State. Each sample should be marked with the vendor's name and address, bid or contract number, and item number. If requested, samples that are not destroyed during reasonable examination will be returned at vendor's expense. After reasonable examination, all demonstrators will be returned at vendor's expense.
- **TESTING PROCEDURES FOR SPECIFICATIONS COMPLIANCE**: Tests may be performed on samples or demonstrators submitted with the bid or on samples taken from the regular shipment. In the event products tested fail to meet or exceed all conditions and Requirements of the specifications, the cost of the sample used and the reasonable cost of the testing **shall** be borne by the vendor.
- **AMENDMENTS**: Vendor's proposals cannot be altered or amended after the bid opening except as permitted by regulation.
- **TAXES AND TRADE DISCOUNTS**: Do not include State or local sales taxes in the bid price. Trade discounts should be deducted from the unit price and the net price should be shown in the bid.
- **AWARD**: Term Contract: A contract award will be issued to the successful vendor. It results in a binding obligation without further action by either party. This award does not authorize shipment. Shipment is authorized by the receipt of a purchase order from the ordering agency. Firm Contract: A written State purchase order authorizing shipment will be furnished to the successful vendor.
- **DELIVERY ON FIRM CONTRACTS**: This solicitation shows the number of days to place a commodity in the ordering agency's designated location under normal conditions. If the vendor cannot meet the stated delivery, alternate delivery schedules may become a factor in an award. The Office of State Procurement **shall** have the right to extend delivery if reasons appear valid. If the alternative delivery schedule is not acceptable, the agency may buy elsewhere and any additional cost **shall** be borne by the vendor.
- **DELIVERY REQUIREMENTS**: No substitutions or cancellations are permitted without written approval of the Office of State Procurement. Delivery **shall** be made during agency work hours only 8:00 a.m. to 4:30 p.m. Central Time, unless prior approval for other delivery has been obtained from the agency. Packing memoranda **shall** be enclosed with each shipment.
- **STORAGE**: The ordering agency is responsible for storage if the contractor delivers within the time required and the agency cannot accept delivery.
- **DEFAULT**: All commodities furnished **shall** be subject to inspection and acceptance of the ordering agency after delivery. Back orders, default in promised delivery, or failure to meet specifications **shall** authorize the Office of State Procurement to cancel this contract, or any portion of it, and reasonably purchase commodities elsewhere and

charge full increase in cost and handling, if any, to the defaulting contractor. The contractor **must** give written notice to the Office of State Procurement and ordering agency of the reason for default and the expected delivery date. Consistent failure to meet delivery without a valid reason may cause removal from the vendors list or suspension of eligibility for award.

- **VARIATION IN QUANTITY**: The State assumes no liability for commodities produced, processed, or shipped in excess of the amount specified on the agency's purchase order.
- **INVOICING**: The contractor **shall** be paid upon the completion of all of the following: (1) submission of an original and the specified number of copies of a properly itemized invoice showing the bid and purchase order numbers, where itemized in the *Bid Solicitation*, (2) delivery and acceptance of the commodities, and (3) proper and legal processing of the invoice by all necessary State agencies. Invoices **must** be sent to the "Invoice To" point shown on the purchase order.
- **STATE PROPERTY**: Any specifications, drawings, technical information, dies, cuts, negatives, positives, data, or any other commodity furnished to the contractor hereunder or in contemplation hereof or developed by the contractor for use hereunder **shall** remain property of the State, **shall** be kept confidential, **shall** be used only as expressly authorized, and **shall** be returned at the contractor's expense to the F.O.B. point provided by the agency or by OSP. Vendor **shall** properly identify items being returned.
- **PATENTS OR COPYRIGHTS**: The contractor shall indemnify and hold the State harmless from all claims, damages, and costs including attorneys' fees, arising from infringement of patents or copyrights.
- **ASSIGNMENT**: Any contract entered into pursuant to this solicitation **shall not** be assignable nor the duties thereunder delegable by either party without the written consent of the other party of the contract.
- **CLAIMS**: Any claims the Contractor may assert under this contract shall be brought before the Arkansas State Claims Commission (“Commission”), which shall have exclusive jurisdiction over any and all claims that the Contactor may have arising from or in connection with this contract. Unless the Contractor’s obligations to perform are terminated by the State, the Contractor shall continue to provide the Services under this contract even if the Contractor has a claim pending before the Commission.
- **CANCELLATION**: In the event the State no longer needs the commodities or services specified for any reason, (e.g., program changes; changes in laws, rules or regulations; relocation of offices; lack of appropriated funding, etc.), the State **shall** have the right to cancel the contract or purchase order by giving the vendor written notice of such cancellation thirty (30) days prior to the date of cancellation.
- Any delivered but unpaid for goods will be returned in normal condition to the contractor by the State. If the State is unable to return the commodities in normal condition and there are no funds legally available to pay for the goods, the contractor may file a claim with the Arkansas State Claims Commission under the laws and regulations governing the filing of such claims. If upon cancellation, the contractor has provided services which the State has accepted but not paid for, the contractor may file a claim with the Commission.
- **NOTHING IN THIS CONTRACT SHALL BE DEEMED A WAIVER OF THE STATE’S RIGHT TO SOVEREIGN IMMUNITY.**

- **DISCRIMINATION**: In order to comply with the provision of Act 954 of 1977, relating to unfair employment practices, the vendor agrees that: (a) the vendor **shall not** discriminate against any employee or applicant for employment because of race, sex, color, age, religion, handicap, or national origin; (b) in all solicitations or advertisements for employees, the vendor **shall** state that all qualified applicants **shall** receive consideration without regard to race, color, sex, age, religion, handicap, or national origin; (c) the vendor will furnish such relevant information and reports as requested by the Human Resources Commission for the purpose of determining compliance with the statute; (d) failure of the vendor to comply with the statute, the rules and regulations promulgated thereunder and this nondiscrimination clause **shall** be deemed a breach of contract and it may be cancelled, terminated or suspended in whole or in part; (e) the vendor **shall** include the provisions of above items (a) through (d) in every subcontract so that such provisions **shall** be binding upon such subcontractor or vendor.
- **CONTINGENT FEE**: The vendor guarantees that he has not retained a person to solicit or secure this contract upon an agreement or understanding for a commission, percentage, brokerage or contingent fee, except for retention of bona fide employees or bona fide established commercial selling agencies maintained by the vendor for the purpose of securing business.
- **ANTITRUST ASSIGNMENT**: As part of the consideration for entering into any contract pursuant to this solicitation, the vendor named on the Submission Cover Sheet (Template T-1, Cover Letter and Executive Summary) for this solicitation, acting herein by the authorized individual or its duly authorized agent, hereby assigns, sells and transfers to the State of Arkansas all rights, title and interest in and to all causes of action it may have under the antitrust laws of the United States or this State for price fixing, which causes of action have accrued prior to the date of this assignment and which relate solely to the particular goods or services purchased or produced by this State pursuant to this contract.
- **DISCLOSURE**: Failure to make any disclosure required by Governor's Executive Order 98-04, or any violation of any rule, regulation, or policy adopted pursuant to that order, **shall** be a material breach of the terms of this contract. Any contractor, whether an individual or entity, who fails to make the required disclosure or who violates any rule, regulation, or policy **shall** be subject to all legal remedies available to the agency.
- SOFTWARE AND OWNERSHIP RIGHTS:

  The State of Arkansas will have all ownership rights in any completed system including all software or modifications thereof and associated materials, work products, data, models, forms, source code, procedures, manuals, system descriptions, workflows, and other Intellectual Property developed by the Vendor(s) under this RFP and any resulting contract, with the exception of proprietary operating/vendor software packages which are provided at established catalog or market prices and sold or leased to the general public. All agencies of the federal government shall have a royalty-free, nonexclusive, and irrevocable license to reproduce, publish, or otherwise use and to authorize others to use for Federal Government purposes, such software, modifications, and documentation in accordance with 45 CFR 95.617 and 45 CFR 95 Subpart F.

  The State of Arkansas reserves the right to use any and all ideas presented in a proposal unless the respondent presents a valid legal case that such ideas are trade secret or confidential information, and identifies the information as such in its proposal. A respondent may not object to the use of ideas that are not the respondent‘s intellectual property and so designated in the proposal that: (1) were known to State of Arkansas before the submission of the proposal, (2) were in the public domain through no fault of State of Arkansas, or (3) became properly known to State of Arkansas after proposal submission through other sources or through acceptance of the proposal

FNS REQUIRED FEDERAL PROVISIONS

The Implementation contractor must comply with the following Federal provisions:

1. Executive Order 11246, entitled "Equal Employment Opportunity," as amended by Executive Order 11375, and as supplemented by the Department of Labor Regulations (41 CFR Part 60): The Executive Order prohibits federal contractors and federally-assisted construction contractors and subcontractors who do over $10,000 in Government business in one year from discriminating in employment decisions on the basis of race, color, religion, sex, or national origin. The Executive Order also requires Government contractors to take affirmative action to ensure that equal opportunity is provided in all aspects of their employment.
2. The Clean Air Act, Section 306:
   a. No Federal agency may enter into any contract with any person who is convicted of any offense under section 113(c) for the procurement of goods, materials, and services to perform such contract at any facility at which the violation which gave rise to such conviction occurred if such facility is owned, leased, or supervised by such person. The prohibition in the preceding sentence shall continue until the Administrator certifies that the condition giving rise to such a conviction has been corrected. For convictions arising under section 113(c)(2), the condition giving rise to the conviction also shall be considered to include any substantive violation of this Act associated with the violation of 113(c)(2). The Administrator may extend this prohibition to other facilities owned or operated by the convicted person.
   b. The Administrator shall establish procedures to provide all Federal agencies with the notification necessary for the purposes of subsection (a).
   c. In order to implement the purposes and policy of this Act to protect and enhance the quality of the Nation's air, the President shall, not more than 180 days after enactment of the Clean Air Amendments of 1970 cause to be issued an order (1) requiring each Federal agency authorized to enter into contracts and each Federal agency which is empowered to extend Federal assistance by way of grant, loan, or contract to effectuate the purpose and policy of this Act in such contracting or assistance activities, and (2) setting forth procedures, sanctions, penalties, and such other provisions, as the President determines necessary to carry out such requirement.
   d. The President may exempt any contract, loan, or grant from all or part of the provisions of this section where he determines such exemption is necessary in the paramount interest of the United States and he shall notify the Congress of such exemption.
   e. The President shall annually report to the Congress on measures taken toward implementing the purpose and intent of this section, including but not limited to the progress and problems associated with implementation of this section. [42 U.S.C. 7606]
3. The Clean Water Act:
   a. No Federal agency may enter into any contract with any person who has been convicted of any offense under Section 309(c) of this Act for the procurement of goods, materials,

and services if such contract is to be performed at any facility at which the violation which gave rise to such conviction occurred, and if such facility is owned, leased, or supervised by such person. The prohibition in preceding sentence shall continue until the Administrator certifies that the condition giving rise to such conviction has been corrected.

b. The Administrator shall establish procedures to provide all Federal agencies with the notification necessary for the purposes of subsection (a) of this section.

c. In order to implement the purposes and policy of this Act to protect and enhance the quality of the Nation's water, the President shall, not more than 180 days after the enactment of this Act, cause to be issued an order:

   (1) requiring each Federal agency authorized to enter into contracts and each Federal agency which is empowered to extend Federal assistance by way of grant, loan, or contract to effectuate the purpose and policy of this Act in such contracting or assistance activities, and

   (2) setting forth procedures, sanctions, penalties, and such other provisions, as the President determines necessary to carry out such requirement.

d. The President may exempt any contract, loan, or grant from all or part of the provisions of this section where he determines such exemption is necessary in the paramount interest of the United States and he shall notify the Congress of such exemption.

e. The President shall annually report to the Congress on measures taken in compliance with the purpose and intent of this section, including, but not limited to, the progress and problems associated with such compliance.

f. (1) No certification by a contractor, and no contract clause, may be required in the case of a contract for the acquisition of commercial items in order to implement a prohibition or requirement of this section or a prohibition or requirement issued in the implementation of this section.

   (2) In paragraph (1), the term "commercial item" has the meaning given such term in section 4(12) of the Office of Federal Procurement Policy Act (41 U.S.C. 403(12)).

4. The Anti-Lobbying Act: This Act prohibits the recipients of federal contracts, grants, and loans from using appropriated funds for lobbying the Executive or Legislative Branches of the federal government in connection with a specific contract, grant, or loan. As required by Section 1352, Title 31 of the U.S. Code and implemented at 34 CFR Part 82 for persons entering into a grant or cooperative agreement over $100,000, as defined at 34 CFR Part 82, Section 82.105 and 82.110, the applicant certifies that:

   a. No federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a member of Congress, an officer or employee of Congress, or an employee of a member of Congress in connection with the making of any federal grant, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any federal grant or cooperative agreement;

   b. If any funds other than federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a member of Congress, an officer or employee of Congress, or an employee of a member of Confess in connection with this federal grantor o cooperative agreement, the undersigned shall complete and submit Standard Form – LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions;

c. The undersigned shall require that the language of this certification be include in the award documents for all sub-awards at all tiers (including sub-grants, contracts under grants and cooperative agreements, and subcontracts) and that all sub-recipients shall certify and disclose accordingly.

5. Americans with Disabilities Act: This Act (28 CFR Part 35, Title II, Subtitle A) prohibits discrimination on the basis of disability in all services, programs, and activities provided to the public by State and local governments, except public transportation services.

6. Drug Free Workplace Statement: The Federal government implemented the Drug Free Workplace Act of 1988 in an attempt to address the problems of drug abuse on the job. It is a fact that employees who use drugs have less productivity, a lower quality of work, and a higher absenteeism, and are more likely to misappropriate funds or services. From this perspective, the drug abuser may endanger other employees, the public at large, or themselves. Damage to property, whether owned by this entity or not, could result from drug abuse on the job. All these actions might undermine public confidence in the services this entity provides. Therefore, in order to remain a responsible source for government contracts, the following guidelines have been adopted:

   a. The unlawful manufacture, distribution, dispensation, possession or use of a controlled substance is prohibited in the work place.

   b. Violators may be terminated or requested to seek counseling from an approved rehabilitation service.

   c. Employees must notify their employer of any conviction of a criminal drug statue no later than five days after such conviction.

   d. Although alcohol is not a controlled substance, it is nonetheless a drug. It is the policy of the Arkansas Department of Health WIC Program that abuse of this drug will also not be tolerated in the workplace.

   e. Contractors of federal agencies are required to certify that they will provide drug-free workplaces for their employees.

7. Debarment, suspension, and other responsibility matters: As required by Executive Order 12549, Debarment and Suspension, and implemented at 34 CFR Part 85, for prospective participants in primary covered transactions, as defined at 34 CFR Part 85, Sections 85.105 and 85.110.

   a. The applicant certifies that it and its principals:

      (1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any federal department or agency;

      (2) Have not within a three-year period preceding this application been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (federal, state, or local) transaction or contract under a public transaction; violation of federal or state antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (federal, state, or local) with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and

(4) Have not within a three-year period preceding this application had one or more public transactions (federal, state, or local) terminated for cause or default.

b. Where the applicant is unable to certify to any of the statements in this certification, he or she shall attach an explanation to this application.

8. The federal government reserves a royalty-free, non-exclusive, and irrevocable license to reproduce, publish, or otherwise use, and to authorize others to use, for federal government purposes, the copyright in any work developed under a grant, sub-grant, or contract under a grant or sub-grant or any rights of copyright to which a contractor purchases ownership.

3.1 Vendor's Acknowledgement of Standard Terms and Conditions

Please provide a signature stipulating the Vendor's acknowledgement of these Terms & Conditions.

Print Name/Signature of Authorized Personnel	Date

4.0 Forms Required

The below listed forms which the Vendor must submit as part of the Proposal and the Contract award process. The actual Forms are available in the Procurement Library in an editable format.

4.1 Mandatory Forms Due at Proposal Submission

The Mandatory forms due at proposal submission must completed and included as part of the Vendor's proposal. The table below lists all of the mandatory forms which must be submitted as part of the Vendor's proposal. The Vendor must complete each of the forms and provide a copy below the table.

The Vendor must complete submitted as directed with wet signatures.

FORM ID	FORM NAME	COMMENTS
	Proposed Subcontractor's Form	See Section 2.4.2.1 of the RFP. A fillable PDF is located in the Procurement Library and on the OSP Website
EO-98-04	Disclosure Form	See Section 2.7.16 of the RFP. A fillable PDF is located in the Procurement Library and on the OSP Website.
	Copy of Vendor's Equal Opportunity Policy	See Section 2.7.8 of the RFP.
	Voluntary Product Accessibility Template (VPAT)	See Section 2.7.11 of the RFP.

Proposed Subcontractors Form

- ***Do not*** *include additional information relating to subcontractors on this form or as an attachment to this form.*

VENDOR PROPOSES TO USE THE FOLLOWING SUBCONTRACTOR(S) TO PROVIDE SERVICES.

Type or Print the following information

Subcontractor's Company Name	Street Address	City, State, ZIP
Northrop Grumman Systems Corporation, a wholly owned subsidiary of Northrop Grumman Corporation	7575 Colshire Drive	McLean, VA 22102

Subcontractor's Company Name	Street Address	City, State, ZIP

☐ VENDOR DOES NOT PROPOSE TO USE SUBCONTRACTORS TO PERFORM SERVICES.

By signature below, vendor agrees to and **shall** fully comply with all Requirements related to subcontractors as shown in the bid solicitation.

Authorized Signature: ______________________

Use Ink Only.

Printed/Typed Name: **Patty Winton**
Date: 7/07/17

Disclosure Form

CONTRACT AND GRANT DISCLOSURE AND CERTIFICATION FORM

Failure to complete all of the following information may result in a delay in obtaining a contract, lease, purchase agreement, or grant award with any Arkansas State Agency.

SUBCONTRACTOR: ☐ Yes ☒ No SUBCONTRACTOR NAME:

TAXPAYER ID NAME: International Business Machines Corp IS THIS FOR: ☐ Goods? ☐ Services? ☒ Both?

YOUR LAST NAME: Winton FIRST NAME: Patty M.I.: E

ADDRESS: 111 Center Street, 8th Floor

CITY: Little Rock STATE: AR ZIP CODE: 72201 COUNTRY: USA

AS A CONDITION OF OBTAINING, EXTENDING, AMENDING, OR RENEWING A CONTRACT, LEASE, PURCHASE AGREEMENT, OR GRANT AWARD WITH ANY ARKANSAS STATE AGENCY, THE FOLLOWING INFORMATION MUST BE DISCLOSED:

FOR INDIVIDUALS*

Indicate below if: you, your spouse or the brother, sister, parent, or child of you or your spouse *is* a current or former: member of the General Assembly, Constitutional Officer, State Board or Commission Member, or State Employee:

Position Held	Mark (√)		Name of Position of Job Held [senator, representative, name of board/ commission, data entry, etc.]	For How Long?		What is the person(s) name and how are they related to you? [i.e., Jane Q. Public, spouse, John Q. Public, Jr., child, etc.]	
	Current	Former		From MM/YY	To MM/YY	Person's Name(s)	Relation
General Assembly							
Constitutional Officer							
State Board or Commission Member							
State Employee							

☒ None of the above applies

FOR AN ENTITY (BUSINESS)*

Indicate below if any of the following persons, current or former, hold any position of control or hold any ownership interest of 10% or greater in the entity: member of the General Assembly, Constitutional Officer, State Board or Commission Member, State Employee, or the spouse, brother, sister, parent, or child of a member of the General Assembly, Constitutional Officer, State Board or Commission Member, or State Employee. Position of control means the power to direct the purchasing policies or influence the management of the entity.

Position Held	Mark (√)		Name of Position of Job Held [senator, representative, name of board/commission, data entry, etc.]	For How Long?		What is the person(s) name and what is his/her % of ownership interest and/or what is his/her position of control?		
	Current	Former		From MM/YY	To MM/YY	Person's Name(s)	Ownership Interest (%)	Position of Control
General Assembly								
Constitutional Officer								
State Board or Commission Member								
State Employee								

☒ None of the above applies

Contract and Grant Disclosure and Certification Form

Failure to make any disclosure required by Governor's Executive Order 98-04, or any violation of any rule, regulation, or policy adopted pursuant to that Order, shall be a material breach of the terms of this contract. Any contractor, whether an individual or entity, who fails to make the required disclosure or who violates any rule, regulation, or policy shall be subject to all legal remedies available to the agency.

As an additional condition of obtaining, extending, amending, or renewing a contract with a *state agency* I agree as follows:

1. Prior to entering into any agreement with any subcontractor, prior or subsequent to the contract date, I will require the subcontractor to complete a CONTRACT AND GRANT DISCLOSURE AND CERTIFICATION FORM. Subcontractor shall mean any person or entity with whom I enter an agreement whereby I assign or otherwise delegate to the person or entity, for consideration, all, or any part, of the performance required of me under the terms of my contract with the state agency.

2. I will include the following language as a part of any agreement with a subcontractor:

   Failure to make any disclosure required by Governor's Executive Order 98-04, or any violation of any rule, regulation, or policy adopted pursuant to that Order, shall be a material breach of the terms of this subcontract. The party who fails to make the required disclosure or who violates any rule, regulation, or policy shall be subject to all legal remedies available to the contractor.

3. No later than ten (10) days after entering into any agreement with a subcontractor, whether prior or subsequent to the contract date, I will mail a copy of the CONTRACT AND GRANT DISCLOSURE AND CERTIFICATION FORM completed by the subcontractor and a statement containing the dollar amount of the subcontract to the state agency.

I certify under penalty of perjury, to the best of my knowledge and belief, all of the above information is true and correct and that I agree to the subcontractor disclosure conditions stated herein.

Signature____________________ Title IBM Client Executive Date 07/07/2017

Vendor Contact Person Patty Winton Title IBM Client Executive Phone No. 501-680-1996

Agency use only

Agency Number	Agency Name	Agency Contact Person	Contact Phone No.	Contract or Grant No.

CONTRACT AND GRANT DISCLOSURE AND CERTIFICATION FORM

Failure to complete all of the following information may result in a delay in obtaining a contract, lease, purchase agreement, or grant award with any Arkansas State Agency.

SUBCONTRACTOR: ☒ Yes ☐ No SUBCONTRACTOR NAME: Northrop Grumman Systems Corporation

TAXPAYER ID NAME: Northrop Grumman Systems Corp IS THIS FOR: ☐ Goods? ☒ Services? ☐ Both?

YOUR LAST NAME: Frank FIRST NAME: Jeanette M.I.: E.

ADDRESS: 7575 Colshire Drive

CITY: McLean STATE: VA ZIP CODE: 22102 COUNTRY: US

AS A CONDITION OF OBTAINING, EXTENDING, AMENDING, OR RENEWING A CONTRACT, LEASE, PURCHASE AGREEMENT, OR GRANT AWARD WITH ANY ARKANSAS STATE AGENCY, THE FOLLOWING INFORMATION MUST BE DISCLOSED:

FOR INDIVIDUALS*

Indicate below if: you, your spouse or the brother, sister, parent, or child of you or your spouse is a current or former: member of the General Assembly, Constitutional Officer, State Board or Commission Member, or State Employee:

Position Held	Mark (√)		Name of Position of Job Held (senator, representative, name of board/commission, data entry, etc.)	For How Long?		What is the person(s) name and how are they related to you? (i.e., Jane Q. Public, spouse, John Q. Public, Jr., child, etc.)	
	Current	Former		From MM/YY	To MM/YY	Person's Name(s)	Relation
General Assembly							
Constitutional Officer							
State Board or Commission Member							
State Employee							

☐ None of the above applies

FOR AN ENTITY (BUSINESS)*

Indicate below if any of the following persons, current or former, hold any position of control or hold any ownership interest of 10% or greater in the entity: member of the General Assembly, Constitutional Officer, State Board or Commission Member, State Employee, or the spouse, brother, sister, parent, or child of a member of the General Assembly, Constitutional Officer, State Board or Commission Member, or State Employee. Position of control means the power to direct the purchasing policies or influence the management of the entity.

Position Held	Mark (√)		Name of Position of Job Held (senator, representative, name of board/commission, data entry, etc.)	For How Long?		What is the person(s) name and what is his/her % of ownership interest and/or what is his/her position of control?		
	Current	Former		From MM/YY	To MM/YY	Person's Name(s)	Ownership Interest (%)	Position of Control
General Assembly								
Constitutional Officer								
State Board or Commission Member								
State Employee								

☒ None of the above applies

Contract and Grant Disclosure and Certification Form

Failure to make any disclosure required by Governor's Executive Order 98-04, or any violation of any rule, regulation, or policy adopted pursuant to that Order, shall be a material breach of the terms of this contract. Any contractor, whether an individual or entity, who fails to make the required disclosure or who violates any rule, regulation, or policy shall be subject to all legal remedies available to the agency.

As an additional condition of obtaining, extending, amending, or renewing a contract with a *state agency* I agree as follows:

1. Prior to entering into any agreement with any subcontractor, prior or subsequent to the contract date, I will require the subcontractor to complete a CONTRACT AND GRANT DISCLOSURE AND CERTIFICATION FORM. Subcontractor shall mean any person or entity with whom I enter an agreement whereby I assign or otherwise delegate to the person or entity, for consideration, all, or any part, of the performance required of me under the terms of my contract with the state agency.

2. I will include the following language as a part of any agreement with a subcontractor:

   Failure to make any disclosure required by Governor's Executive Order 98-04, or any violation of any rule, regulation, or policy adopted pursuant to that Order, shall be a material breach of the terms of this subcontract. The party who fails to make the required disclosure or who violates any rule, regulation, or policy shall be subject to all legal remedies available to the contractor.

3. No later than ten (10) days after entering into any agreement with a subcontractor, whether prior or subsequent to the contract date, I will mail a copy of the CONTRACT AND GRANT DISCLOSURE AND CERTIFICATION FORM completed by the subcontractor and a statement containing the dollar amount of the subcontract to the state agency.

I certify under penalty of perjury, to the best of my knowledge and belief, all of the above information is true and correct and that I agree to the subcontractor disclosure conditions stated herein.

Signature Jeanette E. Frank Title Sr. Contracts Administrator Date June 21, 2017

Vendor Contact Person Jeanette Frank Title Sr. Contracts Administrator Phone No. (703) 556-1694

Agency use only

Agency Number	Agency Name	Agency Contact Person	Contact Phone No.	Contract or Grant No.

IBM's Equal Opportunity Policy

https://www-03.ibm.com/employment/ibm_eo_statement.html

IBM is committed to creating a diverse environment and is proud to be an equal opportunity employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, gender, gender identity or expression, sexual orientation, national origin, genetics, disability, age, or veteran status.

Voluntary Product Accessibility Template (VPAT)

July 7, 2017

State of Arkansas
Office of State Purchasing
1509 W 7th St, Suite 300
Little Rock, AR 72201

Attn: Shane Phillips

Re: Section 508

Dear Shane:

IBM is pleased to provide you, below, with the Section 508 status on IBM Software products currently in use and additional proposed software for RFP SP17-0012 per your request dated 6/2/17 in the final RFP.

Although some of the products referenced in the Attachment(s) are not yet Section 508 ready, they have the accessibility features identified in such Attachment(s). With regards to these accessible features, IBM is capable on delivery, when used in accordance with IBM's associated documentation, of satisfying the applicable requirements of the Architectural and Transportation Barriers Compliance Board set out in 36 C.F.R. Part 1194, provided that any Assistive Technology used with the noted EIT properly interoperates with it.

If we can be of further assistance, please don't hesitate to contact us.

Sincerely,

Patty Winton

IBM Client Executive

VPAT for IBM Cúram Universal Access 7.0.0.0

VPAT for IBM Cúram Universal Access 7.0.0.0	
VPAT comments:	It includes: IBM Cúram Intake and Assessment IBM Cúram Citizen Engagement The IBM Cúram Universal Access solution provides agencies, their partners and their client families secure, online access to services across the social enterprise.

VPAT Summary

Criteria	Status	Remarks and Explanations
1194.21 Software Applications and Operating Systems	Supports	Refer to Section 1194.21 in VPAT Details section below.
1194.22 Web-based Internet information and applications	Supports	Refer to Section 1194.22 in VPAT Details section below.
1194.23 Telecommunications Products	Not Applicable	Not Applicable
1194.24 Video and Multi-Media Products	Not Applicable	Not Applicable
1194.25 Self-Contained, Closed Products	Not Applicable	Not Applicable
1194.26 Desktop and Portable Computers	Not Applicable	Not Applicable
1194.31 Functional Performance Criteria	Supports	Refer to Section 1194.31 in VPAT Details section below.
1194.41 Information, documentation, and support	Supports	Refer to Section 1194.41 in VPAT Details section below.

VPAT Details

1194.21 Software Applications and Operating Systems

Criteria	Supporting Features	Remarks and Explanations
(a) When software is designed to run on a system that has a keyboard, product functions shall be executable from a keyboard where the function itself or the result of performing a function can be discerned textually.	Supports: A keyboard can be used to achieve all tasks in the application, allowing blind and mobility-impaired users to access information without the use of the mouse.	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: All functionality of the content is operable through a keyboard interface without requiring specific timings for individual keystrokes. This is not a requirement where the underlying function requires input that depends on the path of the user's movement and not just the endpoints. If focus can be moved to a component using a keyboard interface, then focus can be moved away from that component using only a keyboard interface, and, if it requires more than unmodified arrow or tab keys, the user is advised of the method for moving focus away. ▪ Command Line Interface ▪ Server Modeling Environment

		▪ Installer
(b) Applications shall not disrupt or disable activated features of other products that are identified as accessibility features, where those features are developed and documented according to industry standards. Applications also shall not disrupt or disable activated features of any operating system that are identified as accessibility features where the application programming interface for those accessibility features has been documented by the manufacturer of the operating system and is available to the product developer.	Supports: Operating systems provide accessibility features that allow disabled users to customize their preferences. This application preserves those accessibility user preference settings. For example, if Sticky Keys option is selected by a mobility-impaired user, this option will continue to be activated when used with this application.	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: Component does not disrupt platform features that are defined in the platform documentation as accessibility features. ▪ Command Line Interface ▪ Server Modeling Environment ▪ Installer
(c) A well-defined on-screen indication of the current focus shall be provided that moves among interactive interface elements as the input focus changes. The focus shall be programmatically exposed so that Assistive Technology can track focus and focus changes.	Supports: When using the application with a keyboard, users can tell where they are on the screen and the information is available to assistive technologies to communicate screen location to visually impaired users.	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: Any keyboard operable user interface has a mode of operation where the keyboard focus indicator is visible. Exposes information and mechanisms necessary to track and modify focus, text insertion point, and selection attributes of user interface components. ▪ Server Modeling Environment ▪ Installer

		• The following components do not apply to this criterion:
		  ○ IBM Cúram Social Program Management Development Environment 7.0.0.0:
		    ▪ Command Line Interface - The user interface is implemented via commands only. There are no interactive objects.

(d) Sufficient information about a user interface element including the identity, operation and state of the element shall be available to Assistive Technology. When an image represents a program element, the information conveyed by the image must also be available in text.	Supports:
	This software application allows a screen reader to describe the user interface environment and controls to a blind user. For example, if you tab through a form and find a radio button, the user would be able to determine it is a radio button and the current selection status of the button.
		• The following components meet this criterion:
		  ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: Semantic information is provided about user interface objects.
		    ▪ Server Modeling Environment
		    ▪ Installer
		• The following components do not apply to this criterion:
		  ○ IBM Cúram Social Program Management Development Environment 7.0.0.0:
		    ▪ Command Line Interface - The user interface is implemented via commands only. There are no interactive objects.

(e) When bitmap images are used to identify controls, status indicators, or other programmatic elements, the meaning assigned to those images shall be consistent throughout an application's performance.	Supports: The meaning assigned to images used in the application is consistent and unique, minimizing confusion of the context of use for those images.	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: Labels are associated with controls, objects, icons and images. The meaning of images is consistent throughout the application. ▪ Server Modeling Environment ▪ Installer • The following components do not apply to this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface - The user interface is implemented via commands only. There are no interactive objects.
(f) Textual information shall be provided through operating system functions for displaying text. The minimum information that shall be made available is text content, text input caret location, and text attributes.	Supports: Text information is accessible so assistive technologies can communicate content, attributes and caret location to blind users.	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: Text is provided through standard system function calls or through an API (application programming interface) which supports interaction with assistive technology.

		▪ Command Line Interface ▪ Server Modeling Environment ▪ Installer
(g) Applications shall not override user selected contrast and color selections and other individual display attributes.	Supports: System settings are inherited by the application so that customized preferences will not need to be continually reset. For example, color contrast settings enhanced for a low vision user would be preserved by the application.	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface - Font, size, and color settings are supported as controlled by the Operative System. ▪ Server Modeling Environment - Component provides a mode of operation that allows user preferences for platform settings for color, contrast, font type, font size, and focus cursor. ▪ Installer - Component provides a mode of operation that allows user preferences for platform settings for color, contrast, font type, font size, and focus cursor.
(h) When animation is displayed, the information shall be displayable in at least	Not Applicable	• The following components do not apply to this criterion:

one non-animated presentation mode at the option of the user.		○ IBM Cúram Social Program Management Development Environment 7.0.0.0: No animation. ▪ Command Line Interface ▪ Server Modeling Environment ▪ Installer
(i) Color coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.	Supports: Color is used only as an enhancement, and an alternate means to convey information or indicate an action is available to users with visual impairments.	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface - Color is not used to convey information. ▪ Server Modeling Environment - Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. ▪ Installer - Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.

(j) When a product permits a user to adjust color and contrast settings, a variety of color selections capable of producing a range of contrast levels shall be provided.	Not Applicable	• The following components do not apply to this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: Color customization is not supported. ▪ Command Line Interface ▪ Server Modeling Environment ▪ Installer
(k) Software shall not use flashing or blinking text, objects, or other elements having a flash or blink frequency greater than 2 Hz and lower than 55 Hz.	Supports: The use of blinking text, objects or elements has been avoided, reducing risk of seizures for users with photosensitive epilepsy.	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: User interface does not contain anything that flashes more than three times in any one second period. ▪ Command Line Interface ▪ Server Modeling Environment ▪ Installer
(l) When electronic forms are used, the form shall allow people using Assistive Technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.	Supports: The application design allows assistive technology access to information, field elements, and functionality required to complete and submit forms.	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: Form fields allow assistive technology to access the information, field elements and functionality required for completion and submission of the form,

		including all directions and cues. ▪ Server Modeling Environment ▪ Installer • The following components do not apply to this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface - No forms.
1194.22 Web-based Internet information and applications		
Criteria	**Supporting Features**	**Remarks and Explanations**
(a) A text equivalent for every non-text element shall be provided (e.g., via "alt", "longdesc", or in element content).	Supports: The application design provides text equivalents for all images so that assistive technology can describe those images to blind users.	• The following components meet this criterion: All non-text content that is presented to the user has a text alternative that serves the equivalent purpose. ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface ○ IBM Cúram Universal Access 7.0.0.0: ▪ User Interface

(b) Equivalent alternatives for any multimedia presentation shall be synchronized with the presentation.	Not Applicable	• The following components do not apply to this criterion: No prerecorded audio-only and no video-only media. No prerecorded audio. No prerecorded audio and no prerecorded video media. No live audio content in synchronized media. No prerecorded video. o IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface o IBM Cúram Universal Access 7.0.0.0: ▪ User Interface
(c) Web pages shall be designed so that all information conveyed with color is also available without color, for example from context or markup.	Supports: Color is used only as an enhancement, and an alternate means to convey information or indicate an action is available to users with visual impairments.	• The following components meet this criterion: Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. o IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface o IBM Cúram Universal Access 7.0.0.0: ▪ User Interface

(d) Documents shall be organized so they are readable without requiring an associated style sheet.	Supports:
	Web page content is readable without the use of a pre-defined style sheet, allowing low vision users to enable their own style sheets that enhance their viewing preferences.
		• The following components meet this criterion: Web pages are readable without requiring style sheets.
		  ○ IBM Cúram Social Program Management Development Environment 7.0.0.0:
		    ▪ Development Environment User Interface
		  ○ IBM Cúram Universal Access 7.0.0.0:
		    ▪ User Interface

(e) Redundant text links shall be provided for each active region of a server-side image map.	Not Applicable	• The following components do not apply to this criterion: No client-side image maps or server-side image maps.
		  ○ IBM Cúram Social Program Management Development Environment 7.0.0.0:
		    ▪ Development Environment User Interface
		  ○ IBM Cúram Universal Access 7.0.0.0:
		    ▪ User Interface

(f) Client-side image maps shall be provided instead of server-side image maps except where the regions cannot be defined with an available geometric shape.	Not Applicable	• The following components do not apply to this criterion: No client-side image maps or server-side image maps.
		  ○ IBM Cúram Social Program Management Development Environment 7.0.0.0:
		    ▪ Development Environment User Interface

		○ IBM Cúram Universal Access 7.0.0.0: ▪ User Interface
(g) Row and column headers shall be identified for data tables.	Supports: The application is designed to identify row and column headers for blind users so the location and context of the table cell are clear and can be communicated by a screen reader.	• The following components meet this criterion: Table cells and relationships between cells can be programmatically determined. ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface ○ IBM Cúram Universal Access 7.0.0.0: ▪ User Interface
(h) Markup shall be used to associate data cells and header cells for data tables that have two or more logical levels of row or column headers.	Supports: Complex tables are designed with additional attributes for blind users so the location and context of the table cell are clear and can be communicated by a screen reader.	• The following components meet this criterion: Table cells and relationships between cells can be programmatically determined. ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface ○ IBM Cúram Universal Access 7.0.0.0: ▪ User Interface

(i) Frames shall be titled with text that facilitates frame identification and navigation.	Supports: Meaningful text titles are used to describe the purpose of frames so blind users can easily navigate to the desired area.	• The following components meet this criterion: A title and an accessible frame source are provided for each frame. ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface ○ IBM Cúram Universal Access 7.0.0.0: ▪ User Interface
(j) Pages shall be designed to avoid causing the screen to flicker with a frequency greater than 2 Hz and lower than 55 Hz.	Supports: The use of blinking text, objects or elements has been avoided, reducing risk of seizures for users with photosensitive epilepsy.	• The following components meet this criterion: User interface does not contain anything that flashes more than three times in any one second period. ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface ○ IBM Cúram Universal Access 7.0.0.0: ▪ User Interface
(k) A text-only page, with equivalent information or functionality, shall be provided to make a web site comply with the provisions of this part, when compliance cannot be accomplished in any other way. The content of the text-only page shall be	Not Applicable	• The following components do not apply to this criterion: Already accessible. Text-only page not required. ○ IBM Cúram Social Program Management Development Environment 7.0.0.0:

updated whenever the primary page changes.		▪ Development Environment User Interface ○ IBM Cúram Universal Access 7.0.0.0: ▪ User Interface
(l) When pages utilize scripting languages to display content, or to create interface elements, the information provided by the script shall be identified with functional text that can be read by Assistive Technology.	Supports: Alternatives to scripting language are provided, allowing users access to the content via keyboard and assistive technology.	• The following components meet this criterion: Scripts are keyboard accessible. When the content affected by scripting is not accessible, an alternative is provided. ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface ○ IBM Cúram Universal Access 7.0.0.0: ▪ User Interface
(m) When a web page requires that an applet, plug-in or other application be present on the client system to interpret page content, the page must provide a link to a plug-in or applet that complies with §1194.21(a) through (l).	Supports: An alternative to inaccessible applets or plug-ins is provided for efficient use by disabled users.	• The following components meet this criterion: A link is provided to a directly accessible applet, plug-in or other application. Alternate content is provided for those applets, plug-ins or other applications that are not directly accessible. ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface

		○ IBM Cúram Universal Access 7.0.0.0: ▪ User Interface
(n) When electronic forms are designed to be completed on-line, the form shall allow people using Assistive Technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.	Supports: The application design allows assistive technology access to information, field elements, and functionality required to complete and submit forms.	• The following components meet this criterion: Form element labels can be programmatically determined. ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface ○ IBM Cúram Universal Access 7.0.0.0: ▪ User Interface
(o) A method shall be provided that permits users to skip repetitive navigation links.	Supports: Web pages are designed so that repetitive navigation links can be skipping over, and blind users can navigate to the main content of the page more easily.	• The following components meet this criterion: A mechanism is available to bypass blocks of content that are repeated. ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface ○ IBM Cúram Universal Access 7.0.0.0: ▪ User Interface

(p) When a timed response is required, the user shall be alerted and given sufficient time to indicate more time is required.	Not Applicable	• The following components do not apply to this criterion: No time limits.
		  ○ IBM Cúram Social Program Management Development Environment 7.0.0.0:
		    ▪ Development Environment User Interface
		  ○ IBM Cúram Universal Access 7.0.0.0:
		    ▪ User Interface

1194.31 Functional Performance Criteria		
Criteria	**Supporting Features**	**Remarks and Explanations**

(a) At least one mode of operation and information retrieval that does not require user vision shall be provided, or support for Assistive Technology used by people who are blind or visually impaired shall be provided.	Supports:
	See the following for supporting features:
	- 1194.21 a, b, c, d, e, f, h, i, l
	- 1194.22 all
	- 1194.23 k1, k4
	- 1194.24 d
	- 1194.25 a, b, c, e, f, g
	- 1194.26 b, d
		• The following components meet this criterion:
		  ○ IBM Cúram Social Program Management Development Environment 7.0.0.0:
		    ▪ Command Line Interface
		    ▪ Server Modeling Environment
		    ▪ Installer
		    ▪ Development Environment User Interface
		  ○ IBM Cúram Universal Access 7.0.0.0:
		    ▪ User Interface

(b) At least one mode of operation and information retrieval that does not require	Supports:	• The following components meet this criterion:

visual acuity greater than 20/70 shall be provided in audio and enlarged print output working together or independently, or support for Assistive Technology used by people what are visually impaired shall be provided.	See the following for supporting features: - 1194.21 c, g, i, j, l - 1194.22 n - 1194.25 h - 1194.26 d	○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface ▪ Server Modeling Environment ▪ Installer ▪ Development Environment User Interface ○ IBM Cúram Universal Access 7.0.0.0: ▪ User Interface
(c) At least one mode of operation and information retrieval that does not require user hearing shall be provided, or support for Assistive Technology used by people who are deaf or hard of hearing shall be provided.	Supports: See the following for other supporting features: - 1194.22 b, m - 1194.23 k4 - 1194.24 c - 1194.25 e, f	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface ○ IBM Cúram Universal Access 7.0.0.0: ▪ User Interface • The following components do not apply to this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface ▪ Server Modeling Environment ▪ Installer

		▪ Development Environment User Interface
(d) Where audio information is important for the use of the product, at least one mode of operation and information retrieval shall be provided in an enhanced auditory fashion, or support for assistive hearing devices shall be provided.	Not Applicable	• The following components do not apply to this criterion: o IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface ▪ Server Modeling Environment ▪ Installer ▪ Development Environment User Interface o IBM Cúram Universal Access 7.0.0.0: ▪ User Interface
(e) At least one mode of operation and information retrieval that does not require user speech shall be provided, or support for Assistive Technology used by people with disabilities shall be provided.	Not Applicable	This is not a speech product.
(f) At least one mode of operation and information retrieval that does not require fine motor control or simultaneous actions and that is operable with limited reach and strength shall be provided.	Supports: See the following for supporting features: - 1194.21 a, b - 1194.22 l, p - 1194.23 k1, k2, k3 - 1194.25 b, j1, j2, j3, j4 - 1194.26 d	• The following components meet this criterion: o IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface ▪ Server Modeling Environment ▪ Installer

		• The following components do not apply to this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface ○ IBM Cúram Universal Access 7.0.0.0: ▪ User Interface

1194.41 Information, documentation, and support

Criteria	**Supporting Features**	**Remarks and Explanations**
(a) Product support documentation provided to end-users shall be made available in alternate formats upon request, at no additional charge.	Supports: Product support documentation is provided in at least one accessible format.	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Java Documentation - No non-text content. No prerecorded audio. No prerecorded audio and no prerecorded video media. No live audio content in synchronized media. No prerecorded video. Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or

		distinguishing a visual element. User interface does not contain anything that flashes more than three times in any one second period. A mechanism is available to bypass blocks of content that are repeated. No client-side image maps or server-side image maps. Web pages are readable without requiring style sheets. Already accessible. Text-only page not required. No forms. Table cells and relationships between cells can be programmatically determined. No scripts. No applets, plug-ins, or non-HTML content. A title and an accessible frame source are provided for each frame. No prerecorded audio-only and no video-only media. No time limits. ▪ Online Help - No prerecorded audio-only and no video-only

			media. No time limits. No non-text content. No prerecorded audio. No prerecorded audio and no prerecorded video media. No live audio content in synchronized media. No prerecorded video. Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. User interface does not contain anything that flashes more than three times in any one second period. A mechanism is available to bypass blocks of content that are repeated. No client-side image maps or server-side image maps. Web pages are readable without requiring style sheets. Already accessible. Text-only page not required. Form element labels can be programmatically

		determined. Table cells and relationships between cells can be programmatically determined. No scripts. A link is provided to a directly accessible applet, plug-in or other application. Alternate content is provided for those applets, plug-ins or other applications that are not directly accessible. A title and an accessible frame source are provided for each frame. ▪ User Interface Metadata XML - All content presented to the user is text. Document information, structure, and relationships are defined and programmatically available. Information that is conveyed by color is also evident without color, including sufficient contrast between text and the page background. Document elements are presented in a logical reading order. No forms. No

		tables. Document does not include text or images that flash more than 2 times in a one second period. An accessible method is provided for navigating long documents. The primary language of the document is defined. ▪ End User Documentation - No prerecorded audio-only and no video-only media. No time limits. No non-text content. No prerecorded audio. No prerecorded audio and no prerecorded video media. No live audio content in synchronized media. No prerecorded video. Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. User interface does not contain anything that flashes more than three times in any one second

		period. A mechanism is available to bypass blocks of content that are repeated. No client-side image maps or server-side image maps. Web pages are readable without requiring style sheets. Already accessible. Text-only page not required. No forms. Table cells and relationships between cells can be programmatically determined. No scripts. No applets, plug-ins, or non-HTML content. No frames.
(b) End-users shall have access to a description of the accessibility and compatibility features of products in alternate formats or alternate methods upon request, at no additional charge.	Supports: Documentation includes a description of accessibility and compatibility features that make it easier for people with disabilities to use the product. Those descriptions are available in alternate formats upon request.	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Java Documentation - Documentation lists and explains accessibility and compatibility features, including keyboard access. ▪ Online Help - Documentation lists and explains accessibility

			and compatibility features, including keyboard access. ▪ User Interface Metadata XML - Documentation is provided on all accessibility features, including keyboard access. ▪ End User Documentation - Documentation lists and explains accessibility and compatibility features, including keyboard access.
(c) Support services for products shall accommodate the communication needs of end-users with disabilities.	Supports: Operating systems provide accessibility features that allow disabled users to customize their preferences. This application preserves those accessibility user preference settings. For example, if Sticky Keys option is selected by a mobility-impaired user, this option will continue to be activated when used with this application. In addition to standard IBM help desk and support Web sites, IBM has established a TTY telephone service for use by deaf or hard of hearing customers to access sales and support services.		

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IBM provides this data for general information on an AS IS basis. For formal representations on particular proposals, please contact an IBM Client Representative or call the IBM Federal Information Call Center at 1-800-333-6705 or TTY: 1-800-IBM-3383. Any third-party components or technologies not developed by or licensed by IBM that may be packaged with or engaged by the use of this product are not included in this Section 508 assessment.

VPAT for IBM Cúram Social Program Management Platform 7.0.0.0

VPAT for IBM Cúram Social Program Management Platform 7.0.0.0	
VPAT comments:	It includes: IBM Cúram Single Client View IBM Cúram Intake and Assessment IBM Cúram Citizen Engagement IBM Cúram Case Management IBM Cúram Case Management Eligibility and Entitlement Add-on IBM Cúram Assessment and Planning IBM Cúram Service Provider Management IBM Cúram Appeals and Legal Actions IBM Cúram Audit and investigation For a detailed description of the parent features and benefits, please refer to

	the following URL: http://www-03.ibm.com/software/products/en/social-program-management-platform

VPAT Summary

Criteria	**Status**	**Remarks and Explanations**
1194.21 Software Applications and Operating Systems	Supports	Refer to Section 1194.21 in VPAT Details section below.
1194.22 Web-based Internet information and applications	Supports	Refer to Section 1194.22 in VPAT Details section below.
1194.23 Telecommunications Products	Not Applicable	Not Applicable
1194.24 Video and Multi-Media Products	Not Applicable	Not Applicable
1194.25 Self-Contained, Closed Products	Not Applicable	Not Applicable
1194.26 Desktop and Portable Computers	Not Applicable	Not Applicable
1194.31 Functional Performance Criteria	Supports	Refer to Section 1194.31 in VPAT Details section below.
1194.41 Information, documentation, and support	Supports	Refer to Section 1194.41 in VPAT Details section below.

VPAT Details

1194.21 Software Applications and Operating Systems

Criteria	**Supporting Features**	**Remarks and Explanations**
(a) When software is designed to run on a system that has a keyboard, product functions shall be executable from a	Supports: A keyboard can be used to achieve all tasks in the application, allowing blind	• The following components meet this criterion:

keyboard where the function itself or the result of performing a function can be discerned textually.	and mobility-impaired users to access information without the use of the mouse.	○ IBM Cúram Social Program Management Development Environment 7.0.0.0: All functionality of the content is operable through a keyboard interface without requiring specific timings for individual keystrokes. This is not a requirement where the underlying function requires input that depends on the path of the user's movement and not just the endpoints. If focus can be moved to a component using a keyboard interface, then focus can be moved away from that component using only a keyboard interface, and, if it requires more than unmodified arrow or tab keys, the user is advised of the method for moving focus away. ▪ Command Line Interface ▪ Server Modeling Environment ▪ Installer
(b) Applications shall not disrupt or disable activated features of other products that are identified as accessibility features, where those features are developed and documented according to industry standards. Applications also shall not disrupt or disable activated features of any operating system that are identified as	Supports: Operating systems provide accessibility features that allow disabled users to customize their preferences. This application preserves those accessibility user preference settings. For example, if Sticky Keys option is selected by a	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: Component does not disrupt platform features that are defined in the platform

accessibility features where the application programming interface for those accessibility features has been documented by the manufacturer of the operating system and is available to the product developer.	mobility-impaired user, this option will continue to be activated when used with this application.	documentation as accessibility features. ▪ Command Line Interface ▪ Server Modeling Environment ▪ Installer
(c) A well-defined on-screen indication of the current focus shall be provided that moves among interactive interface elements as the input focus changes. The focus shall be programmatically exposed so that Assistive Technology can track focus and focus changes.	Supports: When using the application with a keyboard, users can tell where they are on the screen and the information is available to assistive technologies to communicate screen location to visually impaired users.	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: Any keyboard operable user interface has a mode of operation where the keyboard focus indicator is visible. Exposes information and mechanisms necessary to track and modify focus, text insertion point, and selection attributes of user interface components. ▪ Server Modeling Environment ▪ Installer • The following components do not apply to this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface - The user interface is implemented via commands only. There

		are no interactive objects.
(d) Sufficient information about a user interface element including the identity, operation and state of the element shall be available to Assistive Technology. When an image represents a program element, the information conveyed by the image must also be available in text.	Supports: This software application allows a screen reader to describe the user interface environment and controls to a blind user. For example, if you tab through a form and find a radio button, the user would be able to determine it is a radio button and the current selection status of the button.	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: Semantic information is provided about user interface objects. ▪ Server Modeling Environment ▪ Installer • The following components do not apply to this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface - The user interface is implemented via commands only. There are no interactive objects.
(e) When bitmap images are used to identify controls, status indicators, or other programmatic elements, the meaning assigned to those images shall be consistent throughout an application's performance.	Supports: The meaning assigned to images used in the application is consistent and unique, minimizing confusion of the context of use for those images.	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: Labels are associated with controls, objects, icons and images. The meaning of images is consistent throughout the application.

		▪ Server Modeling Environment ▪ Installer • The following components do not apply to this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface - The user interface is implemented via commands only. There are no interactive objects.
(f) Textual information shall be provided through operating system functions for displaying text. The minimum information that shall be made available is text content, text input caret location, and text attributes.	Supports: Text information is accessible so assistive technologies can communicate content, attributes and caret location to blind users.	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: Text is provided through standard system function calls or through an API (application programming interface) which supports interaction with assistive technology. ▪ Command Line Interface ▪ Server Modeling Environment ▪ Installer
(g) Applications shall not override user selected contrast and color selections and other individual display attributes.	Supports: System settings are inherited by the application so that customized preferences will not need to be	• The following components meet this criterion:

	continually reset. For example, color contrast settings enhanced for a low vision user would be preserved by the application.	○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface - Font, size, and color settings are supported as controlled by the Operative System. ▪ Server Modeling Environment - Component provides a mode of operation that allows user preferences for platform settings for color, contrast, font type, font size, and focus cursor. ▪ Installer - Component provides a mode of operation that allows user preferences for platform settings for color, contrast, font type, font size, and focus cursor.
(h) When animation is displayed, the information shall be displayable in at least one non-animated presentation mode at the option of the user.	Not Applicable	• The following components do not apply to this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: No animation. ▪ Command Line Interface ▪ Server Modeling Environment

		▪ Installer
(i) Color coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.	Supports: Color is used only as an enhancement, and an alternate means to convey information or indicate an action is available to users with visual impairments.	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface - Color is not used to convey information. ▪ Server Modeling Environment - Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. ▪ Installer - Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.
(j) When a product permits a user to adjust color and contrast settings, a variety of color selections capable of producing a range of contrast levels shall be provided.	Not Applicable	• The following components do not apply to this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: Color customization is not supported. ▪ Command Line Interface

		▪ Server Modeling Environment ▪ Installer
(k) Software shall not use flashing or blinking text, objects, or other elements having a flash or blink frequency greater than 2 Hz and lower than 55 Hz.	Supports: The use of blinking text, objects or elements has been avoided, reducing risk of seizures for users with photosensitive epilepsy.	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: User interface does not contain anything that flashes more than three times in any one second period. ▪ Command Line Interface ▪ Server Modeling Environment ▪ Installer
(l) When electronic forms are used, the form shall allow people using Assistive Technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.	Supports: The application design allows assistive technology access to information, field elements, and functionality required to complete and submit forms.	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: Form fields allow assistive technology to access the information, field elements and functionality required for completion and submission of the form, including all directions and cues. ▪ Server Modeling Environment ▪ Installer • The following components do not apply to this criterion:

		○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface - No forms.
1194.22 Web-based Internet information and applications		
Criteria	**Supporting Features**	**Remarks and Explanations**
(a) A text equivalent for every non-text element shall be provided (e.g., via "alt", "longdesc", or in element content).	Supports: The application design provides text equivalents for all images so that assistive technology can describe those images to blind users.	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface - All non-text content that is presented to the user has a text alternative that serves the equivalent purpose. • The following components do not apply to this criterion: ○ IBM Cúram Social Program Management Platform 7.0.0.0: ▪ User Interface - No non-text content.
(b) Equivalent alternatives for any multimedia presentation shall be synchronized with the presentation.	Not Applicable	• The following components do not apply to this criterion: No prerecorded audio-only and no video-only media. No prerecorded audio. No prerecorded audio and no prerecorded video

		media. No live audio content in synchronized media. No prerecorded video. o IBM Cúram Social Program Management Platform 7.0.0.0: ▪ User Interface o IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface
(c) Web pages shall be designed so that all information conveyed with color is also available without color, for example from context or markup.	Supports: Color is used only as an enhancement, and an alternate means to convey information or indicate an action is available to users with visual impairments.	• The following components meet this criterion: Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. o IBM Cúram Social Program Management Platform 7.0.0.0: ▪ User Interface o IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface
(d) Documents shall be organized so they are readable without requiring an associated style sheet.	Supports: Web page content is readable without the use of a pre-defined style sheet, allowing low vision users to enable	• The following components meet this criterion: Web pages are readable without requiring style sheets. o IBM Cúram Social Program Management Platform 7.0.0.0: ▪ User Interface

	their own style sheets that enhance their viewing preferences.	◦ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface
(e) Redundant text links shall be provided for each active region of a server-side image map.	Not Applicable	• The following components do not apply to this criterion: No client-side image maps or server-side image maps. ◦ IBM Cúram Social Program Management Platform 7.0.0.0: ▪ User Interface ◦ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface
(f) Client-side image maps shall be provided instead of server-side image maps except where the regions cannot be defined with an available geometric shape.	Not Applicable	• The following components do not apply to this criterion: No client-side image maps or server-side image maps. ◦ IBM Cúram Social Program Management Platform 7.0.0.0: ▪ User Interface ◦ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface

(g) Row and column headers shall be identified for data tables.	Supports:
	The application is designed to identify row and column headers for blind users so the location and context of the table cell are clear and can be communicated by a screen reader.
		• The following components meet this criterion: Table cells and relationships between cells can be programmatically determined.
		    o IBM Cúram Social Program Management Platform 7.0.0.0:
		        ▪ User Interface
		    o IBM Cúram Social Program Management Development Environment 7.0.0.0:
		        ▪ Development Environment User Interface

(h) Markup shall be used to associate data cells and header cells for data tables that have two or more logical levels of row or column headers.	Supports:
	Complex tables are designed with additional attributes for blind users so the location and context of the table cell are clear and can be communicated by a screen reader.
		• The following components meet this criterion: Table cells and relationships between cells can be programmatically determined.
		    o IBM Cúram Social Program Management Platform 7.0.0.0:
		        ▪ User Interface
		    o IBM Cúram Social Program Management Development Environment 7.0.0.0:
		        ▪ Development Environment User Interface

(i) Frames shall be titled with text that facilitates frame identification and navigation.	Supports:
	Meaningful text titles are used to describe the purpose of frames so blind users can easily navigate to the desired area.
		• The following components meet this criterion: A title and an accessible frame source are provided for each frame.
		    o IBM Cúram Social Program Management Platform 7.0.0.0:
		        ▪ User Interface

		○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface
(j) Pages shall be designed to avoid causing the screen to flicker with a frequency greater than 2 Hz and lower than 55 Hz.	Supports: The use of blinking text, objects or elements has been avoided, reducing risk of seizures for users with photosensitive epilepsy.	• The following components meet this criterion: User interface does not contain anything that flashes more than three times in any one second period. ○ IBM Cúram Social Program Management Platform 7.0.0.0: ▪ User Interface ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface
(k) A text-only page, with equivalent information or functionality, shall be provided to make a web site comply with the provisions of this part, when compliance cannot be accomplished in any other way. The content of the text-only page shall be updated whenever the primary page changes.	Not Applicable	• The following components do not apply to this criterion: Already accessible. Text-only page not required. ○ IBM Cúram Social Program Management Platform 7.0.0.0: ▪ User Interface ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface

(l) When pages utilize scripting languages to display content, or to create interface elements, the information provided by the script shall be identified with functional text that can be read by Assistive Technology.	Supports: Alternatives to scripting language are provided, allowing users access to the content via keyboard and assistive technology.	• The following components meet this criterion: Scripts are keyboard accessible. When the content affected by scripting is not accessible, an alternative is provided. ○ IBM Cúram Social Program Management Platform 7.0.0.0: ▪ User Interface ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface
(m) When a web page requires that an applet, plug-in or other application be present on the client system to interpret page content, the page must provide a link to a plug-in or applet that complies with §1194.21(a) through (l).	Supports: An alternative to inaccessible applets or plug-ins is provided for efficient use by disabled users.	• The following components meet this criterion: A link is provided to a directly accessible applet, plug-in or other application. Alternate content is provided for those applets, plug-ins or other applications that are not directly accessible. ○ IBM Cúram Social Program Management Platform 7.0.0.0: ▪ User Interface ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface
(n) When electronic forms are designed to be completed on-line, the form shall allow people using Assistive Technology to	Supports: The application design allows assistive technology access to information, field	• The following components meet this criterion: Form element labels can be programmatically determined.

access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.	elements, and functionality required to complete and submit forms.	◦ IBM Cúram Social Program Management Platform 7.0.0.0: ▪ User Interface ◦ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface
(o) A method shall be provided that permits users to skip repetitive navigation links.	Supports: Web pages are designed so that repetitive navigation links can be skipping over, and blind users can navigate to the main content of the page more easily.	• The following components meet this criterion: A mechanism is available to bypass blocks of content that are repeated. ◦ IBM Cúram Social Program Management Platform 7.0.0.0: ▪ User Interface ◦ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface
(p) When a timed response is required, the user shall be alerted and given sufficient time to indicate more time is required.	Not Applicable	• The following components do not apply to this criterion: No time limits. ◦ IBM Cúram Social Program Management Platform 7.0.0.0: ▪ User Interface ◦ IBM Cúram Social Program Management Development Environment 7.0.0.0:

		▪ Development Environment User Interface
1194.31 Functional Performance Criteria		
Criteria	**Supporting Features**	**Remarks and Explanations**
(a) At least one mode of operation and information retrieval that does not require user vision shall be provided, or support for Assistive Technology used by people who are blind or visually impaired shall be provided.	Supports: See the following for supporting features: - 1194.21 a, b, c, d, e, f, h, i, l - 1194.22 all - 1194.23 k1, k4 - 1194.24 d - 1194.25 a, b, c, e, f, g - 1194.26 b, d	• The following components meet this criterion: ○ IBM Cúram Social Program Management Platform 7.0.0.0: ▪ User Interface ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface ▪ Server Modeling Environment ▪ Installer ▪ Development Environment User Interface
(b) At least one mode of operation and information retrieval that does not require visual acuity greater than 20/70 shall be provided in audio and enlarged print output working together or independently, or support for Assistive Technology used by people what are visually impaired shall be provided.	Supports: See the following for supporting features: - 1194.21 c, g, i, j, l - 1194.22 n - 1194.25 h - 1194.26 d	• The following components meet this criterion: ○ IBM Cúram Social Program Management Platform 7.0.0.0: ▪ User Interface ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface

		▪ Server Modeling Environment ▪ Installer ▪ Development Environment User Interface
(c) At least one mode of operation and information retrieval that does not require user hearing shall be provided, or support for Assistive Technology used by people who are deaf or hard of hearing shall be provided.	Supports: See the following for other supporting features: - 1194.22 b, m - 1194.23 k4 - 1194.24 c - 1194.25 e, f	• The following components meet this criterion: ○ IBM Cúram Social Program Management Platform 7.0.0.0: ▪ User Interface ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface • The following components do not apply to this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface ▪ Server Modeling Environment ▪ Installer ▪ Development Environment User Interface
(d) Where audio information is important for the use of the product, at least one mode of operation and information retrieval shall be provided in an enhanced auditory fashion, or	Not Applicable	• The following components do not apply to this criterion: ○ IBM Cúram Social Program Management Platform 7.0.0.0:

support for assistive hearing devices shall be provided.		▪ User Interface ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface ▪ Server Modeling Environment ▪ Installer ▪ Development Environment User Interface
(e) At least one mode of operation and information retrieval that does not require user speech shall be provided, or support for Assistive Technology used by people with disabilities shall be provided.	Not Applicable	This is not a speech product.
(f) At least one mode of operation and information retrieval that does not require fine motor control or simultaneous actions and that is operable with limited reach and strength shall be provided.	Supports: See the following for supporting features: - 1194.21 a, b - 1194.22 l, p - 1194.23 k1, k2, k3 - 1194.25 b, j1, j2, j3, j4 - 1194.26 d	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface ▪ Server Modeling Environment ▪ Installer • The following components do not apply to this criterion: ○ IBM Cúram Social Program Management Platform 7.0.0.0: ▪ User Interface ○ IBM Cúram Social Program Management Development Environment 7.0.0.0:

		▪ Development Environment User Interface
1194.41 Information, documentation, and support		
Criteria	**Supporting Features**	**Remarks and Explanations**
(a) Product support documentation provided to end-users shall be made available in alternate formats upon request, at no additional charge.	Supports: Product support documentation is provided in at least one accessible format.	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Java Documentation - A mechanism is available to bypass blocks of content that are repeated. No client-side image maps or server-side image maps. Web pages are readable without requiring style sheets. Already accessible. Text-only page not required. No forms. Table cells and relationships between cells can be programmatically determined. No scripts. No applets, plug-ins, or non-HTML content. A title and an accessible frame source are provided for each

		frame. No prerecorded audio-only and no video-only media. No time limits. No non-text content. No prerecorded audio. No prerecorded audio and no prerecorded video media. No live audio content in synchronized media. No prerecorded video. Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. User interface does not contain anything that flashes more than three times in any one second period. ▪ Online Help - No non-text content. No prerecorded audio. No prerecorded audio and no prerecorded video media. No live audio content in synchronized media. No prerecorded video. Color is not used as the only visual means of conveying information, indicating

			an action, prompting a response, or distinguishing a visual element. User interface does not contain anything that flashes more than three times in any one second period. A mechanism is available to bypass blocks of content that are repeated. No client-side image maps or server-side image maps. Web pages are readable without requiring style sheets. Already accessible. Text-only page not required. Form element labels can be programmatically determined. Table cells and relationships between cells can be programmatically determined. No scripts. A link is provided to a directly accessible applet, plug-in or other application. Alternate content is provided for those applets, plug-ins or other applications that are not directly

		accessible. A title and an accessible frame source are provided for each frame. No prerecorded audio-only and no video-only media. No time limits. ▪ User Interface Metadata XML - All content presented to the user is text. Document information, structure, and relationships are defined and programmatically available. Information that is conveyed by color is also evident without color, including sufficient contrast between text and the page background. Document elements are presented in a logical reading order. No forms. No tables. Document does not include text or images that flash more than 2 times in a one second period. An accessible method is provided for navigating long documents. The primary language of the document is defined.

		▪ End User Documentation - No non-text content. No prerecorded audio. No prerecorded audio and no prerecorded video media. No live audio content in synchronized media. No prerecorded video. Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. User interface does not contain anything that flashes more than three times in any one second period. A mechanism is available to bypass blocks of content that are repeated. No client-side image maps or server-side image maps. Web pages are readable without requiring style sheets. Already accessible. Text-only page not required. No forms. Table cells and relationships between

		cells can be programmatically determined. No scripts. No applets, plug-ins, or non-HTML content. No frames. No prerecorded audio-only and no video-only media. No time limits.
(b) End-users shall have access to a description of the accessibility and compatibility features of products in alternate formats or alternate methods upon request, at no additional charge.	Supports: Documentation includes a description of accessibility and compatibility features that make it easier for people with disabilities to use the product. Those descriptions are available in alternate formats upon request.	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Java Documentation - Documentation lists and explains accessibility and compatibility features, including keyboard access. ▪ Online Help - Documentation lists and explains accessibility and compatibility features, including keyboard access. ▪ User Interface Metadata XML - Documentation is provided on all accessibility features, including keyboard access. ▪ End User Documentation -

		Documentation lists and explains accessibility and compatibility features, including keyboard access.
(c) Support services for products shall accommodate the communication needs of end-users with disabilities.	Supports: Operating systems provide accessibility features that allow disabled users to customize their preferences. This application preserves those accessibility user preference settings. For example, if Sticky Keys option is selected by a mobility-impaired user, this option will continue to be activated when used with this application. In addition to standard IBM help desk and support Web sites, IBM has established a TTY telephone service for use by deaf or hard of hearing customers to access sales and support services.	
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VPAT for IBM Cúram Provider Management 7.0.0.0

VPAT for IBM Cúram Provider Management 7.0.0.0	
VPAT comments:	It includes: IBM Cúram Assessment and Planning IBM Cúram Service Provider Management IBM Cúram Provider Management enables agencies to manage the complete provider management lifecycle, resulting in improved service delivery, efficiency and sustainable outcomes.

VPAT Summary

Criteria	Status	Remarks and Explanations
1194.21 Software Applications and Operating Systems	Supports	Refer to Section 1194.21 in VPAT Details section below.
1194.22 Web-based Internet information and applications	Supports	Refer to Section 1194.22 in VPAT Details section below.
1194.23 Telecommunications Products	Not Applicable	Not Applicable
1194.24 Video and Multi-media Products	Not Applicable	Not Applicable
1194.25 Self-Contained, Closed Products	Not Applicable	Not Applicable
1194.26 Desktop and Portable Computers	Not Applicable	Not Applicable
1194.31 Functional Performance Criteria	Supports	Refer to Section 1194.31 in VPAT Details section below.

1194.41 Information, documentation, and support	Supports	Refer to Section 1194.41 in VPAT Details section below.

VPAT Details

1194.21 Software Applications and Operating Systems

Criteria	Supporting Features	Remarks and Explanations

(a) When software is designed to run on a system that has a keyboard, product functions shall be executable from a keyboard where the function itself or the result of performing a function can be discerned textually.	Supports:
	A keyboard can be used to achieve all tasks in the application, allowing blind and mobility-impaired users to access information without the use of the mouse.
		• The following components meet this criterion:
		  ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: All functionality of the content is operable through a keyboard interface without requiring specific timings for individual keystrokes. This is not a requirement where the underlying function requires input that depends on the path of the user's movement and not just the endpoints. If focus can be moved to a component using a keyboard interface, then focus can be moved away from that component using only a keyboard interface, and, if it requires more than unmodified arrow or tab keys, the user is advised of the method for moving focus away.
		    ▪ Command Line Interface

		▪ Server Modeling Environment ▪ Installer
(b) Applications shall not disrupt or disable activated features of other products that are identified as accessibility features, where those features are developed and documented according to industry standards. Applications also shall not disrupt or disable activated features of any operating system that are identified as accessibility features where the application programming interface for those accessibility features has been documented by the manufacturer of the operating system and is available to the product developer.	Supports: Operating systems provide accessibility features that allow disabled users to customize their preferences. This application preserves those accessibility user preference settings. For example, if Sticky Keys option is selected by a mobility-impaired user, this option will continue to be activated when used with this application.	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: Component does not disrupt platform features that are defined in the platform documentation as accessibility features. ▪ Command Line Interface ▪ Server Modeling Environment ▪ Installer
(c) A well-defined on-screen indication of the current focus shall be provided that moves among interactive interface elements as the input focus changes. The focus shall be programmatically exposed so that Assistive Technology can track focus and focus changes.	Supports: When using the application with a keyboard, users can tell where they are on the screen and the information is available to assistive technologies to communicate screen location to visually impaired users.	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: Any keyboard operable user interface has a mode of operation where the keyboard focus indicator is visible. Exposes information and mechanisms necessary to track and modify focus, text insertion point, and selection attributes of user interface components. ▪ Server Modeling Environment

		▪ Installer • The following components do not apply to this criterion: o IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface - The user interface is implemented via commands only. There are no interactive objects.
(d) Sufficient information about a user interface element including the identity, operation and state of the element shall be available to Assistive Technology. When an image represents a program element, the information conveyed by the image must also be available in text.	Supports: This software application allows a screen reader to describe the user interface environment and controls to a blind user. For example, if you tab through a form and find a radio button, the user would be able to determine it is a radio button and the current selection status of the button.	• The following components meet this criterion: o IBM Cúram Social Program Management Development Environment 7.0.0.0: Semantic information is provided about user interface objects. ▪ Server Modeling Environment ▪ Installer • The following components do not apply to this criterion: o IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface - The user interface is implemented via commands only. There are no interactive objects.

(e) When bitmap images are used to identify controls, status indicators, or other programmatic elements, the meaning assigned to those images shall be consistent throughout an application's performance.	Supports: The meaning assigned to images used in the application is consistent and unique, minimizing confusion of the context of use for those images.	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: Labels are associated with controls, objects, icons and images. The meaning of images is consistent throughout the application. ▪ Server Modeling Environment ▪ Installer • The following components do not apply to this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface - The user interface is implemented via commands only. There are no interactive objects.
(f) Textual information shall be provided through operating system functions for displaying text. The minimum information that shall be made available is text content, text input caret location, and text attributes.	Supports: Text information is accessible so assistive technologies can communicate content, attributes and caret location to blind users.	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: Text is provided through standard system function calls or through an API (application programming interface) which supports interaction with assistive technology.

		▪ Command Line Interface ▪ Server Modeling Environment ▪ Installer
(g) Applications shall not override user selected contrast and color selections and other individual display attributes.	Supports: System settings are inherited by the application so that customized preferences will not need to be continually reset. For example, color contrast settings enhanced for a low vision user would be preserved by the application.	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface - Font, size, and color settings are supported as controlled by the Operative System. ▪ Server Modeling Environment - Component provides a mode of operation that allows user preferences for platform settings for color, contrast, font type, font size, and focus cursor. ▪ Installer - Component provides a mode of operation that allows user preferences for platform settings for color, contrast, font type, font size, and focus cursor.
(h) When animation is displayed, the information shall be displayable in at least	Not Applicable	• The following components do not apply to this criterion:

one non-animated presentation mode at the option of the user.		○ IBM Cúram Social Program Management Development Environment 7.0.0.0: No animation. ▪ Command Line Interface ▪ Server Modeling Environment ▪ Installer
(i) Color coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.	Supports: Color is used only as an enhancement, and an alternate means to convey information or indicate an action is available to users with visual impairments.	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface - Color is not used to convey information. ▪ Server Modeling Environment - Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. ▪ Installer - Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.

(j) When a product permits a user to adjust color and contrast settings, a variety of color selections capable of producing a range of contrast levels shall be provided.	Not Applicable	• The following components do not apply to this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: Color customization is not supported. ▪ Command Line Interface ▪ Server Modeling Environment ▪ Installer
(k) Software shall not use flashing or blinking text, objects, or other elements having a flash or blink frequency greater than 2 Hz and lower than 55 Hz.	Supports: The use of blinking text, objects or elements has been avoided, reducing risk of seizures for users with photosensitive epilepsy.	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: User interface does not contain anything that flashes more than three times in any one second period. ▪ Command Line Interface ▪ Server Modeling Environment ▪ Installer
(l) When electronic forms are used, the form shall allow people using Assistive Technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.	Supports: The application design allows assistive technology access to information, field elements, and functionality required to complete and submit forms.	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: Form fields allow assistive technology to access the information, field elements and functionality required for completion and submission of the form,

		including all directions and cues. ▪ Server Modeling Environment ▪ Installer • The following components do not apply to this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface - No forms.
1194.22 Web-based Internet information and applications		
Criteria	**Supporting Features**	**Remarks and Explanations**
(a) A text equivalent for every non-text element shall be provided (e.g., via "alt", "longdesc", or in element content).	Supports: The application design provides text equivalents for all images so that assistive technology can describe those images to blind users.	• The following components meet this criterion: All non-text content that is presented to the user has a text alternative that serves the equivalent purpose. ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface ○ IBM Cúram Provider Management 7.0.0.0: ▪ User Interface

(b) Equivalent alternatives for any multimedia presentation shall be synchronized with the presentation.	Not Applicable	• The following components do not apply to this criterion: No prerecorded audio-only and no video-only media. No prerecorded audio. No prerecorded audio and no prerecorded video media. No live audio content in synchronized media. No prerecorded video. ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface ○ IBM Cúram Provider Management 7.0.0.0: ▪ User Interface
(c) Web pages shall be designed so that all information conveyed with color is also available without color, for example from context or markup.	Supports: Color is used only as an enhancement, and an alternate means to convey information or indicate an action is available to users with visual impairments.	• The following components meet this criterion: Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface ○ IBM Cúram Provider Management 7.0.0.0: ▪ User Interface

(d) Documents shall be organized so they are readable without requiring an associated style sheet.	Supports: Web page content is readable without the use of a pre-defined style sheet, allowing low vision users to enable their own style sheets that enhance their viewing preferences.	• The following components meet this criterion: Web pages are readable without requiring style sheets. ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface ○ IBM Cúram Provider Management 7.0.0.0: ▪ User Interface
(e) Redundant text links shall be provided for each active region of a server-side image map.	Not Applicable	• The following components do not apply to this criterion: No client-side image maps or server-side image maps. ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface ○ IBM Cúram Provider Management 7.0.0.0: ▪ User Interface
(f) Client-side image maps shall be provided instead of server-side image maps except where the regions cannot be defined with an available geometric shape.	Not Applicable	• The following components do not apply to this criterion: No client-side image maps or server-side image maps. ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface

		○ IBM Cúram Provider Management 7.0.0.0: ▪ User Interface
(g) Row and column headers shall be identified for data tables.	Supports: The application is designed to identify row and column headers for blind users so the location and context of the table cell are clear and can be communicated by a screen reader.	• The following components meet this criterion: Table cells and relationships between cells can be programmatically determined. ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface ○ IBM Cúram Provider Management 7.0.0.0: ▪ User Interface
(h) Markup shall be used to associate data cells and header cells for data tables that have two or more logical levels of row or column headers.	Supports: Complex tables are designed with additional attributes for blind users so the location and context of the table cell are clear and can be communicated by a screen reader.	• The following components meet this criterion: Table cells and relationships between cells can be programmatically determined. ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface ○ IBM Cúram Provider Management 7.0.0.0: ▪ User Interface

(i) Frames shall be titled with text that facilitates frame identification and navigation.	Supports: Meaningful text titles are used to describe the purpose of frames so blind users can easily navigate to the desired area.	• The following components meet this criterion: A title and an accessible frame source are provided for each frame. ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface ○ IBM Cúram Provider Management 7.0.0.0: ▪ User Interface
(j) Pages shall be designed to avoid causing the screen to flicker with a frequency greater than 2 Hz and lower than 55 Hz.	Supports: The use of blinking text, objects or elements has been avoided, reducing risk of seizures for users with photosensitive epilepsy.	• The following components meet this criterion: User interface does not contain anything that flashes more than three times in any one second period. ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface ○ IBM Cúram Provider Management 7.0.0.0: ▪ User Interface
(k) A text-only page, with equivalent information or functionality, shall be provided to make a web site comply with the provisions of this part, when compliance cannot be accomplished in any other way. The content of the text-only page shall be	Not Applicable	• The following components do not apply to this criterion: Already accessible. Text-only page not required. ○ IBM Cúram Social Program Management Development Environment 7.0.0.0:

updated whenever the primary page changes.		▪ Development Environment User Interface o IBM Cúram Provider Management 7.0.0.0: ▪ User Interface
(l) When pages utilize scripting languages to display content, or to create interface elements, the information provided by the script shall be identified with functional text that can be read by Assistive Technology.	Supports: Alternatives to scripting language are provided, allowing users access to the content via keyboard and assistive technology.	• The following components meet this criterion: Scripts are keyboard accessible. When the content affected by scripting is not accessible, an alternative is provided. o IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface o IBM Cúram Provider Management 7.0.0.0: ▪ User Interface
(m) When a web page requires that an applet, plug-in or other application be present on the client system to interpret page content, the page must provide a link to a plug-in or applet that complies with §1194.21(a) through (l).	Supports: An alternative to inaccessible applets or plug-ins is provided for efficient use by disabled users.	• The following components meet this criterion: A link is provided to a directly accessible applet, plug-in or other application. Alternate content is provided for those applets, plug-ins or other applications that are not directly accessible. o IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface

		○ IBM Cúram Provider Management 7.0.0.0: ▪ User Interface
(n) When electronic forms are designed to be completed on-line, the form shall allow people using Assistive Technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.	Supports: The application design allows assistive technology access to information, field elements, and functionality required to complete and submit forms.	• The following components meet this criterion: Form element labels can be programmatically determined. ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface ○ IBM Cúram Provider Management 7.0.0.0: ▪ User Interface
(o) A method shall be provided that permits users to skip repetitive navigation links.	Supports: Web pages are designed so that repetitive navigation links can be skipping over, and blind users can navigate to the main content of the page more easily.	• The following components meet this criterion: A mechanism is available to bypass blocks of content that are repeated. ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface ○ IBM Cúram Provider Management 7.0.0.0: ▪ User Interface

<table>
<tr><td>(p) When a timed response is required, the user shall be alerted and given sufficient time to indicate more time is required.</td><td>Not Applicable</td><td>The following components do not apply to this criterion: No time limits.
IBM Cúram Social Program Management Development Environment 7.0.0.0:
Development Environment User Interface
IBM Cúram Provider Management 7.0.0.0:
User Interface</td></tr>
<tr><td colspan="3">1194.31 Functional Performance Criteria</td></tr>
<tr><td>Criteria</td><td>Supporting Features</td><td>Remarks and Explanations</td></tr>
<tr><td>(a) At least one mode of operation and information retrieval that does not require user vision shall be provided, or support for Assistive Technology used by people who are blind or visually impaired shall be provided.</td><td>Supports:
See the following for supporting features:
- 1194.21 a, b, c, d, e, f, h, i, l
- 1194.22 all
- 1194.23 k1, k4
- 1194.24 d
- 1194.25 a, b, c, e, f, g
- 1194.26 b, d</td><td>The following components meet this criterion:
IBM Cúram Social Program Management Development Environment 7.0.0.0:
Command Line Interface
Server Modeling Environment
Installer
Development Environment User Interface
IBM Cúram Provider Management 7.0.0.0:
User Interface</td></tr>
<tr><td>(b) At least one mode of operation and information retrieval that does not require</td><td>Supports:</td><td>The following components meet this criterion:</td></tr>
</table>

visual acuity greater than 20/70 shall be provided in audio and enlarged print output working together or independently, or support for Assistive Technology used by people what are visually impaired shall be provided.	See the following for supporting features: - 1194.21 c, g, i, j, l - 1194.22 n - 1194.25 h - 1194.26 d	○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface ▪ Server Modeling Environment ▪ Installer ▪ Development Environment User Interface ○ IBM Cúram Provider Management 7.0.0.0: ▪ User Interface
(c) At least one mode of operation and information retrieval that does not require user hearing shall be provided, or support for Assistive Technology used by people who are deaf or hard of hearing shall be provided.	Supports: See the following for other supporting features: - 1194.22 b, m - 1194.23 k4 - 1194.24 c - 1194.25 e, f	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface ○ IBM Cúram Provider Management 7.0.0.0: ▪ User Interface • The following components do not apply to this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface ▪ Server Modeling Environment ▪ Installer

		▪ Development Environment User Interface

(d) Where audio information is important for the use of the product, at least one mode of operation and information retrieval shall be provided in an enhanced auditory fashion, or support for assistive hearing devices shall be provided.	Not Applicable	• The following components do not apply to this criterion:
		  ○ IBM Cúram Social Program Management Development Environment 7.0.0.0:
		    ▪ Command Line Interface
		    ▪ Server Modeling Environment
		    ▪ Installer
		    ▪ Development Environment User Interface
		  ○ IBM Cúram Provider Management 7.0.0.0:
		    ▪ User Interface

(e) At least one mode of operation and information retrieval that does not require user speech shall be provided, or support for Assistive Technology used by people with disabilities shall be provided.	Not Applicable	This is not a speech product.

(f) At least one mode of operation and information retrieval that does not require fine motor control or simultaneous actions and that is operable with limited reach and strength shall be provided.	Supports:
	See the following for supporting features:
	- 1194.21 a, b
	- 1194.22 l, p
	- 1194.23 k1, k2, k3
	- 1194.25 b, j1, j2, j3, j4
	- 1194.26 d
		• The following components meet this criterion:
		  ○ IBM Cúram Social Program Management Development Environment 7.0.0.0:
		    ▪ Command Line Interface
		    ▪ Server Modeling Environment
		    ▪ Installer

		• The following components do not apply to this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface ○ IBM Cúram Provider Management 7.0.0.0: ▪ User Interface
1194.41 Information, documentation, and support		
Criteria	**Supporting Features**	**Remarks and Explanations**
(a) Product support documentation provided to end-users shall be made available in alternate formats upon request, at no additional charge.	Supports: Product support documentation is provided in at least one accessible format.	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Java Documentation - No non-text content. No prerecorded audio. No prerecorded audio and no prerecorded video media. No live audio content in synchronized media. No prerecorded video. Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or

			distinguishing a visual element. User interface does not contain anything that flashes more than three times in any one second period. A mechanism is available to bypass blocks of content that are repeated. No client-side image maps or server-side image maps. Web pages are readable without requiring style sheets. Already accessible. Text-only page not required. No forms. Table cells and relationships between cells can be programmatically determined. No scripts. No applets, plug-ins, or non-HTML content. A title and an accessible frame source are provided for each frame. No prerecorded audio-only and no video-only media. No time limits. ▪ Online Help - No prerecorded audio-only and no video-only

			media. No time limits. No non-text content. No prerecorded audio. No prerecorded audio and no prerecorded video media. No live audio content in synchronized media. No prerecorded video. Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. User interface does not contain anything that flashes more than three times in any one second period. A mechanism is available to bypass blocks of content that are repeated. No client-side image maps or server-side image maps. Web pages are readable without requiring style sheets. Already accessible. Text-only page not required. Form element labels can be programmatically

		determined. Table cells and relationships between cells can be programmatically determined. No scripts. A link is provided to a directly accessible applet, plug-in or other application. Alternate content is provided for those applets, plug-ins or other applications that are not directly accessible. A title and an accessible frame source are provided for each frame. ▪ User Interface Metadata XML - All content presented to the user is text. Document information, structure, and relationships are defined and programmatically available. Information that is conveyed by color is also evident without color, including sufficient contrast between text and the page background. Document elements are presented in a logical reading order. No forms. No

		tables. Document does not include text or images that flash more than 2 times in a one second period. An accessible method is provided for navigating long documents. The primary language of the document is defined. ▪ End User Documentation - No prerecorded audio-only and no video-only media. No time limits. No non-text content. No prerecorded audio. No prerecorded audio and no prerecorded video media. No live audio content in synchronized media. No prerecorded video. Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. User interface does not contain anything that flashes more than three times in any one second

		period. A mechanism is available to bypass blocks of content that are repeated. No client-side image maps or server-side image maps. Web pages are readable without requiring style sheets. Already accessible. Text-only page not required. No forms. Table cells and relationships between cells can be programmatically determined. No scripts. No applets, plug-ins, or non-HTML content. No frames.
(b) End-users shall have access to a description of the accessibility and compatibility features of products in alternate formats or alternate methods upon request, at no additional charge.	Supports: Documentation includes a description of accessibility and compatibility features that make it easier for people with disabilities to use the product. Those descriptions are available in alternate formats upon request.	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Java Documentation - Documentation lists and explains accessibility and compatibility features, including keyboard access. ▪ Online Help - Documentation lists and explains accessibility

		and compatibility features, including keyboard access. ▪ User Interface Metadata XML - Documentation is provided on all accessibility features, including keyboard access. ▪ End User Documentation - Documentation lists and explains accessibility and compatibility features, including keyboard access.
(c) Support services for products shall accommodate the communication needs of end-users with disabilities.	Supports: Operating systems provide accessibility features that allow disabled users to customize their preferences. This application preserves those accessibility user preference settings. For example, if Sticky Keys option is selected by a mobility-impaired user, this option will continue to be activated when used with this application. In addition to standard IBM help desk and support Web sites, IBM has established a TTY telephone service for use by deaf or hard of hearing customers to access sales and support services.	

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VPAT for IBM Cúram Outcome Management 7.0.0.0

VPAT for IBM Cúram Outcome Management 7.0.0.0	
VPAT comments:	It includes: IBM Cúram Assessment and Planning IBM Cúram Service Provider Management IBM Cúram Outcome Management is designed to assess a client's needs, establish a client's goals, plan for goal attainment and track a client's progress.

VPAT Summary

Criteria	**Status**	**Remarks and Explanations**
1194.21 Software Applications and Operating Systems	Supports	Refer to Section 1194.21 in VPAT Details section below.
1194.22 Web-based Internet information and applications	Supports	Refer to Section 1194.22 in VPAT Details section below.
1194.23 Telecommunications Products	Not Applicable	Not Applicable
1194.24 Video and Multi-Media Products	Supports	Refer to Section 1194.24 in VPAT Details section below.
1194.25 Self-Contained, Closed Products	Not Applicable	Not Applicable

1194.26 Desktop and Portable Computers	Not Applicable	Not Applicable
1194.31 Functional Performance Criteria	Supports	Refer to Section 1194.31 in VPAT Details section below.
1194.41 Information, documentation, and support	Supports	Refer to Section 1194.41 in VPAT Details section below.

VPAT Details

1194.21 Software Applications and Operating Systems

Criteria	Supporting Features	Remarks and Explanations
(a) When software is designed to run on a system that has a keyboard, product functions shall be executable from a keyboard where the function itself or the result of performing a function can be discerned textually.	Supports: A keyboard can be used to achieve all tasks in the application, allowing blind and mobility-impaired users to access information without the use of the mouse.	• The following components meet this criterion: All functionality of the content is operable through a keyboard interface without requiring specific timings for individual keystrokes. This is not a requirement where the underlying function requires input that depends on the path of the user's movement and not just the endpoints. If focus can be moved to a component using a keyboard interface, then focus can be moved away from that component using only a keyboard interface, and, if it requires more than unmodified arrow or tab keys, the user is advised of the method for moving focus away. ○ IBM Cúram Outcome Management 7.0.0.0: ▪ IBM Cúram Mobile 1.3 User Interface ○ IBM Cúram Social Program Management Development Environment 7.0.0.0:

		▪ Command Line Interface ▪ Server Modeling Environment ▪ Installer
(b) Applications shall not disrupt or disable activated features of other products that are identified as accessibility features, where those features are developed and documented according to industry standards. Applications also shall not disrupt or disable activated features of any operating system that are identified as accessibility features where the application programming interface for those accessibility features has been documented by the manufacturer of the operating system and is available to the product developer.	Supports: Operating systems provide accessibility features that allow disabled users to customize their preferences. This application preserves those accessibility user preference settings. For example, if Sticky Keys option is selected by a mobility-impaired user, this option will continue to be activated when used with this application.	• The following components meet this criterion: Component does not disrupt platform features that are defined in the platform documentation as accessibility features. ○ IBM Cúram Outcome Management 7.0.0.0: ▪ IBM Cúram Mobile 1.3 User Interface ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface ▪ Server Modeling Environment ▪ Installer
(c) A well-defined on-screen indication of the current focus shall be provided that moves among interactive interface elements as the input focus changes. The focus shall be programmatically exposed so that Assistive Technology can track focus and focus changes.	Supports: When using the application with a keyboard, users can tell where they are on the screen and the information is available to assistive technologies to communicate screen location to visually impaired users.	• The following components meet this criterion: Exposes information and mechanisms necessary to track and modify focus, text insertion point, and selection attributes of user interface components. Any keyboard operable user interface has a mode of operation where the keyboard focus indicator is visible. ○ IBM Cúram Outcome Management 7.0.0.0: ▪ IBM Cúram Mobile 1.3 User Interface

		○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Server Modeling Environment ▪ Installer • The following components do not apply to this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface - The user interface is implemented via commands only. There are no interactive objects.
(d) Sufficient information about a user interface element including the identity, operation and state of the element shall be available to Assistive Technology. When an image represents a program element, the information conveyed by the image must also be available in text.	Supports: This software application allows a screen reader to describe the user interface environment and controls to a blind user. For example, if you tab through a form and find a radio button, the user would be able to determine it is a radio button and the current selection status of the button.	• The following components meet this criterion: Semantic information is provided about user interface objects. ○ IBM Cúram Outcome Management 7.0.0.0: ▪ IBM Cúram Mobile 1.3 User Interface ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Server Modeling Environment ▪ Installer • The following components do not apply to this criterion:

		○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface - The user interface is implemented via commands only. There are no interactive objects.
(e) When bitmap images are used to identify controls, status indicators, or other programmatic elements, the meaning assigned to those images shall be consistent throughout an application's performance.	Supports: The meaning assigned to images used in the application is consistent and unique, minimizing confusion of the context of use for those images.	• The following components meet this criterion: Labels are associated with controls, objects, icons and images. The meaning of images is consistent throughout the application. ○ IBM Cúram Outcome Management 7.0.0.0: ▪ IBM Cúram Mobile 1.3 User Interface ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Server Modeling Environment ▪ Installer • The following components do not apply to this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface - The user interface is implemented via commands only. There

		are no interactive objects.

(f) Textual information shall be provided through operating system functions for displaying text. The minimum information that shall be made available is text content, text input caret location, and text attributes.	Supports:
	Text information is accessible so assistive technologies can communicate content, attributes and caret location to blind users.
		• The following components meet this criterion: Text is provided through standard system function calls or through an API (application programming interface) which supports interaction with assistive technology.
		  ○ IBM Cúram Outcome Management 7.0.0.0:
		    ▪ IBM Cúram Mobile 1.3 User Interface
		  ○ IBM Cúram Social Program Management Development Environment 7.0.0.0:
		    ▪ Command Line Interface
		    ▪ Server Modeling Environment
		    ▪ Installer

(g) Applications shall not override user selected contrast and color selections and other individual display attributes.	Supports:
	System settings are inherited by the application so that customized preferences will not need to be continually reset. For example, color contrast settings enhanced for a low vision user would be preserved by the application.
		• The following components meet this criterion:
		  ○ IBM Cúram Outcome Management 7.0.0.0:
		    ▪ IBM Cúram Mobile 1.3 User Interface - Component provides a mode of operation that allows user preferences for platform settings for color, contrast, font type, font size, and focus cursor.

		○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface - Font, size, and color settings are supported as controlled by the Operative System. ▪ Server Modeling Environment - Component provides a mode of operation that allows user preferences for platform settings for color, contrast, font type, font size, and focus cursor. ▪ Installer - Component provides a mode of operation that allows user preferences for platform settings for color, contrast, font type, font size, and focus cursor.
(h) When animation is displayed, the information shall be displayable in at least one non-animated presentation mode at the option of the user.	Not Applicable	• The following components do not apply to this criterion: No animation. ○ IBM Cúram Outcome Management 7.0.0.0: ▪ IBM Cúram Mobile 1.3 User Interface ○ IBM Cúram Social Program Management Development Environment 7.0.0.0:

		▪ Command Line Interface ▪ Server Modeling Environment ▪ Installer
(i) Color coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.	Supports: Color is used only as an enhancement, and an alternate means to convey information or indicate an action is available to users with visual impairments.	• The following components meet this criterion: o IBM Cúram Outcome Management 7.0.0.0: ▪ IBM Cúram Mobile 1.3 User Interface - Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. o IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface - Color is not used to convey information. ▪ Server Modeling Environment - Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. ▪ Installer - Color is not used as the only visual

		means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.

(j) When a product permits a user to adjust color and contrast settings, a variety of color selections capable of producing a range of contrast levels shall be provided.	Supports:
	When color customization is supported, a variety of color selections and a range of contrast improves accessibility for users with vision impairments.
		• The following components meet this criterion:
		  ○ IBM Cúram Outcome Management 7.0.0.0:
		    ▪ IBM Cúram Mobile 1.3 User Interface - Color customization is supported and a variety of color selections capable of producing a range of contrast levels is provided.
		• The following components do not apply to this criterion:
		  ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: Color customization is not supported.
		    ▪ Command Line Interface
		    ▪ Server Modeling Environment
		    ▪ Installer

(k) Software shall not use flashing or blinking text, objects, or other elements having a flash or blink frequency greater than 2 Hz and lower than 55 Hz.	Supports: The use of blinking text, objects or elements has been avoided, reducing	• The following components meet this criterion: User interface does not contain anything that flashes more than three times in any one second period.

	risk of seizures for users with photosensitive epilepsy.	○ IBM Cúram Outcome Management 7.0.0.0: ▪ IBM Cúram Mobile 1.3 User Interface ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface ▪ Server Modeling Environment ▪ Installer
(l) When electronic forms are used, the form shall allow people using Assistive Technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.	Supports: The application design allows assistive technology access to information, field elements, and functionality required to complete and submit forms.	• The following components meet this criterion: Form fields allow assistive technology to access the information, field elements and functionality required for completion and submission of the form, including all directions and cues. ○ IBM Cúram Outcome Management 7.0.0.0: ▪ IBM Cúram Mobile 1.3 User Interface ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Server Modeling Environment ▪ Installer • The following components do not apply to this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0:

		▪ Command Line Interface - No forms.

1194.22 Web-based Internet information and applications

Criteria	Supporting Features	Remarks and Explanations
(a) A text equivalent for every non-text element shall be provided (e.g., via "alt", "longdesc", or in element content).	Supports: The application design provides text equivalents for all images so that assistive technology can describe those images to blind users.	• The following components meet this criterion: All non-text content that is presented to the user has a text alternative that serves the equivalent purpose. ○ IBM Cúram Outcome Management 7.0.0.0: ▪ User Interface ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface
(b) Equivalent alternatives for any multimedia presentation shall be synchronized with the presentation.	Not Applicable	• The following components do not apply to this criterion: No prerecorded audio. No prerecorded audio and no prerecorded video media. No live audio content in synchronized media. No prerecorded video. No prerecorded audio-only and no video-only media. ○ IBM Cúram Outcome Management 7.0.0.0: ▪ User Interface ○ IBM Cúram Social Program Management Development Environment 7.0.0.0:

		▪ Development Environment User Interface
(c) Web pages shall be designed so that all information conveyed with color is also available without color, for example from context or markup.	Supports: Color is used only as an enhancement, and an alternate means to convey information or indicate an action is available to users with visual impairments.	• The following components meet this criterion: Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. ○ IBM Cúram Outcome Management 7.0.0.0: ▪ User Interface ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface
(d) Documents shall be organized so they are readable without requiring an associated style sheet.	Supports: Web page content is readable without the use of a pre-defined style sheet, allowing low vision users to enable their own style sheets that enhance their viewing preferences.	• The following components meet this criterion: Web pages are readable without requiring style sheets. ○ IBM Cúram Outcome Management 7.0.0.0: ▪ User Interface ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface

(e) Redundant text links shall be provided for each active region of a server-side image map.	Not Applicable	• The following components do not apply to this criterion: No client-side image maps or server-side image maps. o IBM Cúram Outcome Management 7.0.0.0: ▪ User Interface o IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface
(f) Client-side image maps shall be provided instead of server-side image maps except where the regions cannot be defined with an available geometric shape.	Not Applicable	• The following components do not apply to this criterion: No client-side image maps or server-side image maps. o IBM Cúram Outcome Management 7.0.0.0: ▪ User Interface o IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface
(g) Row and column headers shall be identified for data tables.	Supports: The application is designed to identify row and column headers for blind users so the location and context of the table cell are clear and can be communicated by a screen reader.	• The following components meet this criterion: Table cells and relationships between cells can be programmatically determined. o IBM Cúram Outcome Management 7.0.0.0: ▪ User Interface

		○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface
(h) Markup shall be used to associate data cells and header cells for data tables that have two or more logical levels of row or column headers.	Supports: Complex tables are designed with additional attributes for blind users so the location and context of the table cell are clear and can be communicated by a screen reader.	• The following components meet this criterion: Table cells and relationships between cells can be programmatically determined. ○ IBM Cúram Outcome Management 7.0.0.0: ▪ User Interface ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface
(i) Frames shall be titled with text that facilitates frame identification and navigation.	Supports: Meaningful text titles are used to describe the purpose of frames so blind users can easily navigate to the desired area.	• The following components meet this criterion: A title and an accessible frame source are provided for each frame. ○ IBM Cúram Outcome Management 7.0.0.0: ▪ User Interface ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface

(j) Pages shall be designed to avoid causing the screen to flicker with a frequency greater than 2 Hz and lower than 55 Hz.	Supports: The use of blinking text, objects or elements has been avoided, reducing risk of seizures for users with photosensitive epilepsy.	• The following components meet this criterion: User interface does not contain anything that flashes more than three times in any one second period. o IBM Cúram Outcome Management 7.0.0.0: ▪ User Interface o IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface
(k) A text-only page, with equivalent information or functionality, shall be provided to make a web site comply with the provisions of this part, when compliance cannot be accomplished in any other way. The content of the text-only page shall be updated whenever the primary page changes.	Not Applicable	• The following components do not apply to this criterion: Already accessible. Text-only page not required. o IBM Cúram Outcome Management 7.0.0.0: ▪ User Interface o IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface
(l) When pages utilize scripting languages to display content, or to create interface elements, the information provided by the script shall be identified with functional text that can be read by Assistive Technology.	Supports: Alternatives to scripting language are provided, allowing users access to the content via keyboard and assistive technology.	• The following components meet this criterion: Scripts are keyboard accessible. When the content affected by scripting is not accessible, an alternative is provided. o IBM Cúram Outcome Management 7.0.0.0: ▪ User Interface

		○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface
(m) When a web page requires that an applet, plug-in or other application be present on the client system to interpret page content, the page must provide a link to a plug-in or applet that complies with §1194.21(a) through (l).	Supports: An alternative to inaccessible applets or plug-ins is provided for efficient use by disabled users.	• The following components meet this criterion: A link is provided to a directly accessible applet, plug-in or other application. Alternate content is provided for those applets, plug-ins or other applications that are not directly accessible. ○ IBM Cúram Outcome Management 7.0.0.0: ▪ User Interface ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface
(n) When electronic forms are designed to be completed on-line, the form shall allow people using Assistive Technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.	Supports: The application design allows assistive technology access to information, field elements, and functionality required to complete and submit forms.	• The following components meet this criterion: Form element labels can be programmatically determined. ○ IBM Cúram Outcome Management 7.0.0.0: ▪ User Interface ○ IBM Cúram Social Program Management Development Environment 7.0.0.0:

		▪ Development Environment User Interface
(o) A method shall be provided that permits users to skip repetitive navigation links.	Supports: Web pages are designed so that repetitive navigation links can be skipping over, and blind users can navigate to the main content of the page more easily.	• The following components meet this criterion: A mechanism is available to bypass blocks of content that are repeated. ○ IBM Cúram Outcome Management 7.0.0.0: ▪ User Interface ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface
(p) When a timed response is required, the user shall be alerted and given sufficient time to indicate more time is required.	Not Applicable	• The following components do not apply to this criterion: No time limits. ○ IBM Cúram Outcome Management 7.0.0.0: ▪ User Interface ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface

1194.24 Video and Multi-Media Products		
Criteria	**Supporting Features**	**Remarks and Explanations**
(a) All analog television displays 13 inches and larger, and computer equipment that includes analog television receiver or display circuitry, shall be equipped with caption decoder circuitry which appropriately receives, decodes, and displays closed captions from broadcast, cable, videotape, and DVD signals. As soon as practicable, but not later than July 1, 2002, widescreen digital television (DTV) displays measuring at least 7.8 inches vertically, DTV sets with conventional displays measuring at least 13 inches vertically, and stand-alone DTV tuners, whether or not they are marketed with display screens, and computer equipment that includes DTV receiver or display circuitry, shall be equipped with caption decoder circuitry which appropriately receives, decodes, and displays closed captions from broadcast, cable, videotape, and DVD signals.	Not Applicable	
(b) Television tuners, including tuner cards for use in computers, shall be equipped with secondary audio program playback circuitry.	Not Applicable	
(c) All training and informational video and multimedia productions which support the agency's mission, regardless of format, that contain speech or other audio information	Supports: Training and informational video and multimedia provided with the product	• The following components meet this criterion: ○ IBM Cúram Outcome Management 7.0.0.0:

necessary for the comprehension of the content, shall be open or closed captioned.	supports captioning for relevant audio for deaf and hard of hearing users.	▪ IBM Cúram Mobile 1.3 User Interface - Captions are provided for prerecorded audio content in synchronized media. This is not a requirement when the media is a media alternative for text and is clearly labeled as such. • The following components do not apply to this criterion: No prerecorded audio. ○ IBM Cúram Outcome Management 7.0.0.0: ▪ User Interface ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface ▪ Server Modeling Environment ▪ Installer ▪ Development Environment User Interface
(d) All training and informational video and multimedia productions which support the agency's mission, regardless of format, that contain visual information necessary for the comprehension of the content, shall be audio described.	Not Applicable	• The following components do not apply to this criterion: No prerecorded audio and no prerecorded video media. ○ IBM Cúram Outcome Management 7.0.0.0: ▪ User Interface - No prerecorded video. No prerecorded audio-only

		and no video-only media. ▪ IBM Cúram Mobile 1.3 User Interface ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface ▪ Server Modeling Environment ▪ Installer ▪ Development Environment User Interface - No prerecorded video. No prerecorded audio-only and no video-only media.
(e) Display or presentation of alternate text presentation or audio descriptions shall be user-selectable unless permanent.	Not Applicable	
1194.31 Functional Performance Criteria		
Criteria	**Supporting Features**	**Remarks and Explanations**
(a) At least one mode of operation and information retrieval that does not require user vision shall be provided, or support for Assistive Technology used by people who are blind or visually impaired shall be provided.	Supports: See the following for supporting features: - 1194.21 a, b, c, d, e, f, h, i, l - 1194.22 all - 1194.23 k1, k4 - 1194.24 d	• The following components meet this criterion: ○ IBM Cúram Outcome Management 7.0.0.0: ▪ User Interface ▪ IBM Cúram Mobile 1.3 User Interface

	- 1194.25 a, b, c, e, f, g - 1194.26 b, d	○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface ▪ Server Modeling Environment ▪ Installer ▪ Development Environment User Interface
(b) At least one mode of operation and information retrieval that does not require visual acuity greater than 20/70 shall be provided in audio and enlarged print output working together or independently, or support for Assistive Technology used by people what are visually impaired shall be provided.	Supports: See the following for supporting features: - 1194.21 c, g, i, j, l - 1194.22 n - 1194.25 h - 1194.26 d	• The following components meet this criterion: ○ IBM Cúram Outcome Management 7.0.0.0: ▪ User Interface ▪ IBM Cúram Mobile 1.3 User Interface ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface ▪ Server Modeling Environment ▪ Installer ▪ Development Environment User Interface
(c) At least one mode of operation and information retrieval that does not require user hearing shall be provided, or support for Assistive Technology used by people	Supports: See the following for other supporting features: - 1194.22 b, m - 1194.23 k4	• The following components meet this criterion: ○ IBM Cúram Outcome Management 7.0.0.0: ▪ User Interface

<table>
<tr>
<td>who are deaf or hard of hearing shall be provided.</td>
<td>- 1194.24 c
- 1194.25 e, f</td>
<td>IBM Cúram Mobile 1.3 User Interface
IBM Cúram Social Program Management Development Environment 7.0.0.0:
Development Environment User Interface
The following components do not apply to this criterion:
IBM Cúram Social Program Management Development Environment 7.0.0.0:
Command Line Interface
Server Modeling Environment
Installer
Development Environment User Interface</td>
</tr>
<tr>
<td>(d) Where audio information is important for the use of the product, at least one mode of operation and information retrieval shall be provided in an enhanced auditory fashion, or support for assistive hearing devices shall be provided.</td>
<td>Supports:
See the following for other supporting features:
- 1194.23 k4
- 1194.25 e, f</td>
<td>The following components meet this criterion:
IBM Cúram Outcome Management 7.0.0.0:
IBM Cúram Mobile 1.3 User Interface
The following components do not apply to this criterion:
IBM Cúram Outcome Management 7.0.0.0:
User Interface
IBM Cúram Social Program Management Development Environment 7.0.0.0:</td>
</tr>
</table>

		▪ Command Line Interface ▪ Server Modeling Environment ▪ Installer ▪ Development Environment User Interface
(e) At least one mode of operation and information retrieval that does not require user speech shall be provided, or support for Assistive Technology used by people with disabilities shall be provided.	Not Applicable	This is not a speech product.
(f) At least one mode of operation and information retrieval that does not require fine motor control or simultaneous actions and that is operable with limited reach and strength shall be provided.	Supports: See the following for supporting features: - 1194.21 a, b - 1194.22 l, p - 1194.23 k1, k2, k3 - 1194.25 b, j1, j2, j3, j4 - 1194.26 d	• The following components meet this criterion: ○ IBM Cúram Outcome Management 7.0.0.0: ▪ IBM Cúram Mobile 1.3 User Interface ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface ▪ Server Modeling Environment ▪ Installer • The following components do not apply to this criterion: ○ IBM Cúram Outcome Management 7.0.0.0: ▪ User Interface ○ IBM Cúram Social Program Management Development Environment 7.0.0.0:

		▪ Development Environment User Interface
1194.41 Information, documentation, and support		
Criteria	**Supporting Features**	**Remarks and Explanations**
(a) Product support documentation provided to end-users shall be made available in alternate formats upon request, at no additional charge.	Supports: Product support documentation is provided in at least one accessible format.	• The following components meet this criterion: o IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Java Documentation - No time limits. No non-text content. No prerecorded audio. No prerecorded audio and no prerecorded video media. No live audio content in synchronized media. No prerecorded video. Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. User interface does not contain anything that flashes more than three times in any one second period. A mechanism is available to bypass

		blocks of content that are repeated. No client-side image maps or server-side image maps. Web pages are readable without requiring style sheets. Already accessible. Text-only page not required. No forms. Table cells and relationships between cells can be programmatically determined. No scripts. No prerecorded audio-only and no video-only media. No applets, plug-ins, or non-HTML content. A title and an accessible frame source are provided for each frame. ▪ Online Help - No live audio content in synchronized media. No prerecorded video. Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. User interface does not contain

			anything that flashes more than three times in any one second period. A mechanism is available to bypass blocks of content that are repeated. No client-side image maps or server-side image maps. Web pages are readable without requiring style sheets. Already accessible. Text-only page not required. Form element labels can be programmatically determined. Table cells and relationships between cells can be programmatically determined. No scripts. A link is provided to a directly accessible applet, plug-in or other application. Alternate content is provided for those applets, plug-ins or other applications that are not directly accessible. A title and an accessible frame source are provided for each frame. No prerecorded audio-only and no video-

		only media. No time limits. No non-text content. No prerecorded audio. No prerecorded audio and no prerecorded video media. ▪ User Interface Metadata XML - All content presented to the user is text. Document information, structure, and relationships are defined and programmatically available. Information that is conveyed by color is also evident without color, including sufficient contrast between text and the page background. Document elements are presented in a logical reading order. No forms. No tables. Document does not include text or images that flash more than 2 times in a one second period. An accessible method is provided for navigating long documents. The primary language of the document is defined.

		▪ End User Documentation - A mechanism is available to bypass blocks of content that are repeated. No client-side image maps or server-side image maps. Web pages are readable without requiring style sheets. Already accessible. Text-only page not required. No forms. Table cells and relationships between cells can be programmatically determined. No scripts. No applets, plug-ins, or non-HTML content. No frames. No prerecorded audio-only and no video-only media. No time limits. No non-text content. No prerecorded audio. No prerecorded audio and no prerecorded video media. No live audio content in synchronized media. No prerecorded video. Color is not used as the only visual means of conveying

		information, indicating an action, prompting a response, or distinguishing a visual element. User interface does not contain anything that flashes more than three times in any one second period.
(b) End-users shall have access to a description of the accessibility and compatibility features of products in alternate formats or alternate methods upon request, at no additional charge.	Supports: Documentation includes a description of accessibility and compatibility features that make it easier for people with disabilities to use the product. Those descriptions are available in alternate formats upon request.	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Java Documentation - Documentation lists and explains accessibility and compatibility features, including keyboard access. ▪ Online Help - Documentation lists and explains accessibility and compatibility features, including keyboard access. ▪ User Interface Metadata XML - Documentation is provided on all accessibility features, including keyboard access. ▪ End User Documentation -

		Documentation lists and explains accessibility and compatibility features, including keyboard access.
(c) Support services for products shall accommodate the communication needs of end-users with disabilities.	Supports: Operating systems provide accessibility features that allow disabled users to customize their preferences. This application preserves those accessibility user preference settings. For example, if Sticky Keys option is selected by a mobility-impaired user, this option will continue to be activated when used with this application. In addition to standard IBM help desk and support Web sites, IBM has established a TTY telephone service for use by deaf or hard of hearing customers to access sales and support services.	

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IBM provides this data for general information on an AS IS basis. For formal representations on particular proposals, please contact an IBM Client Representative or call the IBM Federal Information Call Center at 1-800-333-6705 or TTY: 1-800-IBM-3383. Any third-party components or technologies not developed by or licensed by IBM that may be packaged with or engaged by the use of this product are not included in this Section 508 assessment.

VPAT for IBM Cúram Income Support 7.0.0.0

VPAT for IBM Cúram Income Support 7.0.0.0	
VPAT comments:	IBM Cúram Income Support provides an integrated, outcomes-based and client-focused solution for a range of human services programs.

VPAT Summary

Criteria	**Status**	**Remarks and Explanations**
1194.21 Software Applications and Operating Systems	Supports	Refer to Section 1194.21 in VPAT Details section below.
1194.22 Web-based Internet information and applications	Supports	Refer to Section 1194.22 in VPAT Details section below.
1194.23 Telecommunications Products	Not Applicable	Not Applicable
1194.24 Video and Multi-Media Products	Not Applicable	Not Applicable
1194.25 Self-Contained, Closed Products	Not Applicable	Not Applicable
1194.26 Desktop and Portable Computers	Not Applicable	Not Applicable
1194.31 Functional Performance Criteria	Supports	Refer to Section 1194.31 in VPAT Details section below.
1194.41 Information, documentation, and support	Supports	Refer to Section 1194.41 in VPAT Details section below.

VPAT Details

1194.21 Software Applications and Operating Systems

Criteria	**Supporting Features**	**Remarks and Explanations**
(a) When software is designed to run on a system that has a keyboard, product functions shall be executable from a	Supports: A keyboard can be used to achieve all tasks in the application, allowing blind	• The following components meet this criterion:

keyboard where the function itself or the result of performing a function can be discerned textually.	and mobility-impaired users to access information without the use of the mouse.	○ IBM Cúram Social Program Management Development Environment 7.0.0.0: All functionality of the content is operable through a keyboard interface without requiring specific timings for individual keystrokes. This is not a requirement where the underlying function requires input that depends on the path of the user's movement and not just the endpoints. If focus can be moved to a component using a keyboard interface, then focus can be moved away from that component using only a keyboard interface, and, if it requires more than unmodified arrow or tab keys, the user is advised of the method for moving focus away. ▪ Command Line Interface ▪ Server Modeling Environment ▪ Installer
(b) Applications shall not disrupt or disable activated features of other products that are identified as accessibility features, where those features are developed and documented according to industry standards. Applications also shall not disrupt or disable activated features of any operating system that are identified as	Supports: Operating systems provide accessibility features that allow disabled users to customize their preferences. This application preserves those accessibility user preference settings. For example, if Sticky Keys option is selected by a	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: Component does not disrupt platform features that are defined in the platform

accessibility features where the application programming interface for those accessibility features has been documented by the manufacturer of the operating system and is available to the product developer.	mobility-impaired user, this option will continue to be activated when used with this application.	documentation as accessibility features. ▪ Command Line Interface ▪ Server Modeling Environment ▪ Installer
(c) A well-defined on-screen indication of the current focus shall be provided that moves among interactive interface elements as the input focus changes. The focus shall be programmatically exposed so that Assistive Technology can track focus and focus changes.	Supports: When using the application with a keyboard, users can tell where they are on the screen and the information is available to assistive technologies to communicate screen location to visually impaired users.	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: Any keyboard operable user interface has a mode of operation where the keyboard focus indicator is visible. Exposes information and mechanisms necessary to track and modify focus, text insertion point, and selection attributes of user interface components. ▪ Server Modeling Environment ▪ Installer • The following components do not apply to this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface - The user interface is implemented via commands only. There

		are no interactive objects.
(d) Sufficient information about a user interface element including the identity, operation and state of the element shall be available to Assistive Technology. When an image represents a program element, the information conveyed by the image must also be available in text.	Supports: This software application allows a screen reader to describe the user interface environment and controls to a blind user. For example, if you tab through a form and find a radio button, the user would be able to determine it is a radio button and the current selection status of the button.	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: Semantic information is provided about user interface objects. ▪ Server Modeling Environment ▪ Installer • The following components do not apply to this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface - The user interface is implemented via commands only. There are no interactive objects.
(e) When bitmap images are used to identify controls, status indicators, or other programmatic elements, the meaning assigned to those images shall be consistent throughout an application's performance.	Supports: The meaning assigned to images used in the application is consistent and unique, minimizing confusion of the context of use for those images.	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: Labels are associated with controls, objects, icons and images. The meaning of images is consistent throughout the application.

		▪ Server Modeling Environment ▪ Installer • The following components do not apply to this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface - The user interface is implemented via commands only. There are no interactive objects.
(f) Textual information shall be provided through operating system functions for displaying text. The minimum information that shall be made available is text content, text input caret location, and text attributes.	Supports: Text information is accessible so assistive technologies can communicate content, attributes and caret location to blind users.	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: Text is provided through standard system function calls or through an API (application programming interface) which supports interaction with assistive technology. ▪ Command Line Interface ▪ Server Modeling Environment ▪ Installer
(g) Applications shall not override user selected contrast and color selections and other individual display attributes.	Supports: System settings are inherited by the application so that customized preferences will not need to be	• The following components meet this criterion:

	continually reset. For example, color contrast settings enhanced for a low vision user would be preserved by the application.	○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface - Font, size, and color settings are supported as controlled by the Operative System. ▪ Server Modeling Environment - Component provides a mode of operation that allows user preferences for platform settings for color, contrast, font type, font size, and focus cursor. ▪ Installer - Component provides a mode of operation that allows user preferences for platform settings for color, contrast, font type, font size, and focus cursor.
(h) When animation is displayed, the information shall be displayable in at least one non-animated presentation mode at the option of the user.	Not Applicable	• The following components do not apply to this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: No animation. ▪ Command Line Interface ▪ Server Modeling Environment

		▪ Installer
(i) Color coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.	Supports: Color is used only as an enhancement, and an alternate means to convey information or indicate an action is available to users with visual impairments.	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface - Color is not used to convey information. ▪ Server Modeling Environment - Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. ▪ Installer - Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.
(j) When a product permits a user to adjust color and contrast settings, a variety of color selections capable of producing a range of contrast levels shall be provided.	Not Applicable	• The following components do not apply to this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: Color customization is not supported. ▪ Command Line Interface

		▪ Server Modeling Environment ▪ Installer
(k) Software shall not use flashing or blinking text, objects, or other elements having a flash or blink frequency greater than 2 Hz and lower than 55 Hz.	Supports: The use of blinking text, objects or elements has been avoided, reducing risk of seizures for users with photosensitive epilepsy.	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: User interface does not contain anything that flashes more than three times in any one second period. ▪ Command Line Interface ▪ Server Modeling Environment ▪ Installer
(l) When electronic forms are used, the form shall allow people using Assistive Technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.	Supports: The application design allows assistive technology access to information, field elements, and functionality required to complete and submit forms.	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: Form fields allow assistive technology to access the information, field elements and functionality required for completion and submission of the form, including all directions and cues. ▪ Server Modeling Environment ▪ Installer • The following components do not apply to this criterion:

		◦ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface - No forms.
1194.22 Web-based Internet information and applications		
Criteria	**Supporting Features**	**Remarks and Explanations**
(a) A text equivalent for every non-text element shall be provided (e.g., via "alt", "longdesc", or in element content).	Supports: The application design provides text equivalents for all images so that assistive technology can describe those images to blind users.	• The following components meet this criterion: All non-text content that is presented to the user has a text alternative that serves the equivalent purpose. ◦ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface ◦ IBM Cúram Income Support 7.0.0.0: ▪ User Interface • The following components do not apply to this criterion: ◦ IBM Cúram Social Program Management Platform 7.0.0.0: ▪ User Interface - No non-text content.
(b) Equivalent alternatives for any multimedia presentation shall be synchronized with the presentation.	Not Applicable	• The following components do not apply to this criterion: No prerecorded audio. No prerecorded audio and no prerecorded video media. No live audio

		content in synchronized media. No prerecorded video. No prerecorded audio-only and no video-only media. ◦ IBM Cúram Social Program Management Platform 7.0.0.0: ▪ User Interface ◦ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface ◦ IBM Cúram Income Support 7.0.0.0: ▪ User Interface
(c) Web pages shall be designed so that all information conveyed with color is also available without color, for example from context or markup.	Supports: Color is used only as an enhancement, and an alternate means to convey information or indicate an action is available to users with visual impairments.	• The following components meet this criterion: Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. ◦ IBM Cúram Social Program Management Platform 7.0.0.0: ▪ User Interface ◦ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface ◦ IBM Cúram Income Support 7.0.0.0: ▪ User Interface

(d) Documents shall be organized so they are readable without requiring an associated style sheet.	Supports: Web page content is readable without the use of a pre-defined style sheet, allowing low vision users to enable their own style sheets that enhance their viewing preferences.	• The following components meet this criterion: Web pages are readable without requiring style sheets. o IBM Cúram Social Program Management Platform 7.0.0.0: ▪ User Interface o IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface o IBM Cúram Income Support 7.0.0.0: ▪ User Interface
(e) Redundant text links shall be provided for each active region of a server-side image map.	Not Applicable	• The following components do not apply to this criterion: No client-side image maps or server-side image maps. o IBM Cúram Social Program Management Platform 7.0.0.0: ▪ User Interface o IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface o IBM Cúram Income Support 7.0.0.0: ▪ User Interface
(f) Client-side image maps shall be provided instead of server-side image maps except	Not Applicable	• The following components do not apply to this criterion: No client-side image maps or server-side image maps.

where the regions cannot be defined with an available geometric shape.		○ IBM Cúram Social Program Management Platform 7.0.0.0: ▪ User Interface ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface ○ IBM Cúram Income Support 7.0.0.0: ▪ User Interface
(g) Row and column headers shall be identified for data tables.	Supports: The application is designed to identify row and column headers for blind users so the location and context of the table cell are clear and can be communicated by a screen reader.	• The following components meet this criterion: Table cells and relationships between cells can be programmatically determined. ○ IBM Cúram Social Program Management Platform 7.0.0.0: ▪ User Interface ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface ○ IBM Cúram Income Support 7.0.0.0: ▪ User Interface
(h) Markup shall be used to associate data cells and header cells for data tables that have two or more logical levels of row or column headers.	Supports: Complex tables are designed with additional attributes for blind users so the location and context of the table	• The following components meet this criterion: Table cells and relationships between cells can be programmatically determined.

	cell are clear and can be communicated by a screen reader.	○ IBM Cúram Social Program Management Platform 7.0.0.0:
		  ▪ User Interface
		○ IBM Cúram Social Program Management Development Environment 7.0.0.0:
		  ▪ Development Environment User Interface
		○ IBM Cúram Income Support 7.0.0.0:
		  ▪ User Interface

(i) Frames shall be titled with text that facilitates frame identification and navigation.	Supports:
	Meaningful text titles are used to describe the purpose of frames so blind users can easily navigate to the desired area.
		• The following components meet this criterion: A title and an accessible frame source are provided for each frame.
		○ IBM Cúram Social Program Management Platform 7.0.0.0:
		  ▪ User Interface
		○ IBM Cúram Social Program Management Development Environment 7.0.0.0:
		  ▪ Development Environment User Interface
		○ IBM Cúram Income Support 7.0.0.0:
		  ▪ User Interface

(j) Pages shall be designed to avoid causing the screen to flicker with a frequency greater than 2 Hz and lower than 55 Hz.	Supports: The use of blinking text, objects or elements has been avoided, reducing	• The following components meet this criterion: User interface does not contain anything that flashes more than three times in any one second period.

	risk of seizures for users with photosensitive epilepsy.	○ IBM Cúram Social Program Management Platform 7.0.0.0: ▪ User Interface ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface ○ IBM Cúram Income Support 7.0.0.0: ▪ User Interface
(k) A text-only page, with equivalent information or functionality, shall be provided to make a web site comply with the provisions of this part, when compliance cannot be accomplished in any other way. The content of the text-only page shall be updated whenever the primary page changes.	Not Applicable	• The following components do not apply to this criterion: Already accessible. Text-only page not required. ○ IBM Cúram Social Program Management Platform 7.0.0.0: ▪ User Interface ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface ○ IBM Cúram Income Support 7.0.0.0: ▪ User Interface
(l) When pages utilize scripting languages to display content, or to create interface elements, the information provided by the script shall be identified with functional text that can be read by Assistive Technology.	Supports: Alternatives to scripting language are provided, allowing users access to the content via keyboard and assistive technology.	• The following components meet this criterion: Scripts are keyboard accessible. When the content affected by scripting is not accessible, an alternative is provided.

		○ IBM Cúram Social Program Management Platform 7.0.0.0: ▪ User Interface ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface ○ IBM Cúram Income Support 7.0.0.0: ▪ User Interface
(m) When a web page requires that an applet, plug-in or other application be present on the client system to interpret page content, the page must provide a link to a plug-in or applet that complies with §1194.21(a) through (l).	Supports: An alternative to inaccessible applets or plug-ins is provided for efficient use by disabled users.	• The following components meet this criterion: A link is provided to a directly accessible applet, plug-in or other application. Alternate content is provided for those applets, plug-ins or other applications that are not directly accessible. ○ IBM Cúram Social Program Management Platform 7.0.0.0: ▪ User Interface ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface ○ IBM Cúram Income Support 7.0.0.0: ▪ User Interface

(n) When electronic forms are designed to be completed on-line, the form shall allow people using Assistive Technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.	Supports:
	The application design allows assistive technology access to information, field elements, and functionality required to complete and submit forms.
		• The following components meet this criterion: Form element labels can be programmatically determined.
		  ○ IBM Cúram Social Program Management Platform 7.0.0.0:
		    ▪ User Interface
		  ○ IBM Cúram Social Program Management Development Environment 7.0.0.0:
		    ▪ Development Environment User Interface
		  ○ IBM Cúram Income Support 7.0.0.0:
		    ▪ User Interface

(o) A method shall be provided that permits users to skip repetitive navigation links.	Supports:
	Web pages are designed so that repetitive navigation links can be skipping over, and blind users can navigate to the main content of the page more easily.
		• The following components meet this criterion: A mechanism is available to bypass blocks of content that are repeated.
		  ○ IBM Cúram Social Program Management Platform 7.0.0.0:
		    ▪ User Interface
		  ○ IBM Cúram Social Program Management Development Environment 7.0.0.0:
		    ▪ Development Environment User Interface
		  ○ IBM Cúram Income Support 7.0.0.0:
		    ▪ User Interface

(p) When a timed response is required, the user shall be alerted and given sufficient time to indicate more time is required.	Not Applicable	• The following components do not apply to this criterion: No time limits. ○ IBM Cúram Social Program Management Platform 7.0.0.0: ▪ User Interface ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface ○ IBM Cúram Income Support 7.0.0.0: ▪ User Interface
1194.31 Functional Performance Criteria		
Criteria	**Supporting Features**	**Remarks and Explanations**
(a) At least one mode of operation and information retrieval that does not require user vision shall be provided, or support for Assistive Technology used by people who are blind or visually impaired shall be provided.	Supports: See the following for supporting features: - 1194.21 a, b, c, d, e, f, h, i, l - 1194.22 all - 1194.23 k1, k4 - 1194.24 d - 1194.25 a, b, c, e, f, g - 1194.26 b, d	• The following components meet this criterion: ○ IBM Cúram Social Program Management Platform 7.0.0.0: ▪ User Interface ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface ▪ Server Modeling Environment ▪ Installer ▪ Development Environment User Interface ○ IBM Cúram Income Support 7.0.0.0:

		▪ User Interface
(b) At least one mode of operation and information retrieval that does not require visual acuity greater than 20/70 shall be provided in audio and enlarged print output working together or independently, or support for Assistive Technology used by people what are visually impaired shall be provided.	Supports: See the following for supporting features: - 1194.21 c, g, i, j, l - 1194.22 n - 1194.25 h - 1194.26 d	• The following components meet this criterion: ○ IBM Cúram Social Program Management Platform 7.0.0.0: ▪ User Interface ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface ▪ Server Modeling Environment ▪ Installer ▪ Development Environment User Interface ○ IBM Cúram Income Support 7.0.0.0: ▪ User Interface
(c) At least one mode of operation and information retrieval that does not require user hearing shall be provided, or support for Assistive Technology used by people who are deaf or hard of hearing shall be provided.	Supports: See the following for other supporting features: - 1194.22 b, m - 1194.23 k4 - 1194.24 c - 1194.25 e, f	• The following components meet this criterion: ○ IBM Cúram Social Program Management Platform 7.0.0.0: ▪ User Interface ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface ○ IBM Cúram Income Support 7.0.0.0: ▪ User Interface

		• The following components do not apply to this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface ▪ Server Modeling Environment ▪ Installer ▪ Development Environment User Interface
(d) Where audio information is important for the use of the product, at least one mode of operation and information retrieval shall be provided in an enhanced auditory fashion, or support for assistive hearing devices shall be provided.	Not Applicable	• The following components do not apply to this criterion: ○ IBM Cúram Social Program Management Platform 7.0.0.0: ▪ User Interface ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface ▪ Server Modeling Environment ▪ Installer ▪ Development Environment User Interface ○ IBM Cúram Income Support 7.0.0.0: ▪ User Interface
(e) At least one mode of operation and information retrieval that does not require user speech shall be provided, or support	Not Applicable	This is not a speech product.

for Assistive Technology used by people with disabilities shall be provided.		
(f) At least one mode of operation and information retrieval that does not require fine motor control or simultaneous actions and that is operable with limited reach and strength shall be provided.	Supports: See the following for supporting features: - 1194.21 a, b - 1194.22 l, p - 1194.23 k1, k2, k3 - 1194.25 b, j1, j2, j3, j4 - 1194.26 d	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface ▪ Server Modeling Environment ▪ Installer • The following components do not apply to this criterion: ○ IBM Cúram Social Program Management Platform 7.0.0.0: ▪ User Interface ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface ○ IBM Cúram Income Support 7.0.0.0: ▪ User Interface
1194.41 Information, documentation, and support		
Criteria	**Supporting Features**	**Remarks and Explanations**
(a) Product support documentation provided to end-users shall be made available in	Supports: Product support documentation is provided in at least one accessible format.	• The following components meet this criterion:

alternate formats upon request, at no additional charge.		○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Java Documentation - No non-text content. No prerecorded audio. No prerecorded audio and no prerecorded video media. No live audio content in synchronized media. No prerecorded video. Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. User interface does not contain anything that flashes more than three times in any one second period. A mechanism is available to bypass blocks of content that are repeated. No client-side image maps or server-side image maps. Web pages are readable without requiring style sheets. Already accessible. Text-only page not required. No

		forms. Table cells and relationships between cells can be programmatically determined. No scripts. No applets, plug-ins, or non-HTML content. A title and an accessible frame source are provided for each frame. No prerecorded audio-only and no video-only media. No time limits. ▪ Online Help - No prerecorded audio-only and no video-only media. No time limits. No non-text content. No prerecorded audio. No prerecorded audio and no prerecorded video media. No live audio content in synchronized media. No prerecorded video. Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. User interface does not contain

		anything that flashes more than three times in any one second period. A mechanism is available to bypass blocks of content that are repeated. No client-side image maps or server-side image maps. Web pages are readable without requiring style sheets. Already accessible. Text-only page not required. Form element labels can be programmatically determined. Table cells and relationships between cells can be programmatically determined. No scripts. A link is provided to a directly accessible applet, plug-in or other application. Alternate content is provided for those applets, plug-ins or other applications that are not directly accessible. A title and an accessible frame source are provided for each frame.

			▪ User Interface Metadata XML - All content presented to the user is text. Document information, structure, and relationships are defined and programmatically available. Information that is conveyed by color is also evident without color, including sufficient contrast between text and the page background. Document elements are presented in a logical reading order. No forms. No tables. Document does not include text or images that flash more than 2 times in a one second period. An accessible method is provided for navigating long documents. The primary language of the document is defined. ▪ End User Documentation - No prerecorded audio-only and no video-only media. No time limits. No non-text content. No prerecorded

		audio. No prerecorded audio and no prerecorded video media. No live audio content in synchronized media. No prerecorded video. Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. User interface does not contain anything that flashes more than three times in any one second period. A mechanism is available to bypass blocks of content that are repeated. No client-side image maps or server-side image maps. Web pages are readable without requiring style sheets. Already accessible. Text-only page not required. No forms. Table cells and relationships between cells can be programmatically determined. No

		scripts. No applets, plug-ins, or non-HTML content. No frames.
(b) End-users shall have access to a description of the accessibility and compatibility features of products in alternate formats or alternate methods upon request, at no additional charge.	Supports: Documentation includes a description of accessibility and compatibility features that make it easier for people with disabilities to use the product. Those descriptions are available in alternate formats upon request.	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Java Documentation - Documentation lists and explains accessibility and compatibility features, including keyboard access. ▪ Online Help - Documentation lists and explains accessibility and compatibility features, including keyboard access. ▪ User Interface Metadata XML - Documentation is provided on all accessibility features, including keyboard access. ▪ End User Documentation - Documentation lists and explains accessibility and compatibility features, including keyboard access.

(c) Support services for products shall accommodate the communication needs of end-users with disabilities.	Supports: Operating systems provide accessibility features that allow disabled users to customize their preferences. This application preserves those accessibility user preference settings. For example, if Sticky Keys option is selected by a mobility-impaired user, this option will continue to be activated when used with this application. In addition to standard IBM help desk and support Web sites, IBM has established a TTY telephone service for use by deaf or hard of hearing customers to access sales and support services.	
Disclaimer:		
IBM provides this data for general information on an AS IS basis. For formal representations on particular proposals, please contact an IBM Client Representative or call the IBM Federal Information Call Center at 1-800-333-6705 or TTY: 1-800-IBM-3383. Any third-party components or technologies not developed by or licensed by IBM that may be packaged with or engaged by the use of this product are not included in this Section 508 assessment.		

VPAT for IBM Cúram Appeals 7.0.0.0

VPAT for IBM Cúram Appeals 7.0.0.0	
VPAT comments:	It includes: IBM Cúram Appeals and Legal Actions IBM Cúram Audit and Investigation

	For a detailed description of the parent features and benefits, please refer to the following URL: http://www.ibm.com/software/products/us/en/appeals/

VPAT Summary		
Criteria	**Status**	**Remarks and Explanations**
1194.21 Software Applications and Operating Systems	Supports	Refer to Section 1194.21 in VPAT Details section below.
1194.22 Web-based Internet information and applications	Supports	Refer to Section 1194.22 in VPAT Details section below.
1194.23 Telecommunications Products	Not Applicable	Not Applicable
1194.24 Video and Multi-Media Products	Not Applicable	Not Applicable
1194.25 Self-Contained, Closed Products	Not Applicable	Not Applicable
1194.26 Desktop and Portable Computers	Not Applicable	Not Applicable
1194.31 Functional Performance Criteria	Supports	Refer to Section 1194.31 in VPAT Details section below.
1194.41 Information, documentation, and support	Supports	Refer to Section 1194.41 in VPAT Details section below.

VPAT Details		
1194.21 Software Applications and Operating Systems		
Criteria	**Supporting Features**	**Remarks and Explanations**
(a) When software is designed to run on a system that has a keyboard, product functions shall be executable from a	Supports: A keyboard can be used to achieve all tasks in the application, allowing blind	• The following components meet this criterion:

keyboard where the function itself or the result of performing a function can be discerned textually.	and mobility-impaired users to access information without the use of the mouse.	○ IBM Cúram Social Program Management Development Environment 7.0.0.0: All functionality of the content is operable through a keyboard interface without requiring specific timings for individual keystrokes. This is not a requirement where the underlying function requires input that depends on the path of the user's movement and not just the endpoints. If focus can be moved to a component using a keyboard interface, then focus can be moved away from that component using only a keyboard interface, and, if it requires more than unmodified arrow or tab keys, the user is advised of the method for moving focus away. ▪ Command Line Interface ▪ Server Modeling Environment ▪ Installer
(b) Applications shall not disrupt or disable activated features of other products that are identified as accessibility features, where those features are developed and documented according to industry standards. Applications also shall not disrupt or disable activated features of any operating system that are identified as	Supports: Operating systems provide accessibility features that allow disabled users to customize their preferences. This application preserves those accessibility user preference settings. For example, if Sticky Keys option is selected by a	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: Component does not disrupt platform features that are defined in the platform

accessibility features where the application programming interface for those accessibility features has been documented by the manufacturer of the operating system and is available to the product developer.	mobility-impaired user, this option will continue to be activated when used with this application.	documentation as accessibility features. ▪ Command Line Interface ▪ Server Modeling Environment ▪ Installer
(c) A well-defined on-screen indication of the current focus shall be provided that moves among interactive interface elements as the input focus changes. The focus shall be programmatically exposed so that Assistive Technology can track focus and focus changes.	Supports: When using the application with a keyboard, users can tell where they are on the screen and the information is available to assistive technologies to communicate screen location to visually impaired users.	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: Any keyboard operable user interface has a mode of operation where the keyboard focus indicator is visible. Exposes information and mechanisms necessary to track and modify focus, text insertion point, and selection attributes of user interface components. ▪ Server Modeling Environment ▪ Installer • The following components do not apply to this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface - The user interface is implemented via commands only. There

		are no interactive objects.

(d) Sufficient information about a user interface element including the identity, operation and state of the element shall be available to Assistive Technology. When an image represents a program element, the information conveyed by the image must also be available in text.	Supports:
	This software application allows a screen reader to describe the user interface environment and controls to a blind user. For example, if you tab through a form and find a radio button, the user would be able to determine it is a radio button and the current selection status of the button.
		• The following components meet this criterion:
		  ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: Semantic information is provided about user interface objects.
		    ▪ Server Modeling Environment
		    ▪ Installer
		• The following components do not apply to this criterion:
		  ○ IBM Cúram Social Program Management Development Environment 7.0.0.0:
		    ▪ Command Line Interface - The user interface is implemented via commands only. There are no interactive objects.

(e) When bitmap images are used to identify controls, status indicators, or other programmatic elements, the meaning assigned to those images shall be consistent throughout an application's performance.	Supports: The meaning assigned to images used in the application is consistent and unique, minimizing confusion of the context of use for those images.	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: Labels are associated with controls, objects, icons and images. The meaning of images is consistent throughout the application.

		▪ Server Modeling Environment ▪ Installer • The following components do not apply to this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface - The user interface is implemented via commands only. There are no interactive objects.
(f) Textual information shall be provided through operating system functions for displaying text. The minimum information that shall be made available is text content, text input caret location, and text attributes.	Supports: Text information is accessible so assistive technologies can communicate content, attributes and caret location to blind users.	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: Text is provided through standard system function calls or through an API (application programming interface) which supports interaction with assistive technology. ▪ Command Line Interface ▪ Server Modeling Environment ▪ Installer
(g) Applications shall not override user selected contrast and color selections and other individual display attributes.	Supports: System settings are inherited by the application so that customized preferences will not need to be	• The following components meet this criterion:

	continually reset. For example, color contrast settings enhanced for a low vision user would be preserved by the application.	○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface - Font, size, and color settings are supported as controlled by the Operative System. ▪ Server Modeling Environment - Component provides a mode of operation that allows user preferences for platform settings for color, contrast, font type, font size, and focus cursor. ▪ Installer - Component provides a mode of operation that allows user preferences for platform settings for color, contrast, font type, font size, and focus cursor.
(h) When animation is displayed, the information shall be displayable in at least one non-animated presentation mode at the option of the user.	Not Applicable	• The following components do not apply to this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: No animation. ▪ Command Line Interface ▪ Server Modeling Environment

		▪ Installer
(i) Color coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.	Supports: Color is used only as an enhancement, and an alternate means to convey information or indicate an action is available to users with visual impairments.	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface - Color is not used to convey information. ▪ Server Modeling Environment - Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. ▪ Installer - Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.
(j) When a product permits a user to adjust color and contrast settings, a variety of color selections capable of producing a range of contrast levels shall be provided.	Not Applicable	• The following components do not apply to this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: Color customization is not supported. ▪ Command Line Interface

		▪ Server Modeling Environment ▪ Installer
(k) Software shall not use flashing or blinking text, objects, or other elements having a flash or blink frequency greater than 2 Hz and lower than 55 Hz.	Supports: The use of blinking text, objects or elements has been avoided, reducing risk of seizures for users with photosensitive epilepsy.	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: User interface does not contain anything that flashes more than three times in any one second period. ▪ Command Line Interface ▪ Server Modeling Environment ▪ Installer
(l) When electronic forms are used, the form shall allow people using Assistive Technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.	Supports: The application design allows assistive technology access to information, field elements, and functionality required to complete and submit forms.	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: Form fields allow assistive technology to access the information, field elements and functionality required for completion and submission of the form, including all directions and cues. ▪ Server Modeling Environment ▪ Installer • The following components do not apply to this criterion:

		○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface - No forms.
1194.22 Web-based Internet information and applications		
Criteria	**Supporting Features**	**Remarks and Explanations**
(a) A text equivalent for every non-text element shall be provided (e.g., via "alt", "longdesc", or in element content).	Supports: The application design provides text equivalents for all images so that assistive technology can describe those images to blind users.	• The following components meet this criterion: All non-text content that is presented to the user has a text alternative that serves the equivalent purpose. ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface ○ IBM Cúram Appeals 7.0.0.0: ▪ User Interface
(b) Equivalent alternatives for any multimedia presentation shall be synchronized with the presentation.	Not Applicable	• The following components do not apply to this criterion: No prerecorded audio-only and no video-only media. No prerecorded audio. No prerecorded audio and no prerecorded video media. No live audio content in synchronized media. No prerecorded video. ○ IBM Cúram Social Program Management Development Environment 7.0.0.0:

		▪ Development Environment User Interface ○ IBM Cúram Appeals 7.0.0.0: ▪ User Interface
(c) Web pages shall be designed so that all information conveyed with color is also available without color, for example from context or markup.	Supports: Color is used only as an enhancement, and an alternate means to convey information or indicate an action is available to users with visual impairments.	• The following components meet this criterion: Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface ○ IBM Cúram Appeals 7.0.0.0: ▪ User Interface
(d) Documents shall be organized so they are readable without requiring an associated style sheet.	Supports: Web page content is readable without the use of a pre-defined style sheet, allowing low vision users to enable their own style sheets that enhance their viewing preferences.	• The following components meet this criterion: Web pages are readable without requiring style sheets. ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface ○ IBM Cúram Appeals 7.0.0.0: ▪ User Interface

(e) Redundant text links shall be provided for each active region of a server-side image map.	Not Applicable	• The following components do not apply to this criterion: No client-side image maps or server-side image maps.
		  ○ IBM Cúram Social Program Management Development Environment 7.0.0.0:
		    ▪ Development Environment User Interface
		  ○ IBM Cúram Appeals 7.0.0.0:
		    ▪ User Interface

(f) Client-side image maps shall be provided instead of server-side image maps except where the regions cannot be defined with an available geometric shape.	Not Applicable	• The following components do not apply to this criterion: No client-side image maps or server-side image maps.
		  ○ IBM Cúram Social Program Management Development Environment 7.0.0.0:
		    ▪ Development Environment User Interface
		  ○ IBM Cúram Appeals 7.0.0.0:
		    ▪ User Interface

(g) Row and column headers shall be identified for data tables.	Supports:
	The application is designed to identify row and column headers for blind users so the location and context of the table cell are clear and can be communicated by a screen reader.
		• The following components meet this criterion: Table cells and relationships between cells can be programmatically determined.
		  ○ IBM Cúram Social Program Management Development Environment 7.0.0.0:
		    ▪ Development Environment User Interface
		  ○ IBM Cúram Appeals 7.0.0.0:

		▪ User Interface
(h) Markup shall be used to associate data cells and header cells for data tables that have two or more logical levels of row or column headers.	Supports: Complex tables are designed with additional attributes for blind users so the location and context of the table cell are clear and can be communicated by a screen reader.	• The following components meet this criterion: Table cells and relationships between cells can be programmatically determined. o IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface o IBM Cúram Appeals 7.0.0.0: ▪ User Interface
(i) Frames shall be titled with text that facilitates frame identification and navigation.	Supports: Meaningful text titles are used to describe the purpose of frames so blind users can easily navigate to the desired area.	• The following components meet this criterion: A title and an accessible frame source are provided for each frame. o IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface o IBM Cúram Appeals 7.0.0.0: ▪ User Interface
(j) Pages shall be designed to avoid causing the screen to flicker with a frequency greater than 2 Hz and lower than 55 Hz.	Supports: The use of blinking text, objects or elements has been avoided, reducing risk of seizures for users with photosensitive epilepsy.	• The following components meet this criterion: User interface does not contain anything that flashes more than three times in any one second period.

		○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface ○ IBM Cúram Appeals 7.0.0.0: ▪ User Interface
(k) A text-only page, with equivalent information or functionality, shall be provided to make a web site comply with the provisions of this part, when compliance cannot be accomplished in any other way. The content of the text-only page shall be updated whenever the primary page changes.	Not Applicable	• The following components do not apply to this criterion: Already accessible. Text-only page not required. ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface ○ IBM Cúram Appeals 7.0.0.0: ▪ User Interface
(l) When pages utilize scripting languages to display content, or to create interface elements, the information provided by the script shall be identified with functional text that can be read by Assistive Technology.	Supports: Alternatives to scripting language are provided, allowing users access to the content via keyboard and assistive technology.	• The following components meet this criterion: Scripts are keyboard accessible. When the content affected by scripting is not accessible, an alternative is provided. ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface ○ IBM Cúram Appeals 7.0.0.0: ▪ User Interface

(m) When a web page requires that an applet, plug-in or other application be present on the client system to interpret page content, the page must provide a link to a plug-in or applet that complies with §1194.21(a) through (l).	Supports: An alternative to inaccessible applets or plug-ins is provided for efficient use by disabled users.	• The following components meet this criterion: A link is provided to a directly accessible applet, plug-in or other application. Alternate content is provided for those applets, plug-ins or other applications that are not directly accessible. ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface ○ IBM Cúram Appeals 7.0.0.0: ▪ User Interface
(n) When electronic forms are designed to be completed on-line, the form shall allow people using Assistive Technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.	Supports: The application design allows assistive technology access to information, field elements, and functionality required to complete and submit forms.	• The following components meet this criterion: Form element labels can be programmatically determined. ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface ○ IBM Cúram Appeals 7.0.0.0: ▪ User Interface
(o) A method shall be provided that permits users to skip repetitive navigation links.	Supports: Web pages are designed so that repetitive navigation links can be skipping over, and blind users can navigate to the main content of the page more easily.	• The following components meet this criterion: A mechanism is available to bypass blocks of content that are repeated. ○ IBM Cúram Social Program Management Development Environment 7.0.0.0:

		▪ Development Environment User Interface ○ IBM Cúram Appeals 7.0.0.0: ▪ User Interface
(p) When a timed response is required, the user shall be alerted and given sufficient time to indicate more time is required.	Not Applicable	• The following components do not apply to this criterion: No time limits. ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface ○ IBM Cúram Appeals 7.0.0.0: ▪ User Interface
1194.31 Functional Performance Criteria		
Criteria	**Supporting Features**	**Remarks and Explanations**
(a) At least one mode of operation and information retrieval that does not require user vision shall be provided, or support for Assistive Technology used by people who are blind or visually impaired shall be provided.	Supports: See the following for supporting features: - 1194.21 a, b, c, d, e, f, h, i, l - 1194.22 all - 1194.23 k1, k4 - 1194.24 d - 1194.25 a, b, c, e, f, g - 1194.26 b, d	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface ▪ Server Modeling Environment ▪ Installer ▪ Development Environment User Interface ○ IBM Cúram Appeals 7.0.0.0:

		▪ User Interface
(b) At least one mode of operation and information retrieval that does not require visual acuity greater than 20/70 shall be provided in audio and enlarged print output working together or independently, or support for Assistive Technology used by people what are visually impaired shall be provided.	Supports: See the following for supporting features: - 1194.21 c, g, i, j, l - 1194.22 n - 1194.25 h - 1194.26 d	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface ▪ Server Modeling Environment ▪ Installer ▪ Development Environment User Interface ○ IBM Cúram Appeals 7.0.0.0: ▪ User Interface
(c) At least one mode of operation and information retrieval that does not require user hearing shall be provided, or support for Assistive Technology used by people who are deaf or hard of hearing shall be provided.	Supports: See the following for other supporting features: - 1194.22 b, m - 1194.23 k4 - 1194.24 c - 1194.25 e, f	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface ○ IBM Cúram Appeals 7.0.0.0: ▪ User Interface • The following components do not apply to this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface ▪ Server Modeling Environment

		▪ Installer ▪ Development Environment User Interface
(d) Where audio information is important for the use of the product, at least one mode of operation and information retrieval shall be provided in an enhanced auditory fashion, or support for assistive hearing devices shall be provided.	Not Applicable	• The following components do not apply to this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface ▪ Server Modeling Environment ▪ Installer ▪ Development Environment User Interface ○ IBM Cúram Appeals 7.0.0.0: ▪ User Interface
(e) At least one mode of operation and information retrieval that does not require user speech shall be provided, or support for Assistive Technology used by people with disabilities shall be provided.	Not Applicable	This is not a speech product.
(f) At least one mode of operation and information retrieval that does not require fine motor control or simultaneous actions and that is operable with limited reach and strength shall be provided.	Supports: See the following for supporting features: - 1194.21 a, b - 1194.22 l, p - 1194.23 k1, k2, k3 - 1194.25 b, j1, j2, j3, j4 - 1194.26 d	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface ▪ Server Modeling Environment ▪ Installer

		• The following components do not apply to this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface ○ IBM Cúram Appeals 7.0.0.0: ▪ User Interface
1194.41 Information, documentation, and support		
Criteria	**Supporting Features**	**Remarks and Explanations**
(a) Product support documentation provided to end-users shall be made available in alternate formats upon request, at no additional charge.	Supports: Product support documentation is provided in at least one accessible format.	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Java Documentation - A mechanism is available to bypass blocks of content that are repeated. No client-side image maps or server-side image maps. Web pages are readable without requiring style sheets. Already accessible. Text-only page not required. No forms. Table cells and relationships between cells can be programmatically

		determined. No scripts. No applets, plug-ins, or non-HTML content. A title and an accessible frame source are provided for each frame. No prerecorded audio-only and no video-only media. No time limits. No non-text content. No prerecorded audio. No prerecorded audio and no prerecorded video media. No live audio content in synchronized media. No prerecorded video. Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. User interface does not contain anything that flashes more than three times in any one second period. ▪ Online Help - No non-text content. No prerecorded audio. No prerecorded audio and no prerecorded video media. No live audio

			content in synchronized media. No prerecorded video. Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. User interface does not contain anything that flashes more than three times in any one second period. A mechanism is available to bypass blocks of content that are repeated. No client-side image maps or server-side image maps. Web pages are readable without requiring style sheets. Already accessible. Text-only page not required. Form element labels can be programmatically determined. Table cells and relationships between cells can be programmatically determined. No scripts. A link is provided to a directly accessible

			applet, plug-in or other application. Alternate content is provided for those applets, plug-ins or other applications that are not directly accessible. A title and an accessible frame source are provided for each frame. No prerecorded audio-only and no video-only media. No time limits. ▪ User Interface Metadata XML - All content presented to the user is text. Document information, structure, and relationships are defined and programmatically available. Information that is conveyed by color is also evident without color, including sufficient contrast between text and the page background. Document elements are presented in a logical reading order. No forms. No tables. Document does not include text or images that flash more than 2 times in a one

		second period. An accessible method is provided for navigating long documents. The primary language of the document is defined. ▪ End User Documentation - No prerecorded audio-only and no video-only media. No time limits. No non-text content. No prerecorded audio. No prerecorded audio and no prerecorded video media. No live audio content in synchronized media. No prerecorded video. Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. User interface does not contain anything that flashes more than three times in any one second period. A mechanism is available to bypass blocks of content that are repeated. No client-

		side image maps or server-side image maps. Web pages are readable without requiring style sheets. Already accessible. Text-only page not required. No forms. Table cells and relationships between cells can be programmatically determined. No scripts. No applets, plug-ins, or non-HTML content. No frames.
(b) End-users shall have access to a description of the accessibility and compatibility features of products in alternate formats or alternate methods upon request, at no additional charge.	Supports: Documentation includes a description of accessibility and compatibility features that make it easier for people with disabilities to use the product. Those descriptions are available in alternate formats upon request.	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Java Documentation - Documentation lists and explains accessibility and compatibility features, including keyboard access. ▪ Online Help - Documentation lists and explains accessibility and compatibility features, including keyboard access.

		▪ User Interface Metadata XML - Documentation is provided on all accessibility features, including keyboard access. ▪ End User Documentation - Documentation lists and explains accessibility and compatibility features, including keyboard access.
(c) Support services for products shall accommodate the communication needs of end-users with disabilities.	Supports: Operating systems provide accessibility features that allow disabled users to customize their preferences. This application preserves those accessibility user preference settings. For example, if Sticky Keys option is selected by a mobility-impaired user, this option will continue to be activated when used with this application. In addition to standard IBM help desk and support Web sites, IBM has established a TTY telephone service for use by deaf or hard of hearing customers to access sales and support services.	

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VPAT for IBM Cúram Business Intelligence and Analytics 7.0.0.0

VPAT for IBM Cúram Business Intelligence and Analytics 7.0.0.0	
VPAT comments:	IBM Cúram Business Intelligence & Analytics is a complete Business Intelligence solution providing robust enterprise reporting capabilities for Social Enterprise Management organizations.

VPAT Summary		
Criteria	**Status**	**Remarks and Explanations**
1194.21 Software Applications and Operating Systems	Supports	Refer to Section 1194.21 in VPAT Details section below.
1194.22 Web-based Internet information and applications	Not Applicable	Not Applicable
1194.23 Telecommunications Products	Not Applicable	Not Applicable
1194.24 Video and Multi-Media Products	Not Applicable	Not Applicable
1194.25 Self-Contained, Closed Products	Not Applicable	Not Applicable
1194.26 Desktop and Portable Computers	Not Applicable	Not Applicable
1194.31 Functional Performance Criteria	Supports	Refer to Section 1194.31 in VPAT Details section below.
1194.41 Information, documentation, and support	Supports	Refer to Section 1194.41 in VPAT Details section below.

VPAT Details		
1194.21 Software Applications and Operating Systems		
Criteria	**Supporting Features**	**Remarks and Explanations**
(a) When software is designed to run on a system that has a keyboard, product functions shall be executable from a keyboard where the function itself or the result of performing a function can be discerned textually.	Supports: A keyboard can be used to achieve all tasks in the application, allowing blind and mobility-impaired users to access information without the use of the mouse.	• The following components meet this criterion: ○ IBM Cúram Business Intelligence and Analytics 7.0.0.0: ▪ User Interface - All functionality of the content is operable through a keyboard interface without requiring specific timings for individual keystrokes. This is not a requirement where the underlying function requires input that depends on the path of the user's movement and not just the endpoints. If focus can be moved to a component using a keyboard interface, then focus can be moved away from that component using only a keyboard interface, and, if it requires more than unmodified arrow or tab keys, the user is advised

		of the method for moving focus away.
(b) Applications shall not disrupt or disable activated features of other products that are identified as accessibility features, where those features are developed and documented according to industry standards. Applications also shall not disrupt or disable activated features of any operating system that are identified as accessibility features where the application programming interface for those accessibility features has been documented by the manufacturer of the operating system and is available to the product developer.	Supports: Operating systems provide accessibility features that allow disabled users to customize their preferences. This application preserves those accessibility user preference settings. For example, if Sticky Keys option is selected by a mobility-impaired user, this option will continue to be activated when used with this application.	• The following components meet this criterion: ○ IBM Cúram Business Intelligence and Analytics 7.0.0.0: ▪ User Interface - Component does not disrupt platform features that are defined in the platform documentation as accessibility features.
(c) A well-defined on-screen indication of the current focus shall be provided that moves among interactive interface elements as the input focus changes. The focus shall be programmatically exposed so that Assistive Technology can track focus and focus changes.	Supports: When using the application with a keyboard, users can tell where they are on the screen and the information is available to assistive technologies to communicate screen location to visually impaired users.	• The following components meet this criterion: ○ IBM Cúram Business Intelligence and Analytics 7.0.0.0: ▪ User Interface - The user interface is implemented via commands only. There are no interactive objects. Any keyboard operable user interface has a mode of operation where the keyboard focus indicator is visible.
(d) Sufficient information about a user interface element including the identity,	Not Applicable	• The following components do not apply to this criterion:

operation and state of the element shall be available to Assistive Technology. When an image represents a program element, the information conveyed by the image must also be available in text.		◦ IBM Cúram Business Intelligence and Analytics 7.0.0.0: ▪ User Interface - The user interface is implemented via commands only. There are no interactive objects.
(e) When bitmap images are used to identify controls, status indicators, or other programmatic elements, the meaning assigned to those images shall be consistent throughout an application's performance.	Not Applicable	• The following components do not apply to this criterion: ◦ IBM Cúram Business Intelligence and Analytics 7.0.0.0: ▪ User Interface - The user interface is implemented via commands only. There are no interactive objects.
(f) Textual information shall be provided through operating system functions for displaying text. The minimum information that shall be made available is text content, text input caret location, and text attributes.	Supports: Text information is accessible so assistive technologies can communicate content, attributes and caret location to blind users.	• The following components meet this criterion: ◦ IBM Cúram Business Intelligence and Analytics 7.0.0.0: ▪ User Interface - Text is provided through standard system function calls or through an API (application programming interface) which supports

		interaction with assistive technology.
(g) Applications shall not override user selected contrast and color selections and other individual display attributes.	Supports: System settings are inherited by the application so that customized preferences will not need to be continually reset. For example, color contrast settings enhanced for a low vision user would be preserved by the application.	• The following components meet this criterion: ○ IBM Cúram Business Intelligence and Analytics 7.0.0.0: ▪ User Interface - Component provides a mode of operation that allows user preferences for platform settings for color, contrast, font type, font size, and focus cursor.
(h) When animation is displayed, the information shall be displayable in at least one non-animated presentation mode at the option of the user.	Not Applicable	• The following components do not apply to this criterion: ○ IBM Cúram Business Intelligence and Analytics 7.0.0.0: ▪ User Interface - No animation.
(i) Color coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.	Supports: Color is used only as an enhancement, and an alternate means to convey information or indicate an action is available to users with visual impairments.	• The following components meet this criterion: ○ IBM Cúram Business Intelligence and Analytics 7.0.0.0: ▪ User Interface - Color is not used as the only visual means of conveying information,

		indicating an action, prompting a response, or distinguishing a visual element.
(j) When a product permits a user to adjust color and contrast settings, a variety of color selections capable of producing a range of contrast levels shall be provided.	Not Applicable	• The following components do not apply to this criterion: ○ IBM Cúram Business Intelligence and Analytics 7.0.0.0: ▪ User Interface - Color customization is not supported.
(k) Software shall not use flashing or blinking text, objects, or other elements having a flash or blink frequency greater than 2 Hz and lower than 55 Hz.	Supports: The use of blinking text, objects or elements has been avoided, reducing risk of seizures for users with photosensitive epilepsy.	• The following components meet this criterion: ○ IBM Cúram Business Intelligence and Analytics 7.0.0.0: ▪ User Interface - User interface does not contain anything that flashes more than three times in any one second period.
(l) When electronic forms are used, the form shall allow people using Assistive Technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.	Not Applicable	• The following components do not apply to this criterion: ○ IBM Cúram Business Intelligence and Analytics 7.0.0.0: ▪ User Interface - No forms.

1194.31 Functional Performance Criteria		
Criteria	**Supporting Features**	**Remarks and Explanations**
(a) At least one mode of operation and information retrieval that does not require user vision shall be provided, or support for Assistive Technology used by people who are blind or visually impaired shall be provided.	Supports: See the following for supporting features: - 1194.21 a, b, c, d, e, f, h, i, l - 1194.22 all - 1194.23 k1, k4 - 1194.24 d - 1194.25 a, b, c, e, f, g - 1194.26 b, d	• The following components meet this criterion: ○ IBM Cúram Business Intelligence and Analytics 7.0.0.0: ▪ User Interface
(b) At least one mode of operation and information retrieval that does not require visual acuity greater than 20/70 shall be provided in audio and enlarged print output working together or independently, or support for Assistive Technology used by people what are visually impaired shall be provided.	Supports: See the following for supporting features: - 1194.21 c, g, i, j, l - 1194.22 n - 1194.25 h - 1194.26 d	• The following components meet this criterion: ○ IBM Cúram Business Intelligence and Analytics 7.0.0.0: ▪ User Interface
(c) At least one mode of operation and information retrieval that does not require user hearing shall be provided, or support for Assistive Technology used by people who are deaf or hard of hearing shall be provided.	Not Applicable	• The following components do not apply to this criterion: ○ IBM Cúram Business Intelligence and Analytics 7.0.0.0: ▪ User Interface
(d) Where audio information is important for the use of the product, at least one mode of operation and information retrieval shall be provided in an enhanced auditory fashion,	Not Applicable	• The following components do not apply to this criterion: ○ IBM Cúram Business Intelligence and Analytics 7.0.0.0:

or support for assistive hearing devices shall be provided.		▪ User Interface
(e) At least one mode of operation and information retrieval that does not require user speech shall be provided, or support for Assistive Technology used by people with disabilities shall be provided.	Not Applicable	This is not a speech product.
(f) At least one mode of operation and information retrieval that does not require fine motor control or simultaneous actions and that is operable with limited reach and strength shall be provided.	Supports: See the following for supporting features: - 1194.21 a, b - 1194.22 l, p - 1194.23 k1, k2, k3 - 1194.25 b, j1, j2, j3, j4 - 1194.26 d	• The following components meet this criterion: ○ IBM Cúram Business Intelligence and Analytics 7.0.0.0: ▪ User Interface
1194.41 Information, documentation, and support		
Criteria	**Supporting Features**	**Remarks and Explanations**
(a) Product support documentation provided to end-users shall be made available in alternate formats upon request, at no additional charge.	Not Applicable	
(b) End-users shall have access to a description of the accessibility and compatibility features of products in alternate formats or alternate methods upon request, at no additional charge.	Not Applicable	

(c) Support services for products shall accommodate the communication needs of end-users with disabilities.	Supports: Operating systems provide accessibility features that allow disabled users to customize their preferences. This application preserves those accessibility user preference settings. For example, if Sticky Keys option is selected by a mobility-impaired user, this option will continue to be activated when used with this application. In addition to standard IBM help desk and support Web sites, IBM has established a TTY telephone service for use by deaf or hard of hearing customers to access sales and support services.	
Disclaimer:		
IBM provides this data for general information on an AS IS basis. For formal representations on particular proposals, please contact an IBM Client Representative or call the IBM Federal Information Call Center at 1-800-333-6705 or TTY: 1-800-IBM-3383. Any third-party components or technologies not developed by or licensed by IBM that may be packaged with or engaged by the use of this product are not included in this Section 508 assessment.		

VPAT for IBM Cúram Social Enterprise Collaboration 7.0.0.0

VPAT for IBM Cúram Social Enterprise Collaboration 7.0.0.0	
VPAT comments:	It includes: IBM Cúram Assessment and Planning IBM Cúram Service Provider Management

	IBM Cúram Social Enterprise Collaboration provides a platform for multi-disciplinary teams to collaborate in support of an outcome-based service plan for clients and families. Social Enterprise Collaboration improves outcomes by providing enhanced communication and information-sharing through role-based access to case and client information in context.

VPAT Summary

Criteria	**Status**	**Remarks and Explanations**
1194.21 Software Applications and Operating Systems	Supports	Refer to Section 1194.21 in VPAT Details section below.
1194.22 Web-based Internet information and applications	Supports	Refer to Section 1194.22 in VPAT Details section below.
1194.23 Telecommunications Products	Not Applicable	Not Applicable
1194.24 Video and Multi-Media Products	Not Applicable	Not Applicable
1194.25 Self-Contained, Closed Products	Not Applicable	Not Applicable
1194.26 Desktop and Portable Computers	Not Applicable	Not Applicable
1194.31 Functional Performance Criteria	Supports	Refer to Section 1194.31 in VPAT Details section below.
1194.41 Information, documentation, and support	Supports	Refer to Section 1194.41 in VPAT Details section below.

VPAT Details

1194.21 Software Applications and Operating Systems

Criteria	**Supporting Features**	**Remarks and Explanations**
(a) When software is designed to run on a system that has a keyboard, product functions shall be executable from a keyboard where the function itself or the	Supports: A keyboard can be used to achieve all tasks in the application, allowing blind and mobility-impaired users to access	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: All

result of performing a function can be discerned textually.	information without the use of the mouse.	functionality of the content is operable through a keyboard interface without requiring specific timings for individual keystrokes. This is not a requirement where the underlying function requires input that depends on the path of the user's movement and not just the endpoints. If focus can be moved to a component using a keyboard interface, then focus can be moved away from that component using only a keyboard interface, and, if it requires more than unmodified arrow or tab keys, the user is advised of the method for moving focus away. ▪ Command Line Interface ▪ Server Modeling Environment ▪ Installer
(b) Applications shall not disrupt or disable activated features of other products that are identified as accessibility features, where those features are developed and documented according to industry standards. Applications also shall not disrupt or disable activated features of any operating system that are identified as accessibility features where the application programming interface for those accessibility features has been documented	Supports: Operating systems provide accessibility features that allow disabled users to customize their preferences. This application preserves those accessibility user preference settings. For example, if Sticky Keys option is selected by a mobility-impaired user, this option will continue to be activated when used with this application.	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: Component does not disrupt platform features that are defined in the platform documentation as accessibility features. ▪ Command Line Interface

by the manufacturer of the operating system and is available to the product developer.		▪ Server Modeling Environment ▪ Installer
(c) A well-defined on-screen indication of the current focus shall be provided that moves among interactive interface elements as the input focus changes. The focus shall be programmatically exposed so that Assistive Technology can track focus and focus changes.	Supports: When using the application with a keyboard, users can tell where they are on the screen and the information is available to assistive technologies to communicate screen location to visually impaired users.	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: Any keyboard operable user interface has a mode of operation where the keyboard focus indicator is visible. Exposes information and mechanisms necessary to track and modify focus, text insertion point, and selection attributes of user interface components. ▪ Server Modeling Environment ▪ Installer • The following components do not apply to this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface - The user interface is implemented via commands only. There are no interactive objects.
(d) Sufficient information about a user interface element including the identity,	Supports:	• The following components meet this criterion:

operation and state of the element shall be available to Assistive Technology. When an image represents a program element, the information conveyed by the image must also be available in text.	This software application allows a screen reader to describe the user interface environment and controls to a blind user. For example, if you tab through a form and find a radio button, the user would be able to determine it is a radio button and the current selection status of the button.	○ IBM Cúram Social Program Management Development Environment 7.0.0.0: Semantic information is provided about user interface objects. ▪ Server Modeling Environment ▪ Installer • The following components do not apply to this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface - The user interface is implemented via commands only. There are no interactive objects.
(e) When bitmap images are used to identify controls, status indicators, or other programmatic elements, the meaning assigned to those images shall be consistent throughout an application's performance.	Supports: The meaning assigned to images used in the application is consistent and unique, minimizing confusion of the context of use for those images.	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: Labels are associated with controls, objects, icons and images. The meaning of images is consistent throughout the application. ▪ Server Modeling Environment ▪ Installer • The following components do not apply to this criterion:

		○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface - The user interface is implemented via commands only. There are no interactive objects.
(f) Textual information shall be provided through operating system functions for displaying text. The minimum information that shall be made available is text content, text input caret location, and text attributes.	Supports: Text information is accessible so assistive technologies can communicate content, attributes and caret location to blind users.	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: Text is provided through standard system function calls or through an API (application programming interface) which supports interaction with assistive technology. ▪ Command Line Interface ▪ Server Modeling Environment ▪ Installer
(g) Applications shall not override user selected contrast and color selections and other individual display attributes.	Supports: System settings are inherited by the application so that customized preferences will not need to be continually reset. For example, color contrast settings enhanced for a low vision user would be preserved by the application.	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface - Font, size, and color settings are supported

		as controlled by the Operative System. ▪ Server Modeling Environment - Component provides a mode of operation that allows user preferences for platform settings for color, contrast, font type, font size, and focus cursor. ▪ Installer - Component provides a mode of operation that allows user preferences for platform settings for color, contrast, font type, font size, and focus cursor.
(h) When animation is displayed, the information shall be displayable in at least one non-animated presentation mode at the option of the user.	Not Applicable	• The following components do not apply to this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: No animation. ▪ Command Line Interface ▪ Server Modeling Environment ▪ Installer
(i) Color coding shall not be used as the only means of conveying information, indicating	Supports: Color is used only as an enhancement, and an alternate means to convey information or indicate an action is	• The following components meet this criterion:

an action, prompting a response, or distinguishing a visual element.	available to users with visual impairments.	○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface - Color is not used to convey information. ▪ Server Modeling Environment - Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. ▪ Installer - Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.
(j) When a product permits a user to adjust color and contrast settings, a variety of color selections capable of producing a range of contrast levels shall be provided.	Not Applicable	• The following components do not apply to this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: Color customization is not supported. ▪ Command Line Interface ▪ Server Modeling Environment ▪ Installer

(k) Software shall not use flashing or blinking text, objects, or other elements having a flash or blink frequency greater than 2 Hz and lower than 55 Hz.	Supports:
	The use of blinking text, objects or elements has been avoided, reducing risk of seizures for users with photosensitive epilepsy.
		• The following components meet this criterion:
		  ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: User interface does not contain anything that flashes more than three times in any one second period.
		    ▪ Command Line Interface
		    ▪ Server Modeling Environment
		    ▪ Installer

(l) When electronic forms are used, the form shall allow people using Assistive Technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.	Supports:
	The application design allows assistive technology access to information, field elements, and functionality required to complete and submit forms.
		• The following components meet this criterion:
		  ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: Form fields allow assistive technology to access the information, field elements and functionality required for completion and submission of the form, including all directions and cues.
		    ▪ Server Modeling Environment
		    ▪ Installer
		• The following components do not apply to this criterion:
		  ○ IBM Cúram Social Program Management Development Environment 7.0.0.0:

		▪ Command Line Interface - No forms.
1194.22 Web-based Internet information and applications		
Criteria	**Supporting Features**	**Remarks and Explanations**
(a) A text equivalent for every non-text element shall be provided (e.g., via "alt", "longdesc", or in element content).	Supports: The application design provides text equivalents for all images so that assistive technology can describe those images to blind users.	• The following components meet this criterion: All non-text content that is presented to the user has a text alternative that serves the equivalent purpose. ○ IBM Cúram Social Enterprise Collaboration 7.0.0.0: ▪ User Interface ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface
(b) Equivalent alternatives for any multimedia presentation shall be synchronized with the presentation.	Not Applicable	• The following components do not apply to this criterion: No prerecorded audio. No prerecorded audio and no prerecorded video media. No live audio content in synchronized media. No prerecorded video. No prerecorded audio-only and no video-only media. ○ IBM Cúram Social Enterprise Collaboration 7.0.0.0: ▪ User Interface ○ IBM Cúram Social Program Management Development Environment 7.0.0.0:

		▪ Development Environment User Interface
(c) Web pages shall be designed so that all information conveyed with color is also available without color, for example from context or markup.	Supports: Color is used only as an enhancement, and an alternate means to convey information or indicate an action is available to users with visual impairments.	• The following components meet this criterion: Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. o IBM Cúram Social Enterprise Collaboration 7.0.0.0: ▪ User Interface o IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface
(d) Documents shall be organized so they are readable without requiring an associated style sheet.	Supports: Web page content is readable without the use of a pre-defined style sheet, allowing low vision users to enable their own style sheets that enhance their viewing preferences.	• The following components meet this criterion: Web pages are readable without requiring style sheets. o IBM Cúram Social Enterprise Collaboration 7.0.0.0: ▪ User Interface o IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface

(e) Redundant text links shall be provided for each active region of a server-side image map.	Not Applicable	• The following components do not apply to this criterion: No client-side image maps or server-side image maps.
		  ○ IBM Cúram Social Enterprise Collaboration 7.0.0.0:
		    ▪ User Interface
		  ○ IBM Cúram Social Program Management Development Environment 7.0.0.0:
		    ▪ Development Environment User Interface

(f) Client-side image maps shall be provided instead of server-side image maps except where the regions cannot be defined with an available geometric shape.	Not Applicable	• The following components do not apply to this criterion: No client-side image maps or server-side image maps.
		  ○ IBM Cúram Social Enterprise Collaboration 7.0.0.0:
		    ▪ User Interface
		  ○ IBM Cúram Social Program Management Development Environment 7.0.0.0:
		    ▪ Development Environment User Interface

(g) Row and column headers shall be identified for data tables.	Supports:
	The application is designed to identify row and column headers for blind users so the location and context of the table cell are clear and can be communicated by a screen reader.
		• The following components meet this criterion: Table cells and relationships between cells can be programmatically determined.
		  ○ IBM Cúram Social Enterprise Collaboration 7.0.0.0:
		    ▪ User Interface

		○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface
(h) Markup shall be used to associate data cells and header cells for data tables that have two or more logical levels of row or column headers.	Supports: Complex tables are designed with additional attributes for blind users so the location and context of the table cell are clear and can be communicated by a screen reader.	• The following components meet this criterion: Table cells and relationships between cells can be programmatically determined. ○ IBM Cúram Social Enterprise Collaboration 7.0.0.0: ▪ User Interface ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface
(i) Frames shall be titled with text that facilitates frame identification and navigation.	Supports: Meaningful text titles are used to describe the purpose of frames so blind users can easily navigate to the desired area.	• The following components meet this criterion: A title and an accessible frame source are provided for each frame. ○ IBM Cúram Social Enterprise Collaboration 7.0.0.0: ▪ User Interface ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface

(j) Pages shall be designed to avoid causing the screen to flicker with a frequency greater than 2 Hz and lower than 55 Hz.	Supports: The use of blinking text, objects or elements has been avoided, reducing risk of seizures for users with photosensitive epilepsy.	• The following components meet this criterion: User interface does not contain anything that flashes more than three times in any one second period. ○ IBM Cúram Social Enterprise Collaboration 7.0.0.0: ▪ User Interface ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface
(k) A text-only page, with equivalent information or functionality, shall be provided to make a web site comply with the provisions of this part, when compliance cannot be accomplished in any other way. The content of the text-only page shall be updated whenever the primary page changes.	Not Applicable	• The following components do not apply to this criterion: Already accessible. Text-only page not required. ○ IBM Cúram Social Enterprise Collaboration 7.0.0.0: ▪ User Interface ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface
(l) When pages utilize scripting languages to display content, or to create interface elements, the information provided by the script shall be identified with functional text that can be read by Assistive Technology.	Supports: Alternatives to scripting language are provided, allowing users access to the content via keyboard and assistive technology.	• The following components meet this criterion: Scripts are keyboard accessible. When the content affected by scripting is not accessible, an alternative is provided. ○ IBM Cúram Social Enterprise Collaboration 7.0.0.0: ▪ User Interface

		○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface
(m) When a web page requires that an applet, plug-in or other application be present on the client system to interpret page content, the page must provide a link to a plug-in or applet that complies with §1194.21(a) through (l).	Supports: An alternative to inaccessible applets or plug-ins is provided for efficient use by disabled users.	• The following components meet this criterion: A link is provided to a directly accessible applet, plug-in or other application. Alternate content is provided for those applets, plug-ins or other applications that are not directly accessible. ○ IBM Cúram Social Enterprise Collaboration 7.0.0.0: ▪ User Interface ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface
(n) When electronic forms are designed to be completed on-line, the form shall allow people using Assistive Technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.	Supports: The application design allows assistive technology access to information, field elements, and functionality required to complete and submit forms.	• The following components meet this criterion: Form element labels can be programmatically determined. ○ IBM Cúram Social Enterprise Collaboration 7.0.0.0: ▪ User Interface ○ IBM Cúram Social Program Management Development Environment 7.0.0.0:

		▪ Development Environment User Interface
(o) A method shall be provided that permits users to skip repetitive navigation links.	Supports: Web pages are designed so that repetitive navigation links can be skipping over, and blind users can navigate to the main content of the page more easily.	• The following components meet this criterion: A mechanism is available to bypass blocks of content that are repeated. ○ IBM Cúram Social Enterprise Collaboration 7.0.0.0: ▪ User Interface ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface
(p) When a timed response is required, the user shall be alerted and given sufficient time to indicate more time is required.	Not Applicable	• The following components do not apply to this criterion: No time limits. ○ IBM Cúram Social Enterprise Collaboration 7.0.0.0: ▪ User Interface ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface

1194.31 Functional Performance Criteria		
Criteria	**Supporting Features**	**Remarks and Explanations**

(a) At least one mode of operation and information retrieval that does not require user vision shall be provided, or support for Assistive Technology used by people who are blind or visually impaired shall be provided.	Supports:
	See the following for supporting features:
	- 1194.21 a, b, c, d, e, f, h, i, l
	- 1194.22 all
	- 1194.23 k1, k4
	- 1194.24 d
	- 1194.25 a, b, c, e, f, g
	- 1194.26 b, d
		• The following components meet this criterion:
		  ○ IBM Cúram Social Enterprise Collaboration 7.0.0.0:
		    ▪ User Interface
		  ○ IBM Cúram Social Program Management Development Environment 7.0.0.0:
		    ▪ Command Line Interface
		    ▪ Server Modeling Environment
		    ▪ Installer
		    ▪ Development Environment User Interface

(b) At least one mode of operation and information retrieval that does not require visual acuity greater than 20/70 shall be provided in audio and enlarged print output working together or independently, or support for Assistive Technology used by people what are visually impaired shall be provided.	Supports:
	See the following for supporting features:
	- 1194.21 c, g, i, j, l
	- 1194.22 n
	- 1194.25 h
	- 1194.26 d
		• The following components meet this criterion:
		  ○ IBM Cúram Social Enterprise Collaboration 7.0.0.0:
		    ▪ User Interface
		  ○ IBM Cúram Social Program Management Development Environment 7.0.0.0:
		    ▪ Command Line Interface
		    ▪ Server Modeling Environment
		    ▪ Installer
		    ▪ Development Environment User Interface

(c) At least one mode of operation and information retrieval that does not require user hearing shall be provided, or support for Assistive Technology used by people who are deaf or hard of hearing shall be provided.	Supports: See the following for other supporting features: - 1194.22 b, m - 1194.23 k4 - 1194.24 c - 1194.25 e, f	• The following components meet this criterion: ◦ IBM Cúram Social Enterprise Collaboration 7.0.0.0: ▪ User Interface ◦ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface • The following components do not apply to this criterion: ◦ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface ▪ Server Modeling Environment ▪ Installer ▪ Development Environment User Interface
(d) Where audio information is important for the use of the product, at least one mode of operation and information retrieval shall be provided in an enhanced auditory fashion, or support for assistive hearing devices shall be provided.	Not Applicable	• The following components do not apply to this criterion: ◦ IBM Cúram Social Enterprise Collaboration 7.0.0.0: ▪ User Interface ◦ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface ▪ Server Modeling Environment

		▪ Installer ▪ Development Environment User Interface
(e) At least one mode of operation and information retrieval that does not require user speech shall be provided, or support for Assistive Technology used by people with disabilities shall be provided.	Not Applicable	This is not a speech product.
(f) At least one mode of operation and information retrieval that does not require fine motor control or simultaneous actions and that is operable with limited reach and strength shall be provided.	Supports: See the following for supporting features: - 1194.21 a, b - 1194.22 l, p - 1194.23 k1, k2, k3 - 1194.25 b, j1, j2, j3, j4 - 1194.26 d	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Command Line Interface ▪ Server Modeling Environment ▪ Installer • The following components do not apply to this criterion: ○ IBM Cúram Social Enterprise Collaboration 7.0.0.0: ▪ User Interface ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Development Environment User Interface

1194.41 Information, documentation, and support		
Criteria	**Supporting Features**	**Remarks and Explanations**
(a) Product support documentation provided to end-users shall be made available in alternate formats upon request, at no additional charge.	Supports: Product support documentation is provided in at least one accessible format.	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Java Documentation - No non-text content. No prerecorded audio. No prerecorded audio and no prerecorded video media. No live audio content in synchronized media. No prerecorded video. Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. User interface does not contain anything that flashes more than three times in any one second period. A mechanism is available to bypass blocks of content that are repeated. No client-side image maps or server-side image maps. Web pages are

		readable without requiring style sheets. Already accessible. Text-only page not required. No forms. Table cells and relationships between cells can be programmatically determined. No scripts. No applets, plug-ins, or non-HTML content. A title and an accessible frame source are provided for each frame. No prerecorded audio-only and no video-only media. No time limits. ▪ Online Help - No prerecorded audio-only and no video-only media. No time limits. No non-text content. No prerecorded audio. No prerecorded audio and no prerecorded video media. No live audio content in synchronized media. No prerecorded media. No prerecorded video. Color is not used as the only visual means of conveying information, indicating

			an action, prompting a response, or distinguishing a visual element. User interface does not contain anything that flashes more than three times in any one second period. A mechanism is available to bypass blocks of content that are repeated. No client-side image maps or server-side image maps. Web pages are readable without requiring style sheets. Already accessible. Text-only page not required. Form element labels can be programmatically determined. Table cells and relationships between cells can be programmatically determined. No scripts. A link is provided to a directly accessible applet, plug-in or other application. Alternate content is provided for those applets, plug-ins or other applications that are not directly

		accessible. A title and an accessible frame source are provided for each frame. ▪ User Interface Metadata XML - All content presented to the user is text. Document information, structure, and relationships are defined and programmatically available. Information that is conveyed by color is also evident without color, including sufficient contrast between text and the page background. Document elements are presented in a logical reading order. No forms. No tables. Document does not include text or images that flash more than 2 times in a one second period. An accessible method is provided for navigating long documents. The primary language of the document is defined. ▪ End User Documentation - No prerecorded audio-only

			and no video-only media. No time limits. No non-text content. No prerecorded audio. No prerecorded audio and no prerecorded video media. No live audio content in synchronized media. No prerecorded video. Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. User interface does not contain anything that flashes more than three times in any one second period. A mechanism is available to bypass blocks of content that are repeated. No client-side image maps or server-side image maps. Web pages are readable without requiring style sheets. Already accessible. Text-only page not required. No forms. Table cells and

		relationships between cells can be programmatically determined. No scripts. No applets, plug-ins, or non-HTML content. No frames.
(b) End-users shall have access to a description of the accessibility and compatibility features of products in alternate formats or alternate methods upon request, at no additional charge.	Supports: Documentation includes a description of accessibility and compatibility features that make it easier for people with disabilities to use the product. Those descriptions are available in alternate formats upon request.	• The following components meet this criterion: ○ IBM Cúram Social Program Management Development Environment 7.0.0.0: ▪ Java Documentation - Documentation lists and explains accessibility and compatibility features, including keyboard access. ▪ Online Help - Documentation lists and explains accessibility and compatibility features, including keyboard access. ▪ User Interface Metadata XML - Documentation is provided on all accessibility features, including keyboard access. ▪ End User Documentation - Documentation lists and explains accessibility

		and compatibility features, including keyboard access.
(c) Support services for products shall accommodate the communication needs of end-users with disabilities.	Supports: Operating systems provide accessibility features that allow disabled users to customize their preferences. This application preserves those accessibility user preference settings. For example, if Sticky Keys option is selected by a mobility-impaired user, this option will continue to be activated when used with this application. In addition to standard IBM help desk and support Web sites, IBM has established a TTY telephone service for use by deaf or hard of hearing customers to access sales and support services.	

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VPAT for IBM Business Process Manager 8.5.7.x

VPAT for IBM Business Process Manager 8.5.7.x	
VPAT comments:	This VPAT applies for the IBM Business Process Manager V 8.5.7.x family comprised of:

	- IBM Business Process Manager Advanced (PID: 5725C94) - IBM Business Process Manager Standard (PID: 5725C95) - IBM Business Process Manager Express (PID: 5725C96) - IBM Process Designer (PID: 5725C97)

VPAT Summary		
Criteria	**Status**	**Remarks and Explanations**
1194.21 Software Applications and Operating Systems	Supports with exceptions	Refer to Section 1194.21 in VPAT Details section below.
1194.22 Web-based Internet information and applications	Supports with exceptions	Refer to Section 1194.22 in VPAT Details section below.
1194.23 Telecommunications Products	Not Applicable	Not Applicable
1194.24 Video and Multi-Media Products	Not Applicable	Not Applicable
1194.25 Self-Contained, Closed Products	Not Applicable	Not Applicable
1194.26 Desktop and Portable Computers	Not Applicable	Not Applicable
1194.31 Functional Performance Criteria	Supports with exceptions	Refer to Section 1194.31 in VPAT Details section below.
1194.41 Information, documentation, and support	Supports	Refer to Section 1194.41 in VPAT Details section below.

VPAT Details		
1194.21 Software Applications and Operating Systems		
Criteria	**Supporting Features**	**Remarks and Explanations**
(a) When software is designed to run on a system that has a keyboard, product functions shall be executable from a keyboard where the function itself or the result of performing a function can be discerned textually.	Supports with exceptions	• The following components meet this criterion: ○ IBM Installation Manager and IBM Packaging Utility 1.8.x: ▪ Installation Manager and Packaging Utility - Silent, Console, and Command-line Modes - This application runs as a command line interface, which is only operable with a keyboard. ▪ Installation Manager and Packaging Utility - Wizard Mode - Keyboard equivalents are provided for all actions. ○ IBM Business Process Manager 8.5.7.x: ▪ Install - Keyboard equivalents are provided for all actions. • The following components do not meet this criterion: ○ IBM Business Process Manager 8.5.7.x: ▪ Process Designer - Keyboard equivalents

		are not provided for all actions.
(b) Applications shall not disrupt or disable activated features of other products that are identified as accessibility features, where those features are developed and documented according to industry standards. Applications also shall not disrupt or disable activated features of any operating system that are identified as accessibility features where the application programming interface for those accessibility features has been documented by the manufacturer of the operating system and is available to the product developer.	Supports: Operating systems provide accessibility features that allow disabled users to customize their preferences. This application preserves those accessibility user preference settings. For example, if Sticky Keys option is selected by a mobility-impaired user, this option will continue to be activated when used with this application.	• The following components meet this criterion: ○ IBM Installation Manager and IBM Packaging Utility 1.8.x: ▪ Installation Manager and Packaging Utility - Silent, Console, and Command-line Modes - This application does not interfere with keyboard accessibility features provided by operating system. ▪ Installation Manager and Packaging Utility - Wizard Mode - This application does not interfere with keyboard accessibility features built into the operating system. ○ IBM Business Process Manager 8.5.7.x: ▪ Process Designer - Keyboard accessibility features built into the OS is not interfered. ▪ Install - Does not interfere with keyboard accessibility features

		provided by the operating system.
(c) A well-defined on-screen indication of the current focus shall be provided that moves among interactive interface elements as the input focus changes. The focus shall be programmatically exposed so that Assistive Technology can track focus and focus changes.	Supports with exceptions	• The following components meet this criterion: ○ IBM Installation Manager and IBM Packaging Utility 1.8.x: ▪ Installation Manager and Packaging Utility - Wizard Mode - A visual focus indicator is provided and is programmatically exposed to assistive technology. ○ IBM Business Process Manager 8.5.7.x: ▪ Install - A visual focus indicator that moves among interactive objects as the input focus changes and is programmatically exposed to assistive technology is provided. • The following components do not apply to this criterion: ○ IBM Installation Manager and IBM Packaging Utility 1.8.x: ▪ Installation Manager and Packaging Utility - Silent, Console, and Command-line Modes - This application is implemented via

		commands only. There are no interactive objects.
		• The following components do not meet this criterion:
		  ○ IBM Business Process Manager 8.5.7.x:
		    ▪ Process Designer - A visual focus indicator that moves among interactive objects as the input focus changes and is not programmatically exposed to assistive technology is not provided.

(d) Sufficient information about a user interface element including the identity, operation and state of the element shall be available to Assistive Technology. When an image represents a program element, the information conveyed by the image must also be available in text.	Supports with exceptions	• The following components meet this criterion:
		  ○ IBM Installation Manager and IBM Packaging Utility 1.8.x:
		    ▪ Installation Manager and Packaging Utility - Wizard Mode - Semantic information is provided for all user interface objects. Also, alternative text is available for images. Labels are associated with all controls, objects, icons, and images.
		  ○ IBM Business Process Manager 8.5.7.x:

		▪ Install - Semantic information is provided about user interface objects. Labels are associated with controls, objects, icons and images. The meaning of images are consistent throughout the application. • The following components do not apply to this criterion: o IBM Installation Manager and IBM Packaging Utility 1.8.x: ▪ Installation Manager and Packaging Utility - Silent, Console, and Command-line Modes - This application has no user interface objects. This application has no controls, objects, icons, or images. • The following components do not meet this criterion: o IBM Business Process Manager 8.5.7.x: ▪ Process Designer - Semantic information is not provided about user interface objects. Labels are not associated with controls, objects, icons and images. The meaning of images are

		not consistent throughout the application.
(e) When bitmap images are used to identify controls, status indicators, or other programmatic elements, the meaning assigned to those images shall be consistent throughout an application's performance.	Supports with exceptions	• The following components meet this criterion: ○ IBM Installation Manager and IBM Packaging Utility 1.8.x: ▪ Installation Manager and Packaging Utility - Wizard Mode - Labels are associated with all controls, objects, icons, and images. ○ IBM Business Process Manager 8.5.7.x: ▪ Install - Labels are associated with controls, objects, icons and images. The meaning of images is consistent throughout the application. • The following components do not apply to this criterion: ○ IBM Installation Manager and IBM Packaging Utility 1.8.x: ▪ Installation Manager and Packaging Utility - Silent, Console, and Command-line Modes - This application has no controls, objects, icons, or images.

		• The following components do not meet this criterion: ○ IBM Business Process Manager 8.5.7.x: ▪ Process Designer - Labels are not associated with controls, objects, icons and images. The meaning of images is not consistent throughout the application.
(f) Textual information shall be provided through operating system functions for displaying text. The minimum information that shall be made available is text content, text input caret location, and text attributes.	Supports with exceptions	• The following components meet this criterion: ○ IBM Installation Manager and IBM Packaging Utility 1.8.x: ▪ Installation Manager and Packaging Utility - Silent, Console, and Command-line Modes - Output is displayed in the command prompt window using standard text output APIs (application programming interface) as well as written to a log text file. ▪ Installation Manager and Packaging Utility - Wizard Mode - Text is provided through standard system function calls or through

		an API (application programming interface) which supports interaction with assistive technology. ○ IBM Business Process Manager 8.5.7.x: ▪ Install - Text is provided through standard system function calls or through an API (application programming interface) which supports interaction with assistive technology. • The following components do not meet this criterion: ○ IBM Business Process Manager 8.5.7.x: ▪ Process Designer - Text is not provided through standard system function calls or through an API (application programming interface) which supports interaction with assistive technology.
(g) Applications shall not override user selected contrast and color selections and other individual display attributes.	Supports with exceptions	• The following components meet this criterion: ○ IBM Installation Manager and IBM Packaging Utility 1.8.x: Font, size, and color settings

		are supported, as controlled by the operating system. ▪ Installation Manager and Packaging Utility - Silent, Console, and Command-line Modes - Contrast settings are supported, as controlled by the operating system. ▪ Installation Manager and Packaging Utility - Wizard Mode - High contrast settings are supported, as controlled by the operating system. o IBM Business Process Manager 8.5.7.x: ▪ Install - Systems settings are supported for high contrast for all user interface controls and client area content. System settings are inherited for font, size, and color for all elements of the user interface. • The following components do not meet this criterion: o IBM Business Process Manager 8.5.7.x: ▪ Process Designer - Systems settings are

		supported for high contrast for all user interface controls and client area content, except for some icons. System settings are not inherited for font, size, and color for all elements of the user interface.
(h) When animation is displayed, the information shall be displayable in at least one non-animated presentation mode at the option of the user.	Not Applicable	• The following components do not apply to this criterion: ○ IBM Installation Manager and IBM Packaging Utility 1.8.x: ▪ Installation Manager and Packaging Utility - Silent, Console, and Command-line Modes - This application does not support animation. ▪ Installation Manager and Packaging Utility - Wizard Mode - No animation is used in this application. ○ IBM Business Process Manager 8.5.7.x: ▪ Process Designer - There is no animation in the Authoring Environment view. ▪ Install - No animation.

(i) Color coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.	Supports with exceptions	• The following components meet this criterion: ○ IBM Installation Manager and IBM Packaging Utility 1.8.x: ▪ Installation Manager and Packaging Utility - Wizard Mode - Color is not used as a sole means to convey information. ○ IBM Business Process Manager 8.5.7.x: ▪ Install - Color is only used as an enhancement, not as the only way to convey information or indicate an action. • The following components do not apply to this criterion: ○ IBM Installation Manager and IBM Packaging Utility 1.8.x: ▪ Installation Manager and Packaging Utility - Silent, Console, and Command-line Modes - All output is displayed in a single-color text. Color is not used to convey information. • The following components do not meet this criterion: ○ IBM Business Process Manager 8.5.7.x:

		▪ Process Designer - Color is only used as an enhancement, not as the only way to convey information or indicate an action, except sometimes only red is used to show there is a problem in an area with no other indication.
(j) When a product permits a user to adjust color and contrast settings, a variety of color selections capable of producing a range of contrast levels shall be provided.	Supports: When color customization is supported, a variety of color selections and a range of contrast improves accessibility for users with vision impairments.	• The following components meet this criterion: ○ IBM Business Process Manager 8.5.7.x: ▪ Install - Color customization is supported and a variety of color selections that are capable of producing a range of contrast levels is provided. • The following components do not apply to this criterion: ○ IBM Installation Manager and IBM Packaging Utility 1.8.x: ▪ Installation Manager and Packaging Utility - Silent, Console, and Command-line Modes - Color customization is not provided. ▪ Installation Manager and Packaging Utility - Wizard Mode - Color

		customization is not provided in this application. ○ IBM Business Process Manager 8.5.7.x: ▪ Process Designer - No color customization in the Authoring Environment View.
(k) Software shall not use flashing or blinking text, objects, or other elements having a flash or blink frequency greater than 2 Hz and lower than 55 Hz.	Supports: The use of blinking text, objects or elements has been avoided, reducing risk of seizures for users with photosensitive epilepsy.	• The following components meet this criterion: ○ IBM Installation Manager and IBM Packaging Utility 1.8.x: ▪ Installation Manager and Packaging Utility - Silent, Console, and Command-line Modes - No flashing or blinking text is used. ▪ Installation Manager and Packaging Utility - Wizard Mode - No flashing or blinking text or objects are used in this application. ○ IBM Business Process Manager 8.5.7.x: ▪ Process Designer - No flashing object or text is used. ▪ Install - Does not use flashing or blinking text, objects, or other elements having a flash

		or blink frequency greater than 2 Hz and lower than 55 Hz.
(l) When electronic forms are used, the form shall allow people using Assistive Technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.	Supports: The application design allows assistive technology access to information, field elements, and functionality required to complete and submit forms.	• The following components meet this criterion: ○ IBM Installation Manager and IBM Packaging Utility 1.8.x: ▪ Installation Manager and Packaging Utility - Silent, Console, and Command-line Modes - The silent install mode uses a response file that contains the settings used during installation. The response file can be edited using a text editor. ▪ Installation Manager and Packaging Utility - Wizard Mode - This application allows people using assistive technology to access the information, field elements and functionality, including all directions and cues, required for completion of all tasks. ○ IBM Business Process Manager 8.5.7.x: ▪ Install - Form fields allow assistive technology to

		access the information, field elements and functionality required for completion and submission of the form, including all directions and cues.
		• The following components do not apply to this criterion:
		  ○ IBM Business Process Manager 8.5.7.x:
		    ▪ Process Designer - No electronic forms in Authoring Environment view.

1194.22 Web-based Internet information and applications

Criteria	**Supporting Features**	**Remarks and Explanations**

(a) A text equivalent for every non-text element shall be provided (e.g., via "alt", "longdesc", or in element content).	Supports with exceptions	• The following components meet this criterion:
		  ○ IBM ILOG Dojo Diagrammer 1.0:
		    ▪ Diagramming Dijit Widget - Tested with webking
		  ○ IBM Installation Manager and IBM Packaging Utility 1.8.x:
		    ▪ Capilano is Installation Manager and Packaging Utility - RAP platform doesn't provide adequate support. However, Installation Manager SWT GUI client provides corresponding compliant feature
		  ○ IBM Business Process Manager 8.5.7.x:
		    ▪ Process Portal (Windows) - All non-text content that is presented to the user has a text alternative that serves the equivalent purpose.
		    ▪ Web Process Designer - All non-text content that is presented to the user has a text alternative that serves the equivalent purpose.

		▪ Process Inspector - All non-text content that is presented to the user has a text alternative that serves the equivalent purpose. ▪ Process Portal (iOS) - All non-text content that is presented to the user has a text alternative that serves the equivalent purpose. ▪ Business Space - All non-text content that is presented to the user has a text alternative that serves the equivalent purpose. ▪ Coach (iOS) - All non-text content that is presented to the user has a text alternative that serves the equivalent purpose. ▪ Configuration and Migration Tool - Images all have an 'alt' attribute. ▪ Coach (Windows) - All non-text content that is presented to the user has a text alternative that serves the equivalent purpose. o IBM Information Center 3.6.2, 3.6.2.1: ▪ Core Framework User Interface - All non-text content that is presented to the user has a text alternative that serves the equivalent purpose. o IBM Support Assistant Data Collector 2.0.0: ▪ WebUI of ISA DC - This has been verified with the Rational policy tester and JAWS 13.0 screen reader. • The following components do not meet this criterion: o IBM Business Process Manager 8.5.7.x: ▪ Process Center Console / Process Admin Console / Process Center Function (Process App Compare/copy, Process Documentation and OSLC Rich Text Editor) - No for Process Documentation Process Documentation: there is only a minimal amount of non-text content outside of the viewer. Currently they don't have text alternatives. Yes for Process Center Console, Process Admin Console, OSLC Rich Text editor/Admin Console DE Wizard Process Center / Admin Console / Admin

		Console DE Wizard: the only non-text content in this application are icons that don't serve any additional information OSLC Rich Text editor: the toolbar buttons has hover tooltip text description.
(b) Equivalent alternatives for any multimedia presentation shall be synchronized with the presentation.	Not Applicable	• The following components do not apply to this criterion: ○ IBM ILOG Dojo Diagrammer 1.0: ▪ Diagramming Dijit Widget - There is no audio or video content within the widget ○ IBM Installation Manager and IBM Packaging Utility 1.8.x: ▪ Capilano is Installation Manager and Packaging Utility - No prerecorded audio content is provided and therefore is Not Applicable. No audio or video is provided and therefore is Not Applicable. No live multimedia is provided and therefore is Not Applicable. ○ IBM Business Process Manager 8.5.7.x: ▪ Process Portal (Windows) - No prerecorded audio. No time-based media or prerecorded video. No live multimedia. ▪ Web Process Designer - There is no pre-recorded audio There is no live audio There is no live multimedia ▪ Process Inspector - No prerecorded audio. No time-based media or prerecorded video. No live multimedia. ▪ Process Center Console / Process Admin Console / Process Center Function (Process App Compare/copy, Process Documentation and OSLC Rich Text Editor) - No prerecorded audio. No time-based media or prerecorded video. No live multimedia. ▪ Process Portal (iOS) - No prerecorded audio. No time-based media or prerecorded video. No live multimedia. ▪ Business Space - Business Space Framework contains no audio content at all. Business Space Framework contains no audio or video content at all. Business Space Framework contains no live multimedia.

		▪ Coach (iOS) - No prerecorded audio. No time-based media or prerecorded video. No live multimedia. ▪ Configuration and Migration Tool - There is no pre-recorded audio There is no live multimedia ▪ Coach (Windows) - No prerecorded audio. No time-based media or prerecorded video. No live multimedia. o IBM Information Center 3.6.2, 3.6.2.1: ▪ Core Framework User Interface - No prerecorded audio. No time-based media or prerecorded video. No live multimedia. o IBM Support Assistant Data Collector 2.0.0: ▪ WebUI of ISA DC - No media content is included in this application
(c) Web pages shall be designed so that all information conveyed with color is also available without color, for example from context or markup.	Supports: Color is used only as an enhancement, and an alternate means to convey information or indicate an action is available to users with visual impairments.	• The following components meet this criterion: o IBM ILOG Dojo Diagrammer 1.0: ▪ Diagramming Dijit Widget - Final visuals of diagram is in the control of the application (templates). The default templates do not rely only on color o IBM Installation Manager and IBM Packaging Utility 1.8.x: ▪ Capilano is Installation Manager and Packaging Utility - RAP platform doesn't provide adequate support. However, Installation Manager SWT GUI client provides corresponding compliant feature o IBM Business Process Manager 8.5.7.x: ▪ Process Portal (Windows) - Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. ▪ Web Process Designer - Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. ▪ Process Inspector - Color is not used as the only visual means of conveying information, indicating an action,

		prompting a response, or distinguishing a visual element. ▪ Process Center Console / Process Admin Console / Process Center Function (Process App Compare/copy, Process Documentation and OSLC Rich Text Editor) - Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. ▪ Process Portal (iOS) - Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. ▪ Business Space - Color is not the only means of conveying information in Business Space. Text cues is always included when color cues are used. ▪ Coach (iOS) - Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. ▪ Configuration and Migration Tool - In addition to color, text and images are used to convey information and distinguish visual elements to user ▪ Coach (Windows) - Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. o IBM Information Center 3.6.2, 3.6.2.1: ▪ Core Framework User Interface - Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. o IBM Support Assistant Data Collector 2.0.0: ▪ WebUI of ISA DC - This has been verified with JAWS 13.0 screen reader.

(d) Documents shall be organized so they are readable without requiring an associated style sheet.	Supports: Web page content is readable without the use of a pre-defined style sheet, allowing low vision users to enable their own style sheets that enhance their viewing preferences.	• The following components meet this criterion: o IBM Installation Manager and IBM Packaging Utility 1.8.x: ▪ Capilano is Installation Manager and Packaging Utility - RAP platform doesn't provide adequate support. However, Installation Manager SWT GUI client provides corresponding compliant feature o IBM Information Center 3.6.2, 3.6.2.1: ▪ Core Framework User Interface - This application relies on CSS in order to render properly and be usable. However, the application provides equivalent facilitation for low-vision users by utilizing the user's system display settings, including high contrast mode. Users may also control the font sizes using the device or browser settings. o IBM Business Process Manager 8.5.7.x: ▪ Process Portal (Windows) - Web pages are readable without requiring style sheets. This application uses Dojo which requires CSS in order to render properly and be usable. However, the application provides equivalent facilitation for low-vision users by utilizing the user’s system display settings, including high contrast mode. Users may also control the font sizes using the device or browser settings. This comes from Dojo which provides equivalent facilitation for displaying pages. For instance, a special style is added when in high contrast mode. ▪ Web Process Designer - This application relies on CSS in order to render properly and be usable. However, the application provides equivalent facilitation for low-vision users by utilizing the user’s system display settings, including high contrast mode. Users may also control the font sizes using the device or browser settings. ▪ Process Inspector - Web pages are readable without requiring style sheets. ▪ Process Center Console / Process Admin Console / Process Center Function (Process App Compare/copy,

		Process Documentation and OSLC Rich Text Editor) - This application relies on CSS in order to render properly and be usable. However, the application provides equivalent facilitation for low-vision users by utilizing the user's system display settings, including high contrast mode. Users may also control the font sizes using the device or browser settings. ▪ Process Portal (iOS) - This application uses Angular which requires CSS in order to render properly and be usable. However, the application provides equivalent facilitation for low-vision users by utilizing the user's system display settings, including high contrast mode. Users may also control the font sizes using the device or browser settings. ▪ Business Space - The Business Space Framework uses Dojo which requires the use of Cascading Style Sheets. Recent guidance from the United States Access Board says applications that rely on CSS can still meet this checkpoint as long as they can provide equivalent facilitation for low-vision users. User interfaces can be viewed and are fully functional in high-contrast mode. ▪ Coach (iOS) - This application relies on CSS in order to render properly and be usable. However, the application provides equivalent facilitation for low-vision users by utilizing the user's system display settings, including high contrast mode. Users may also control the font sizes using the device or browser settings. ▪ Configuration and Migration Tool - This application relies on CSS in order to render properly and be usable. However, the application provides equivalent facilitation for low-vision users by utilizing the user's system display settings, including high contrast mode. Users may also control the font sizes using the device or browser settings.

		▪ Coach (Windows) - Coach uses Dojo and Bootstrap which requires the use of CSS in order to render properly and be usable. However, the application provides equivalent facilitation for low-vision users by utilizing the user's system display settings, including high contrast mode. Users may also control the font sizes using the device or browser settings. o IBM Support Assistant Data Collector 2.0.0: ▪ WebUI of ISA DC - Verified in IE8 by disabling style sheets. • The following components do not apply to this criterion: o IBM ILOG Dojo Diagrammer 1.0: ▪ Diagramming Dijit Widget - The diagrammer doesn't use CSS
(e) Redundant text links shall be provided for each active region of a server-side image map.	Supports: Text links are utilized for any server-side maps to provide URL information when the map is activated so users can tell where they are being redirected to.	• The following components meet this criterion: o IBM Support Assistant Data Collector 2.0.0: ▪ WebUI of ISA DC - This has been verified with the Rational policy tester and JAWS 13.0 screen reader. • The following components do not apply to this criterion: o IBM ILOG Dojo Diagrammer 1.0: ▪ Diagramming Dijit Widget - We do not use HTML image maps o IBM Installation Manager and IBM Packaging Utility 1.8.x: ▪ Capilano is Installation Manager and Packaging Utility - No image maps are included and therefore is Not Applicable. o IBM Business Process Manager 8.5.7.x: ▪ Process Portal (Windows) - No image maps. ▪ Web Process Designer - There's no large image map ▪ Process Inspector - No image maps. ▪ Process Center Console / Process Admin Console / Process Center Function (Process App Compare/copy, Process Documentation and OSLC Rich Text Editor) - No image maps.

		▪ Process Portal (iOS) - No image maps. ▪ Business Space - Business Space Framework does not include client-side image maps. ▪ Coach (iOS) - No image maps. ▪ Configuration and Migration Tool - There's no large image map ▪ Coach (Windows) - No image maps. o IBM Information Center 3.6.2, 3.6.2.1: ▪ Core Framework User Interface - No image maps.
(f) Client-side image maps shall be provided instead of server-side image maps except where the regions cannot be defined with an available geometric shape.	Supports: Alternative text is utilized for any client-side image maps to provide URL information when the map is activated so users can tell where they are being redirected to.	• The following components meet this criterion: o IBM Support Assistant Data Collector 2.0.0: ▪ WebUI of ISA DC - This has been verified with the Rational policy tester and JAWS 13.0 screen reader. • The following components do not apply to this criterion: o IBM ILOG Dojo Diagrammer 1.0: ▪ Diagramming Dijit Widget - We do not use HTML image maps o IBM Installation Manager and IBM Packaging Utility 1.8.x: ▪ Capilano is Installation Manager and Packaging Utility - No image maps are included and therefore is Not Applicable. o IBM Business Process Manager 8.5.7.x: ▪ Process Portal (Windows) - No image maps. ▪ Web Process Designer - There's no large image map ▪ Process Inspector - No image maps. ▪ Process Center Console / Process Admin Console / Process Center Function (Process App Compare/copy, Process Documentation and OSLC Rich Text Editor) - No image maps. ▪ Process Portal (iOS) - No image maps. ▪ Business Space - Business Space Framework does not include client-side image maps. ▪ Coach (iOS) - No image maps.

		▪ Configuration and Migration Tool - There's no large image map ▪ Coach (Windows) - No image maps. ○ IBM Information Center 3.6.2, 3.6.2.1: ▪ Core Framework User Interface - No image maps.
(g) Row and column headers shall be identified for data tables.	Supports with exceptions	• The following components meet this criterion: ○ IBM Installation Manager and IBM Packaging Utility 1.8.x: ▪ Capilano is Installation Manager and Packaging Utility - Relationships between table cells can be programmatically determined. ○ IBM Business Process Manager 8.5.7.x: ▪ Process Portal (Windows) - Table cells and relationships between cells can be programmatically determined. ▪ Web Process Designer - Table cells and relationships between cells can be programmatically determined. Dojo tables used for presentation cause some RPT errors that do not impact accessibility while using JAWS ▪ Process Inspector - Table cells and relationships between cells can be programmatically determined. ▪ Process Portal (iOS) - Table cells and relationships between cells can be programmatically determined. ▪ Coach (iOS) - Table cells and relationships between cells can be programmatically determined. VoiceOver on iPad using a keyboard does not read when table rows are selected and also does not provide a way to navigate by row rather than by cell. This is a limitation of VoiceOver rather than the application; however, this may be a difficulty in using tables. ▪ Configuration and Migration Tool - ID and header attributes are associated with data cells with header cells in data table. ▪ Coach (Windows) - Table cells and relationships between cells can be programmatically determined. There are some issues with table navigation, cell

		linkages to headers & selection in multi-select control issues (selection multiple items) for Dijit Coaches. There is no table cell for Heritage Coaches. Required function for the above issues is available from the Responsive Coaches. o IBM Information Center 3.6.2, 3.6.2.1: ▪ Core Framework User Interface - Table cells and relationships between cells can be programmatically determined. o IBM Support Assistant Data Collector 2.0.0: ▪ WebUI of ISA DC - This has been verified with the Rational policy tester and JAWS 13.0 screen reader. • The following components do not apply to this criterion: o IBM ILOG Dojo Diagrammer 1.0: ▪ Diagramming Dijit Widget - There are no tables in the widget o IBM Business Process Manager 8.5.7.x: ▪ Business Space - The Business Space Framework does not make use of data tables • The following components do not meet this criterion: o IBM Business Process Manager 8.5.7.x: ▪ Process Center Console / Process Admin Console / Process Center Function (Process App Compare/copy, Process Documentation and OSLC Rich Text Editor) - Missing captions and titles for tables in Process Documentation
(h) Markup shall be used to associate data cells and header cells for data tables that have two or more logical levels of row or column headers.	Supports with exceptions	• The following components meet this criterion: o IBM Installation Manager and IBM Packaging Utility 1.8.x: ▪ Capilano is Installation Manager and Packaging Utility - Relationships between table cells can be programmatically determined. o IBM Business Process Manager 8.5.7.x: ▪ Process Portal (Windows) - Table cells and relationships between cells can be programmatically determined.

		▪ Web Process Designer - Table cells and relationships between cells can be programmatically determined. Dojo tables used for presentation cause some RPT errors that do not impact accessibility while using JAWS ▪ Process Inspector - Table cells and relationships between cells can be programmatically determined. ▪ Process Portal (iOS) - Table cells and relationships between cells can be programmatically determined. ▪ Coach (iOS) - Table cells and relationships between cells can be programmatically determined. VoiceOver on iPad using a keyboard does not read when table rows are selected and also does not provide a way to navigate by row rather than by cell. This is a limitation of VoiceOver rather than the application; however, this may be a difficulty in using tables. ▪ Configuration and Migration Tool - ID and header attributes are associated with data cells with header cells in data table. ▪ Coach (Windows) - Table cells and relationships between cells can be programmatically determined. There are some issues with table navigation, cell linkages to headers & selection in multi-select control issues (selection multiple items) for Dijit Coaches. There is no table cell for Heritage Coaches. Required function for the above issues is available from the Responsive Coaches. o IBM Information Center 3.6.2, 3.6.2.1: ▪ Core Framework User Interface - Table cells and relationships between cells can be programmatically determined. o IBM Support Assistant Data Collector 2.0.0: ▪ WebUI of ISA DC - This has been verified with the Rational policy tester and JAWS 13.0 screen reader. • The following components do not apply to this criterion: o IBM ILOG Dojo Diagrammer 1.0:

		▪ Diagramming Dijit Widget - There are no tables in the widget ○ IBM Business Process Manager 8.5.7.x: ▪ Business Space - The Business Space Framework does not make use of data tables • The following components do not meet this criterion: ○ IBM Business Process Manager 8.5.7.x: ▪ Process Center Console / Process Admin Console / Process Center Function (Process App Compare/copy, Process Documentation and OSLC Rich Text Editor) - Missing captions and titles for tables in Process Documentation
(i) Frames shall be titled with text that facilitates frame identification and navigation.	Supports with exceptions	• The following components meet this criterion: ○ IBM ILOG Dojo Diagrammer 1.0: ▪ Diagramming Dijit Widget - The Embedded Overview must have a title that can describe it. ○ IBM Installation Manager and IBM Packaging Utility 1.8.x: ▪ Capilano is Installation Manager and Packaging Utility - RAP platform doesn't provide adequate support. However, Installation Manager SWT GUI client provides corresponding compliant feature ○ IBM Information Center 3.6.2, 3.6.2.1: ▪ Core Framework User Interface - A title and an accessible frame source are provided for each frame. ○ IBM Business Process Manager 8.5.7.x: ▪ Process Portal (Windows) - A title and an accessible frame source are provided for each frame. ▪ Web Process Designer - Title is provided for each frame. The textbox in 'Documentation editor', 'User Interface editor', which is based on Dojo's editor frame doesn't have a title. This is a Dojo bug to be fixed with http://bugs.dojotoolkit.org/ticket/16140 ▪ Process Inspector - A title and an accessible frame source are provided for each frame.

		▪ Process Portal (iOS) - A title and an accessible frame source are provided for each frame. ▪ Business Space - A title and an accessible frame source are provided for each frame. ▪ Coach (iOS) - A title and an accessible frame source are provided for each frame. ▪ Configuration and Migration Tool - Titles are provided for each frame ▪ Coach (Windows) - Title are provided for the frames. Some Dijit controls (e.g. Rich TextArea) contain iframes that do not satisfy these criteria, but these iframes have a different purpose on the web page. Required function provided by Responsive Coaches. o IBM Support Assistant Data Collector 2.0.0: ▪ WebUI of ISA DC - This has been verified with the Rational policy tester and JAWS 13.0 screen reader. • The following components do not meet this criterion: o IBM Business Process Manager 8.5.7.x: ▪ Process Center Console / Process Admin Console / Process Center Function (Process App Compare/copy, Process Documentation and OSLC Rich Text Editor) - A title and an accessible frame source are provided for many frames, but not all.
(j) Pages shall be designed to avoid causing the screen to flicker with a frequency greater than 2 Hz and lower than 55 Hz.	Supports: The use of blinking text, objects or elements has been avoided, reducing risk of seizures for users with photosensitive epilepsy.	• The following components meet this criterion: o IBM Installation Manager and IBM Packaging Utility 1.8.x: ▪ Capilano is Installation Manager and Packaging Utility - We do not include an object that flash more than three times in any one second period. o IBM Business Process Manager 8.5.7.x: Web pages do not contain anything that flashes more than three times in any one second period. ▪ Process Portal (Windows) ▪ Web Process Designer ▪ Process Inspector

		▪ Process Center Console / Process Admin Console / Process Center Function (Process App Compare/copy, Process Documentation and OSLC Rich Text Editor) ▪ Process Portal (iOS) ▪ Business Space ▪ Coach (iOS) ▪ Configuration and Migration Tool ▪ Coach (Windows) ○ IBM Information Center 3.6.2, 3.6.2.1: ▪ Core Framework User Interface - Web pages do not contain anything that flashes more than three times in any one second period. • The following components do not apply to this criterion: ○ IBM ILOG Dojo Diagrammer 1.0: ▪ Diagramming Dijit Widget - No flashing content within the widgets ○ IBM Support Assistant Data Collector 2.0.0: ▪ WebUI of ISA DC - No flashing content exist in this Web application
(k) A text-only page, with equivalent information or functionality, shall be provided to make a web site comply with the provisions of this part, when compliance cannot be accomplished in any other way. The content of the text-only page shall be updated whenever the primary page changes.	Supports with exceptions	• The following components meet this criterion: ○ IBM Installation Manager and IBM Packaging Utility 1.8.x: ▪ Capilano is Installation Manager and Packaging Utility - RAP platform doesn't provide adequate support. However, Installation Manager SWT GUI client provides corresponding compliant feature ○ IBM Support Assistant Data Collector 2.0.0: ▪ WebUI of ISA DC - Verified • The following components do not apply to this criterion: ○ IBM ILOG Dojo Diagrammer 1.0: ▪ Diagramming Dijit Widget - Applies to web application not individual widgets. Widgets use only HTML technologies. ○ IBM Business Process Manager 8.5.7.x: Already accessible. Text-only page not required.

		▪ Process Portal (Windows) ▪ Process Inspector ▪ Process Portal (iOS) ▪ Business Space ▪ Coach (iOS) ▪ Configuration and Migration Tool ▪ Coach (Windows) ○ IBM Information Center 3.6.2, 3.6.2.1: ▪ Core Framework User Interface - Already accessible. Text-only page not required. • The following components do not meet this criterion: ○ IBM Business Process Manager 8.5.7.x: A text-only page cannot provide equivalent functionality for a Web application and is not provided. ▪ Web Process Designer ▪ Process Center Console / Process Admin Console / Process Center Function (Process App Compare/copy, Process Documentation and OSLC Rich Text Editor)
(l) When pages utilize scripting languages to display content, or to create interface elements, the information provided by the script shall be identified with functional text that can be read by Assistive Technology.	Supports with exceptions	• The following components meet this criterion: ○ IBM ILOG Dojo Diagrammer 1.0: ▪ Diagramming Dijit Widget - Actions from user can launch Scripts (i.e. Click on a button), the result from this must be Keyboard Accessible. ○ IBM Installation Manager and IBM Packaging Utility 1.8.x: ▪ Capilano is Installation Manager and Packaging Utility - RAP platform doesn't provide adequate support. However, Installation Manager SWT GUI client provides corresponding compliant feature ○ IBM Business Process Manager 8.5.7.x: ▪ Process Portal (Windows) - Scripts are keyboard accessible. If the content affected by scripting is not accessible, an alternative is provided.

		▪ Web Process Designer - Scripts are keyboard accessible. If the content affected by scripting is not accessible, an alternative is provided. ▪ Process Inspector - Scripts are keyboard accessible. If the content affected by scripting is not accessible, an alternative is provided. ▪ Process Portal (iOS) - Scripts are keyboard accessible. If the content affected by scripting is not accessible, an alternative is provided. ▪ Business Space - The user interface elements are labelled with text that can be read by Assistive Technology. ▪ Coach (iOS) - Scripts are keyboard accessible. If the content affected by scripting is not accessible, an alternative is provided. ▪ Configuration and Migration Tool - Scripts are accessible. ▪ Coach (Windows) - The Heritage Coaches are not all keyboard accessible but required function is provided with the Responsive Coaches. ○ IBM Information Center 3.6.2, 3.6.2.1: ▪ Core Framework User Interface - Scripts are keyboard accessible. If the content affected by scripting is not accessible, an alternative is provided. ○ IBM Support Assistant Data Collector 2.0.0: ▪ WebUI of ISA DC - Note that JAWS is not able to access pull-down selection when no product is pre-selected in the first attempt. if the user attempts again then the selection can be made. This does not seem to be a product defect, but rather a limitation for JAWS and DOJO 1.5. Keyboard access works correctly when JAWS is not running. See the following link for more detail: http://docs.dojocampus.org/dijit/form/FilteringSelect#id10. Additionally, the user can use the console GUI as an

		alternative to the WEB interface, or specify the product taxonomy on the URL, which will pre-select the product,
		• The following components do not meet this criterion:
		  ○ IBM Business Process Manager 8.5.7.x:
		    ▪ Process Center Console / Process Admin Console / Process Center Function (Process App Compare/copy, Process Documentation and OSLC Rich Text Editor) - Scripts are not accessible by keyboard and there is no available alternative. Not all dialogs and widgets in our JavaScript are not keyboard accessible.

(m) When a web page requires that an applet, plug-in or other application be present on the client system to interpret page content, the page must provide a link to a plug-in or applet that complies with §1194.21(a) through (l).	Supports with exceptions	• The following components meet this criterion:
		  ○ IBM Support Assistant Data Collector 2.0.0:
		    ▪ WebUI of ISA DC - Help is announce on initial load of page within the ALT image text. This text explains the Java plugin criteria for the application; additionally, if the plugin is not installed and the user attempts to run the application, additional help information is displayed via a Third-party java script (Pinlady PluginDetect). Note that Rational Policy Tester found 1 violation for "Objects should contain inner text as alt text." However, we have no control over this Third-Party detection code and therefore cannot make any changes to resolve this issue. This is being tracked as a third-party defect in ISADC #23610
		• The following components do not apply to this criterion:
		  ○ IBM ILOG Dojo Diagrammer 1.0:
		    ▪ Diagramming Dijit Widget - No non-HTML content
		  ○ IBM Installation Manager and IBM Packaging Utility 1.8.x:
		    ▪ Capilano is Installation Manager and Packaging Utility - There are no applets, plug-ins or non-HTML content and therefore is Not Applicable.
		  ○ IBM Business Process Manager 8.5.7.x:
		    ▪ Process Portal (Windows) - No applets, plug-ins, or non-HTML content.

		▪ Web Process Designer - No applet or plug-in is used to deliver non-HTML content to enhance video or visual. ▪ Process Inspector - No applets, plug-ins, or non-HTML content. ▪ Process Portal (iOS) - No applets, plug-ins, or non-HTML content. ▪ Business Space - Business Space Framework does not require any additional plug-ins or applications. ▪ Coach (iOS) - No applets, plug-ins, or non-HTML content. ▪ Configuration and Migration Tool - Applets are not used ▪ Coach (Windows) - No applets, plug-ins, or non-HTML content. ○ IBM Information Center 3.6.2, 3.6.2.1: ▪ Core Framework User Interface - No applets, plug-ins, or non-HTML content. • The following components do not meet this criterion: ○ IBM Business Process Manager 8.5.7.x: ▪ Process Center Console / Process Admin Console / Process Center Function (Process App Compare/copy, Process Documentation and OSLC Rich Text Editor) - A link is not provided to a directly accessible applet, plug-in, or other application and accessible alternate content is not provided. For non-HTML content, such as ILog, SVG, Flash, if they are not accessible, there is no accessible alternative provided.
(n) When electronic forms are designed to be completed on-line, the form shall allow people using Assistive Technology to access the information, field elements, and functionality required for completion and	Supports with exceptions	• The following components meet this criterion: ○ IBM Installation Manager and IBM Packaging Utility 1.8.x: ▪ Capilano is Installation Manager and Packaging Utility - RAP platform doesn't provide adequate support. However, Installation Manager SWT GUI client provides corresponding compliant feature ○ IBM Business Process Manager 8.5.7.x:

submission of the form, including all directions and cues.		▪ Process Portal (Windows) - Form element labels can be programmatically determined. Note: This product uses WAI-ARIA to comply with this checkpoint. WAI-ARIA has been supported since Firefox 3.6 and JAWS 12. ▪ Web Process Designer - Form element labels can be programmatically determined. Note: This product uses WAI-ARIA to comply with this checkpoint. WAI-ARIA has been supported since Firefox 3.6 and JAWS 12. ▪ Process Inspector - Form element labels can be programmatically determined. Note: This product uses WAI-ARIA to comply with this checkpoint. WAI-ARIA has been supported since Firefox 3.6 and JAWS 12. ▪ Process Portal (iOS) - Form element labels can be programmatically determined. Note: This product uses WAI-ARIA to comply with this checkpoint. WAI-ARIA has been supported since Firefox 3.6 and JAWS 12. ▪ Business Space - Where forms are used, accessible text labels have been associated with each field element and the submit control. ▪ Coach (iOS) - Form element labels can be programmatically determined. Note: This product uses WAI-ARIA to comply with this checkpoint. ▪ Configuration and Migration Tool - Text labels are associated with form controls ▪ Coach (Windows) - Form element labels can be programmatically determined. Some label elements in Heritage Coaches are missing, but required function is available via the Responsive Coaches. Note: This product uses WAI-ARIA to comply with this checkpoint. WAI-ARIA has been supported since Firefox 3.6 and JAWS 12. o IBM Information Center 3.6.2, 3.6.2.1: ▪ Core Framework User Interface - Form element labels can be programmatically determined. Note: This product uses WAI-ARIA to comply with this checkpoint. WAI-

		ARIA has been supported since Firefox 3.6 and JAWS 12. ○ IBM Support Assistant Data Collector 2.0.0: ▪ WebUI of ISA DC - This has been verified with the Rational policy tester and JAWS 13.0 screen reader. • The following components do not apply to this criterion: ○ IBM ILOG Dojo Diagrammer 1.0: ▪ Diagramming Dijit Widget - There are no form elements in the diagrammer • The following components do not meet this criterion: ○ IBM Business Process Manager 8.5.7.x: ▪ Process Center Console / Process Admin Console / Process Center Function (Process App Compare/copy, Process Documentation and OSLC Rich Text Editor) - Form element labels cannot be programmatically determined.
(o) A method shall be provided that permits users to skip repetitive navigation links.	Supports with exceptions	• The following components meet this criterion: ○ IBM Business Process Manager 8.5.7.x: ▪ Process Portal (Windows) - Methods are provided for skipping over navigation links to get to the main content of the page. Note: This product uses WAI-ARIA to comply with this checkpoint. WAI-ARIA has been supported since Firefox 3.6 and JAWS 12. ▪ Web Process Designer - Methods are provided for skipping over navigation links to get to the main content of the page. Note: This product uses WAI-ARIA to comply with this checkpoint. WAI-ARIA has been supported since Firefox 3.6 and JAWS 12. ▪ Process Inspector - Methods are provided for skipping over navigation links to get to the main content of the page. Note: This product uses WAI-ARIA to comply with this checkpoint. WAI-ARIA has been supported since Firefox 3.6 and JAWS 12.

		▪ Process Portal (iOS) - Methods are provided for skipping over navigation links to get to the main content of the page. Note: This product uses WAI-ARIA to comply with this checkpoint. WAI-ARIA has been supported since Firefox 3.6 and JAWS 12. ▪ Business Space - Methods are provided for skipping over navigation links to get to the main content of the page. Note: This product might use WAI-ARIA to comply with this checkpoint. WAI-ARIA has been supported since Firefox 3.6 and JAWS 12. ▪ Coach (iOS) - It does not include large amounts of generic content before the main content of the page, so there is no need for this feature. ▪ Configuration and Migration Tool - Methods are provided for skipping over navigation links to get to the main content of the page. Note: This product uses WAI-ARIA to comply with this checkpoint. WAI-ARIA has been supported since Firefox 3.6 and JAWS 12. ▪ Coach (Windows) - Methods are provided for skipping over navigation links to get to the main content of the page. Note: This product uses WAI-ARIA to comply with this checkpoint. WAI-ARIA has been supported since Firefox 3.6 and JAWS 12. o IBM Information Center 3.6.2, 3.6.2.1: ▪ Core Framework User Interface - Methods are provided for skipping over navigation links to get to main content of page. Note: This product uses WAI-ARIA to comply with this checkpoint. WAI-ARIA has been supported since Firefox 3.6 and JAWS 12. o IBM Support Assistant Data Collector 2.0.0: ▪ WebUI of ISA DC - When using JAWS 13.0 during testing, Tab key will allow direct access to being selection criteria or arrow up or down will announce cursor location, which can be activated via space bar or enter key.

		• The following components do not apply to this criterion:
		  ○ IBM ILOG Dojo Diagrammer 1.0:
		    ▪ Diagramming Dijit Widget - Pertains to web page navigation rather than navigation within the widget
		  ○ IBM Installation Manager and IBM Packaging Utility 1.8.x:
		    ▪ Capilano is Installation Manager and Packaging Utility - There is no concept of main content in our components and therefore is Not Applicable.
		• The following components do not meet this criterion:
		  ○ IBM Business Process Manager 8.5.7.x:
		    ▪ Process Center Console / Process Admin Console / Process Center Function (Process App Compare/copy, Process Documentation and OSLC Rich Text Editor) - Methods are not provided for skipping over any navigation links to get to the main content of the page.

(p) When a timed response is required, the user shall be alerted and given sufficient time to indicate more time is required.	Supports with exceptions	• The following components meet this criterion:
		  ○ IBM ILOG Dojo Diagrammer 1.0:
		    ▪ Diagramming Dijit Widget - If applicable, we have (and will have more) animation and effects.
		  ○ IBM Business Process Manager 8.5.7.x: The user is allowed to turn off, adjust or extend all time limits that are not a real-time, essential or 20-hour exception.
		    ▪ Process Portal (Windows)
		    ▪ Process Inspector
		    ▪ Process Portal (iOS)
		• The following components do not apply to this criterion:
		  ○ IBM Installation Manager and IBM Packaging Utility 1.8.x:
		    ▪ Capilano is Installation Manager and Packaging Utility - No time-limits are required and therefore is Not Applicable.
		  ○ IBM Information Center 3.6.2, 3.6.2.1:
		    ▪ Core Framework User Interface - No time limits.
		  ○ IBM Business Process Manager 8.5.7.x:

		▪ Web Process Designer - There is no time-limit on the display and responses ▪ Business Space - There is on time defined input on business space framework. The session itself may time out based on server settings -- and this is indeed adjustable (and by default set to a long period). If a session times out, a login screen is presented the next time a user attempts to access the system. ▪ Coach (iOS) - There is on time defined input on BUE Generated Coach. The session itself may time out based on server settings -- and this is indeed adjustable (and by default set to a long period). If a session times out, a login screen is presented the next time a user attempts to access the system. ▪ Configuration and Migration Tool - There is no time-limit on the display and responses ▪ Coach (Windows) - There is on time defined input on BUE Generated Coach. The session itself may time out based on server settings -- and this is indeed adjustable (and by default set to a long period). If a session times out, a login screen is presented the next time a user attempts to access the system. o IBM Support Assistant Data Collector 2.0.0: ▪ WebUI of ISA DC - This application has no time limits. • The following components do not meet this criterion: o IBM Business Process Manager 8.5.7.x: ▪ Process Center Console / Process Admin Console / Process Center Function (Process App Compare/copy, Process Documentation and OSLC Rich Text Editor) - In most cases, there is not time responses. However, the search filter in Process Documentation is time-sensitive and there is no preference to customize this time limit.

1194.31 Functional Performance Criteria		
Criteria	**Supporting Features**	**Remarks and Explanations**
(a) At least one mode of operation and information retrieval that does not require user vision shall be provided, or support for Assistive Technology used by people who are blind or visually impaired shall be provided.	Supports with exceptions See the following for supporting features: - 1194.21 a, b, c, d, e, f, h, i, l - 1194.22 all - 1194.23 k1, k4 - 1194.24 d - 1194.25 a, b, c, e, f, g - 1194.26 b, d	• The following components meet this criterion: ○ IBM ILOG Dojo Diagrammer 1.0: ▪ Diagramming Dijit Widget ○ IBM Installation Manager and IBM Packaging Utility 1.8.x: ▪ Installation Manager and Packaging Utility - Silent, Console, and Command-line Modes ▪ Installation Manager and Packaging Utility - Wizard Mode ▪ Capilano is Installation Manager and Packaging Utility ○ IBM Business Process Manager 8.5.7.x: ▪ Process Portal (Windows) ▪ Process Inspector ▪ Process Portal (iOS) ▪ Business Space ▪ Coach (iOS) ▪ Configuration and Migration Tool ▪ Install ▪ Coach (Windows) ○ IBM Information Center 3.6.2, 3.6.2.1:

		▪ Core Framework User Interface ○ IBM Support Assistant Data Collector 2.0.0: ▪ WebUI of ISA DC • The following components meet this criterion with exceptions: ○ IBM Business Process Manager 8.5.7.x: ▪ Web Process Designer ▪ Process Center Console / Process Admin Console / Process Center Function (Process App Compare/copy, Process Documentation and OSLC Rich Text Editor) ▪ Process Designer
(b) At least one mode of operation and information retrieval that does not require visual acuity greater than 20/70 shall be provided in audio and enlarged print output working together or independently, or support for Assistive Technology used by people what are visually impaired shall be provided.	Supports with exceptions See the following for supporting features: - 1194.21 c, g, i, j, l - 1194.22 n - 1194.25 h - 1194.26 d	• The following components meet this criterion: ○ IBM Installation Manager and IBM Packaging Utility 1.8.x: ▪ Installation Manager and Packaging Utility - Silent, Console, and Command-line Modes ▪ Installation Manager and Packaging Utility - Wizard Mode ▪ Capilano is Installation Manager and Packaging Utility

		○ IBM Business Process Manager 8.5.7.x: ▪ Process Portal (Windows) ▪ Web Process Designer ▪ Process Inspector ▪ Process Portal (iOS) ▪ Business Space ▪ Coach (iOS) ▪ Configuration and Migration Tool ▪ Install ▪ Coach (Windows) ○ IBM Information Center 3.6.2, 3.6.2.1: ▪ Core Framework User Interface ○ IBM Support Assistant Data Collector 2.0.0: ▪ WebUI of ISA DC • The following components do not apply to this criterion: ○ IBM ILOG Dojo Diagrammer 1.0: ▪ Diagramming Dijit Widget • The following components do not meet this criterion: ○ IBM Business Process Manager 8.5.7.x: ▪ Process Center Console / Process Admin Console / Process Center Function (Process App

		Compare/copy, Process Documentation and OSLC Rich Text Editor) ▪ Process Designer
(c) At least one mode of operation and information retrieval that does not require user hearing shall be provided, or support for Assistive Technology used by people who are deaf or hard of hearing shall be provided.	Supports with exceptions See the following for other supporting features: - 1194.22 b, m - 1194.23 k4 - 1194.24 c - 1194.25 e, f	• The following components meet this criterion: o IBM Business Process Manager 8.5.7.x: ▪ Process Portal (Windows) ▪ Process Inspector ▪ Process Portal (iOS) o IBM Support Assistant Data Collector 2.0.0: ▪ WebUI of ISA DC • The following components do not apply to this criterion: o IBM ILOG Dojo Diagrammer 1.0: ▪ Diagramming Dijit Widget o IBM Installation Manager and IBM Packaging Utility 1.8.x: ▪ Installation Manager and Packaging Utility - Silent, Console, and Command-line Modes ▪ Installation Manager and Packaging Utility - Wizard Mode ▪ Capilano is Installation Manager and Packaging Utility

		- IBM Business Process Manager 8.5.7.x: - Process Portal (Windows) - Web Process Designer - Process Inspector - Process Center Console / Process Admin Console / Process Center Function (Process App Compare/copy, Process Documentation and OSLC Rich Text Editor) - Process Portal (iOS) - Business Space - Coach (iOS) - Configuration and Migration Tool - Process Designer - Install - Coach (Windows) - IBM Information Center 3.6.2, 3.6.2.1: - Core Framework User Interface - The following components do not meet this criterion: - IBM Business Process Manager 8.5.7.x: - Process Center Console / Process Admin Console / Process Center Function (Process App

		Compare/copy, Process Documentation and OSLC Rich Text Editor)
(d) Where audio information is important for the use of the product, at least one mode of operation and information retrieval shall be provided in an enhanced auditory fashion, or support for assistive hearing devices shall be provided.	Not Applicable	• The following components do not apply to this criterion: o IBM ILOG Dojo Diagrammer 1.0: ▪ Diagramming Dijit Widget o IBM Installation Manager and IBM Packaging Utility 1.8.x: ▪ Installation Manager and Packaging Utility - Silent, Console, and Command-line Modes ▪ Installation Manager and Packaging Utility - Wizard Mode ▪ Capilano is Installation Manager and Packaging Utility o IBM Information Center 3.6.2, 3.6.2.1: ▪ Core Framework User Interface o IBM Business Process Manager 8.5.7.x: ▪ Process Portal (Windows) ▪ Web Process Designer ▪ Process Inspector ▪ Process Center Console / Process Admin Console / Process

		Center Function (Process App Compare/copy, Process Documentation and OSLC Rich Text Editor) ▪ Process Portal (iOS) ▪ Business Space ▪ Coach (iOS) ▪ Configuration and Migration Tool ▪ Process Designer ▪ Install ▪ Coach (Windows) ○ IBM Support Assistant Data Collector 2.0.0: ▪ WebUI of ISA DC
(e) At least one mode of operation and information retrieval that does not require user speech shall be provided, or support for Assistive Technology used by people with disabilities shall be provided.	Not Applicable	This is not a speech product.
(f) At least one mode of operation and information retrieval that does not require fine motor control or simultaneous actions and that is operable with limited reach and strength shall be provided.	Supports with exceptions See the following for supporting features: - 1194.21 a, b - 1194.22 l, p - 1194.23 k1, k2, k3 - 1194.25 b, j1, j2, j3, j4 - 1194.26 d	• The following components meet this criterion: ○ IBM ILOG Dojo Diagrammer 1.0: ▪ Diagramming Dijit Widget ○ IBM Installation Manager and IBM Packaging Utility 1.8.x: ▪ Installation Manager and Packaging Utility - Silent, Console, and Command-line Modes

		▪ Installation Manager and Packaging Utility - Wizard Mode ▪ Capilano is Installation Manager and Packaging Utility ○ IBM Business Process Manager 8.5.7.x: ▪ Process Portal (Windows) ▪ Web Process Designer ▪ Process Inspector ▪ Process Portal (iOS) ▪ Business Space ▪ Coach (iOS) ▪ Configuration and Migration Tool ▪ Install ▪ Coach (Windows) ○ IBM Information Center 3.6.2, 3.6.2.1: ▪ Core Framework User Interface ○ IBM Support Assistant Data Collector 2.0.0: ▪ WebUI of ISA DC • The following components meet this criterion with exceptions: ○ IBM Business Process Manager 8.5.7.x: ▪ Process Designer • The following components do not meet this criterion: ○ IBM Business Process Manager 8.5.7.x:

		▪ Process Center Console / Process Admin Console / Process Center Function (Process App Compare/copy, Process Documentation and OSLC Rich Text Editor)
1194.41 Information, documentation, and support		
Criteria	**Supporting Features**	**Remarks and Explanations**
(a) Product support documentation provided to end-users shall be made available in alternate formats upon request, at no additional charge.	Supports: Product support documentation is provided in at least one accessible format.	• The following components meet this criterion: ○ IBM Installation Manager and IBM Packaging Utility 1.8.x: ▪ Installation Manager and Packaging Utility Documentation - Knowledge Center - All graphics have alternate text associated with them. Graphs and charts are not used. Image maps are not used. Audio content is not used. Some video content is used to supplement and encapsulate topics that are otherwise fully described using textual content. Audio content is not used. Live multimedia content is not

		used. Forms are not used. Table cells and the relationship between them can be programmatically determined. Cascading style sheets are not required. Color is used but never as a sole means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. Scripts are not used. Applets, plug-ins, and non-HTML content are not used. Timed responses are not used. Flashing content is not used. Methods are provided for skipping over navigation links to get to the main content. Each frame has a title and contains accessible source. Content is fully accessible so a text-only version is not needed. ○ IBM Information Center 3.6.2, 3.6.2.1: ▪ Core Framework Documentation - All non-text content that is

		presented to the user has a text alternative that serves the equivalent purpose. No image maps. No prerecorded audio. No time-based media or prerecorded video. No live multimedia. Form element labels can be programmatically determined. Note: This product uses WAI-ARIA to comply with this checkpoint. WAI-ARIA has been supported since Firefox 3.6 and JAWS 12. Table cells and relationships between cells can be programmatically determined. Web pages are readable without requiring style sheets. Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. Scripts are keyboard accessible. If the content affected by scripting is not

		accessible, an alternative is provided. No applets, plug-ins, or non-HTML content. No time limits. Web pages do not contain anything that flashes more than three times in any one second period. Methods are provided for skipping over navigation links to get to main content of page. Note: This product uses WAI-ARIA to comply with this checkpoint. WAI-ARIA has been supported since Firefox 3.6 and JAWS 12. A title and an accessible frame source are provided for each frame. Already accessible. Text-only page not required. ○ IBM Business Process Manager 8.5.7.x: ▪ Quick Start Documentation - All non-text content that is presented to the user has a text alternative that serves the equivalent purpose. PDF versions of the quick

			start guide may contain graphics. The same content is also delivered in XHTML versions of the quick start guides as an alternative delivery mechanism, and all graphics or other non-text content that occur in the XHTML versions of the quick start guides have equivalent information presented as text. The information in the quick start guides is structured in a linear fashion with a defined list structure that is readable in JAWS. Information that is conveyed by color is also evident without color, including sufficient contrast between text and the page background. The information in the quick start guides is read in a linear fashion. The same content is also delivered in XHTML versions of the quick start guides as an alternative delivery mechanism, and all graphics or other non-

		text content that occur in the XHTML versions of the quick start guides have equivalent information presented as text. No forms. Table cells are identified and relationships between cells are provided and programmatically available. The same content is also delivered in XHTML versions of the quick start guides as an alternative delivery mechanism, and all graphics or other non-text content that occur in the XHTML versions of the quick start guides have equivalent information presented as text. Document does not include text or images that flash more than 2 times in a one second period. An accessible method is provided for navigating long documents. All quick start guides are two pages or less and can be navigated in a linear fashion. The primary

		language of the document is defined. ▪ Documentation Web - There is alt-text for all screencaps / diagrams in the documentation. The diagrams themselves are not fundamental to understanding the documentation, but rather are enhancements. Client-side image maps are used and alternative text is provided for image map hot spots. Equivalent text links are provided for server-side image maps. The documentation does not include audio-only or video-only content. There is no time-based media. There are a few illustrative video clips -- but these are not fundamental. Their role is to enhance the information provided in the documentation. No time-based media or prerecorded video. No live multimedia. Form element labels can be

			programmatically determined. Note: This product uses WAI-ARIA to comply with this checkpoint. WAI-ARIA has been supported since Firefox 3.6 and JAWS 12. Table cells and relationships between cells can be programmatically determined. Web pages are readable without requiring style sheets. Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. Scripts are keyboard accessible. A script-based interactive installation guide is not fully accessible, but it is not primary content; the primary content is the information center topics, which provide alternative content to the interactive guide. For any script that is not fully accessible, an alternative is provided. A

		link is provided to a directly accessible applet, plug-in or other application. Alternate content is provided for those applets, plug-ins or other applications that are not directly accessible. There is no timing on the content Web pages do not contain anything that flashes more than three times in any one second period. Methods are provided for skipping over navigation links to get to the main content of the page. Note: This product uses WAI-ARIA to comply with this checkpoint. WAI-ARIA has been supported since Firefox 3.6 and JAWS 12. A title and an accessible frame source are provided for each frame. Already accessible. Text-only page not required.
(b) End-users shall have access to a description of the accessibility and compatibility features of products in	Supports: Documentation includes a description of accessibility and compatibility features that make it easier for people	• The following components meet this criterion: ○ IBM Installation Manager and IBM Packaging Utility 1.8.x:

alternate formats or alternate methods upon request, at no additional charge.	with disabilities to use the product. Those descriptions are available in alternate formats upon request.	▪ Installation Manager and Packaging Utility Documentation - Knowledge Center - A product accessibility features section is provided. o IBM Business Process Manager 8.5.7.x: ▪ Quick Start Documentation - Documentation is provided on all accessibility features including keyboard access. That information is not included in the quick start guides, but the quick start guides link to the Information Center where it is documented. ▪ Documentation Web - Documentation is provided on all accessibility features including keyboard access. o IBM Information Center 3.6.2, 3.6.2.1: ▪ Core Framework Documentation - Documentation is provided on all accessibility features

		including keyboard access.
(c) Support services for products shall accommodate the communication needs of end-users with disabilities.	Supports: Operating systems provide accessibility features that allow disabled users to customize their preferences. This application preserves those accessibility user preference settings. For example, if Sticky Keys option is selected by a mobility-impaired user, this option will continue to be activated when used with this application. In addition to standard IBM help desk and support Web sites, IBM has established a TTY telephone service for use by deaf or hard of hearing customers to access sales and support services.	
Other IBM products packaged with IBM Business Process Manager 8.5.7.x		

The releases of other IBM products packaged with this product are listed in the table below. The Product / Component names are current as of the time this VPAT is published. This product may include later releases of the listed bundled products. When you request a VPAT for any other IBM products packaged with this product you will receive the latest version of the published VPAT.

Product / Component name (web link to VPAT)	Status	Function provided by product
IBM DB2 for Linux, Unix, and Windows 10.5	Accessible	
IBM Tivoli Directory Server 6.3	Accessible	

IBM WebSphere Application Server 8.5.5.1 to 8.5.5.x	Partially Accessible	Provides an application serving environment for hosting web-based enterprise applications. http://www-03.ibm.com/software/products/en/was-overview/
IBM Tivoli Access Manager for e-business 6.1 & 6.1.1	Accessible	
IBM MobileFirst Platform Foundation 7.1 iFix	Accessible	IBM MobileFirst™ Platform Foundation V7.1 enhances and simplifies the way enterprises can develop, integrate, deploy and administer their mobile applications. It enables you to: Accelerate native, web, and hybrid mobile development. Drive deeper user engagement. Simplify mobile IT operations. Integrate with existing enterprise systems of record.
IBM WebSphere eXtreme Scale 8.6.0.0	Accessible	
IBM DB2 with BLU Acceleration Pattern 1.2, 1.2.1, 1.2.2, 1.2.3	Accessible	The DB2 with BLU Acceleration Pattern makes it much easier and faster to create and deploy BLU-enabled databases in DBaaS 1.1.0.8. A single interface lets you manage, monitor, and maintain your

		software and hardware through the PureApplication System management console. You can reuse this pattern to deploy and manage database instances in a PureApplication System environment.

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VPAT for IBM InfoSphere Master Data Management Standard Edition 11.0

06/22/2017 05:00:28 EDT
State of Arkansas

VPAT for IBM InfoSphere Master Data Management Standard Edition 11.0	
VPAT comments:	For a detailed description of the parent features and benefits, please refer to the following URL: http://www.ibm.com/software/products/us/en/infosphere-master-data-management/

VPAT Summary

Criteria	Status	Remarks and Explanations
Section 1194.21 Software Applications and Operating Systems	Supports with exceptions	Refer to Section 1194.21 in VPAT Details section below.
Section 1194.22 Web-based Internet information & applications	Supports with exceptions	Refer to Section 1194.22 in VPAT Details section below.
Section 1194.23 Telecommunications Products	Not applicable	Not applicable
Section 1194.24 Video and Multi-media Products	Not applicable	Not applicable
Section 1194.25 Self-Contained, Closed Products	Not applicable	Not applicable
Section 1194.26 Desktop and Portable Computers	Not applicable	Not applicable
Section 1194.31 Functional Performance Criteria	Supports with exceptions	Refer to Section 1194.31 in VPAT Details section below.
Section 1194.41 Information, Documentation, and Support	Supports with exceptions	Refer to Section 1194.41 in VPAT Details section below.

VPAT Details

Section 1194.21 Software Applications and Operating Systems - Detail

Criteria	Supporting Features	Remarks and Explanations
(a) When software is designed to run on a system that has a keyboard, product functions shall be executable from a keyboard where the function itself or the result of performing a function can be discerned textually.	Supports with exceptions	The following components meet this criterion: -IBM InfoSphere Master Data Management Standard Edition: - Healthcare Point of Service Integrator - Actions within this application can be performed using a keyboard only. - Master Data Service Engine: Command Line Interface - The application provides a command line interface which is only operable with a keyboard. -Installation Manager and Packaging Utility: - Wizard Mode - Keyboard equivalents are provided for all actions except for the following instance: Issue: It is not possible to navigate to the help button in the wizard dialog using the keyboard. This is not a show stopper as the user can use the F1 key to access the help. Work around: This issue should not prevent the user from completing their install since they can use the F1 key to access the help. - Silent, Console, and Command-line Modes - This application runs as a command line interface, which is only operable with a keyboard. The following component does not meet this criterion: -IBM InfoSphere Master Data Management Standard Edition: - MDM Workbench - Keyboard equivalents are provided for all actions except for the following: -No shortcut keys are available for Virtual MDM Navigation Pages. -Scrollbar not working on Server Administration Source selection window -Algorithm editor not accessible with keyboard
(b) Applications shall not disrupt or disable activated features of other products that are identified as	Supports: Operating systems provide accessibility	The following components meet this criterion: Does not interfere with keyboard accessibility features

Criteria	Supporting Features	Remarks and Explanations
accessibility features, where those features are developed and documented according to industry standards. Applications also shall not disrupt or disable activated features of any operating system that are identified as accessibility features where the application programming interface for those accessibility features has been documented by the manufacturer of the operating system and is available to the product developer.	features that allow disabled users to customize their preferences. This application preserves those accessibility user preference settings. For example, if Sticky Keys option is selected by a mobility-impaired user, this option will continue to be activated when used with this application.	provided by operating system. -IBM InfoSphere MDM Standard Edition: - Healthcare Point of Service Integrator - Master Data Service Engine: Command Line Interface - MDM Workbench -Installation Manager and Packaging Utility: - Wizard Mode - Silent, Console, and Command-line Modes
(c) A well-defined on-screen indication of the current focus shall be provided that moves among interactive interface elements as the input focus changes. The focus shall be programmatically exposed so that Assistive Technology can track focus and focus changes.	Supports: When using the application with a keyboard, users can tell where they are on the screen and the information is available to assistive technologies to communicate screen location to visually impaired users.	The following components meet this criterion: A visual focus indicator is provided and is programmatically exposed to assistive technology. -IBM InfoSphere Master Data Management Standard Edition: - Healthcare Point of Service Integrator - MDM Workbench -Installation Manager and Packaging Utility: - Wizard Mode The following component does not apply to this criterion: Implemented via commands only. There are no interactive objects. -IBM InfoSphere Master Data Management Standard Edition: - Master Data Service Engine: Command Line Interface -Installation Manager and Packaging Utility: - Silent, Console, and Command-line Modes
(d) Sufficient information about a user interface element including the identity, operation and state of the element shall be available to Assistive Technology. When an image represents a program element, the information conveyed by the image must also be available in text.	Supports with exceptions	The following components meet this criterion: -IBM InfoSphere Master Data Management Standard Edition: - Healthcare Point of Service Integrator - If any image, control, object, or icon represents a program element, there is semantic information available in plain text to convey this information to the user. -Installation Manager and Packaging Utility: - Wizard Mode - Semantic information is provided for user interface objects. Also, alternative text is available for images. The following component meets this criterion with exceptions: -IBM InfoSphere Master Data Management Standard Edition: - MDM Workbench - Labels are provided for all controls, objects, icons, and images. Images representing program element have text alternatives. Semantic information is provided for all user interface objects except for the following: -The screen reader cannot read implementation type description -The screen reader not reading the table/list headers -The screen reader does not read model validation errors -The Language List headings are not readable The following component does not apply to this criterion: Has no user interface objects. -IBM InfoSphere Master Data Management Standard Edition:

Criteria	Supporting Features	Remarks and Explanations
		- Master Data Service Engine: Command Line Interface - Installation Manager and Packaging Utility: - Silent, Console, and Command-line Modes
(e) When bitmap images are used to identify controls, status indicators, or other programmatic elements, the meaning assigned to those images shall be consistent throughout an application's performance.	Supports: The meaning assigned to images used in the application is consistent and unique, minimizing confusion of the context of use for those images.	The following component meets this criterion: Labels are provided for controls, objects, icons, and images. -IBM InfoSphere Master Data Management Standard Edition: - Healthcare Point of Service Integrator - MDM Workbench -Installation Manager and Packaging Utilify: - Wizard Mode The following component does not apply to this criterion: Has no controls, objects, icons, or images. -IBM InfoSphere Master Data Management Standard Edition: - Master Data Service Engine: Command Line Interface -Installation Manager and Packaging Utilify: - Silent, Console, and Command-line Modes
(f) Textual information shall be provided through operating system functions for displaying text. The minimum information that shall be made available is text content, text input caret location, and text attributes.	Supports: Text information is accessible so assistive technologies can communicate content, attributes and caret location to blind users.	The following components meet this criterion: -IBM InfoSphere Master Data Management Standard Edition: - Healthcare Point of Service Integrator - The system provides text for labels and images using standard operating system function calls which makes those text elements available to assistive technology such as screen readers. - Master Data Service Engine: Command Line Interface - Output is displayed in the command prompt window using standard text output APIs. All output text was successfully announced by a screen reader. - MDM Workbench - Text is provided through standard system functions calls or through an API which supports interactions with assistive technologies. -Installation Manager and Packaging Utility: - Wizard Mode - Text is provided through standard system function calls or through an API (application programming interface) which supports interaction with assistive technology. - Silent, Console, and Command-line Modes - Output is displayed in the command prompt window using standard text output APIs (application programming interface) as well as written to a log text file.
(g) Applications shall not override user selected contrast and color selections and other individual display attributes.	Supports with exceptions	The following components meet this criterion: -IBM InfoSphere Master Data Management Standard Edition: Contrast settings as well as font, size, and color settings are supported, as controlled by the operating system. - Healthcare Point of Service Integrator - Master Data Service Engine: Command Line Interface -Installation Manager and Packaging Utilify: - Wizard Mode - Font, size, and color settings are supported, as controlled by the operating system. High contrast settings are supported, as controlled by the operating system except for the following instance: Issue: The Eclipse

Criteria	Supporting Features	Remarks and Explanations
		JFaceColors.getHyperlinkText() method returns the incorrect color in high contrast mode. Equivalent Facilitation: If you are unable to complete your installation because of this issue, you can use either the Silent, Console, or Command-line mode to do your install. - Silent, Console, and Command-line Modes - Contrast settings as well as font, size, and color settings are supported, as controlled by the operating system. The following component does not meet this criterion: -IBM InfoSphere Master Data Management Standard Edition: - MDM Workbench - High contrast settings are supported, as controlled by the operating system except for the following: -Palette Options on the virtual MDM Algorithms screen are not visible when the white setting for high contrast is enabled Font, size, and color settings are supported, as controlled by the operating system except for the following: -Text on Confirm Removal screen under ASI tailoring is not completely visible -Table headers on virtual MDM screens are not completely visible when the extra large font setting is enabled
(h) When animation is displayed, the information shall be displayable in at least one non-animated presentation mode at the option of the user.	Not applicable	The following components do not apply to this criterion: No animation is used -IBM InfoSphere MDM Standard Edition: - Healthcare Point of Service Integrator - Master Data Service Engine: Command Line Interface - MDM Workbench -Installation Manager and Packaging Utility: - Wizard Mode - Silent, Console, and Command-line Modes
(i) Color coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.	Supports: Color is used only as an enhancement, and an alternate means to convey information or indicate an action is available to users with visual impairments.	The following component meets this criterion: Color is not used as a sole means to convey information. -IBM InfoSphere Master Data Management Standard Edition: - Healthcare Point of Service Integrator - MDM Workbench -Installation Manager and Packaging Utility: - Wizard Mode The following component does not apply to this criterion: Output is displayed in a single color text. Color is not used to convey information. -IBM InfoSphere Master Data Management Standard Edition: - Master Data Service Engine: Command Line Interface -Installation Manager and Packaging Utility: - Silent, Console, and Command-line Modes
(j) When a product permits a user to adjust color and contrast settings, a variety of color selections capable of producing a range of contrast levels shall be provided.	Supports: When color customization is supported, a variety of color selections and a range of contrast improves accessibility for users with vision impairments.	The following component meets this criterion: - IBM InfoSphere MDM Standard Edition: - Healthcare Point of Service Integrator - The application respects the color customization made by the user at the operating system level.

Criteria	Supporting Features	Remarks and Explanations
		The following components do not apply to this criterion: No animation is used. -IBM InfoSphere MDM Standard Edition: - Master Data Service Engine: Command Line Interface - MDM Workbench -Installation Manager and Packaging Utility: - Wizard Mode - Silent, Console, and Command-line Modes
(k) Software shall not use flashing or blinking text, objects, or other elements having a flash or blink frequency greater than 2 Hz and lower than 55 Hz.	Supports: The use of blinking text, objects or elements has been avoided, reducing risk of seizures for users with photosensitive epilepsy.	The following components meet this criterion: No flashing or blinking text or objects are used. -IBM InfoSphere MDM Standard Edition: - Healthcare Point of Service Integrator - Master Data Service Engine: Command Line Interface - MDM Workbench -Installation Manager and Packaging Utility: - Wizard Mode - Silent, Console, and Command-line Modes
(l) When electronic forms are used, the form shall allow people using Assistive Technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.	Supports: The application design allows assistive technology access to information, field elements, and functionality required to complete and submit forms.	The following components meet this criterion: -IBM InfoSphere MDM Standard Edition: - Healthcare Point of Service Integrator - The application utilizes forms and user interface controls provided by the underlying operating system and therefore does not prevent a user from using assistive technology to complete and submit forms. -Installation Manager and Packaging Utility: - Wizard Mode - Allows people using assistive technology to access the information, field elements and functionality, including all directions and cues, required for completion of all tasks. - Silent, Console, and Command-line Modes - The silent install mode uses a response file that contains the settings used during installation. The response file can be edited using a text editor. The following components do not apply to this criterion: Does not contain electronic forms. -IBM InfoSphere MDM Standard Edition: - Master Data Service Engine: Command Line Interface - MDM Workbench

Section 1194.22 Web-based Internet information and applications - Detail

Criteria	Supporting Features	Remarks and Explanations
(a) A text equivalent for every non-text element shall be provided (e.g., via "alt", "longdesc", or in element content).	Supports with exceptions	The following components meet this criterion: -IBM InfoSphere Master Data Management Standard Edition: - Data Remediation - The non-text and images have alternative text which is readable by a screen reader. -IBM InfoSphere Master Data Management Application Toolkit 11.0: - MDM Application Toolkit - The images used in the user interface controls provided by the toolkit have text alternatives. The following components do not meet this criterion: Not all non-text content that is presented to user has

Criteria	Supporting Features	Remarks and Explanations
		a corresponding text alternative. -IBM InfoSphere Master Data Management Standard Edition: - Data Remediation - Enterprise Viewer - Inspector - Provider Direct - Web Reports
(b) Equivalent alternatives for any multimedia presentation shall be synchronized with the presentation.	Not applicable	The following components do not apply to this criterion: No multimedia is used. -IBM InfoSphere Master Data Management Standard Edition: - Data Remediation - Enterprise Viewer - Inspector - Provider Direct - Web Reports -IBM InfoSphere Master Data Management Application Toolkit: - MDM Application Toolkit
(c) Web pages shall be designed so that all information conveyed with color is also available without color, for example from context or markup.	Supports with exceptions	The following components meet this criterion: -IBM InfoSphere Master Data Management Standard Edition: - Data Remediation - Color is not used as the sole means for conveying information. In any area where color conveys information, appropriate readable -IBM InfoSphere Master Data Management Application Toolkit: - MDM Application Toolkit - For the user interface controls provided by the toolkit, color is used, but it is not used as the only way of conveying the information. The following components do not meet this criterion: In certain places in the application, color is used as the only means of conveying meaningful information. -IBM InfoSphere Master Data Management Standard Edition: - Data Remediation - Enterprise Viewer - Inspector - Provider Direct - Web Reports
(d) Documents shall be organized so they are readable without requiring an associated style sheet.	Supports with exceptions	The following components meet this criterion: -IBM InfoSphere Master Data Management Standard Edition: - Data Remediation - Web pages can be read without using cascading style sheets. -IBM InfoSphere Master Data Management Application Toolkit: - MDM Application Toolkit - This application relies on cascading style sheets in order to render properly and be usable. However, the application provides equivalent facilitation for low-vision users by utilizing the user's system display settings, including high contrast mode. Users may also control the font sizes using the device or browser settings. The following components do not meet this criterion: Readability of Web pages without using cascading style sheets has not been fully tested. -IBM InfoSphere Master Data Management

Criteria	Supporting Features	Remarks and Explanations
		Standard Edition: -Enterprise Viewer -Inspector -Provider Direct -Web Reports
(e) Redundant text links shall be provided for each active region of a server-side image map.	Not applicable	The following component does not apply to this criterion: Has no image maps. -IBM InfoSphere Master Data Management Standard Edition: - Data Remediation - Enterprise Viewer - Inspector - Provider Direct - Web Reports -IBM InfoSphere Master Data Management Application Toolkit: - MDM Application Toolkit
(f) Client-side image maps shall be provided instead of server-side image maps except where the regions cannot be defined with an available geometric shape.	Not applicable	The following component does not apply to this criterion: Has no image maps. -IBM InfoSphere Master Data Management Standard Edition: - Data Remediation - Enterprise Viewer - Inspector - Provider Direct - Web Reports -IBM InfoSphere Master Data Management Application Toolkit: - MDM Application Toolkit
(g) Row and column headers shall be identified for data tables.	Supports with exceptions	The following component meets this criterion: -IBM InfoSphere Master Data Management Standard Edition: - Data Remediation - Table cells and relationships between cells can be programmatically determined. The following component meets this criterion: The application contains many tables. Not every table within the application has been tested. Some tables are nested in other tables for formatting only. It can be difficult, but not impossible, to discern table structure through a screen readers in some situations but this hasn't been fully tested. -IBM InfoSphere Master Data Management Standard Edition: - Enterprise Viewer - Inspector - Web Reports The following component does not apply to this criterion: -IBM InfoSphere Master Data Management Application Toolkit: - MDM Application Toolkit - This is a toolkit and doesn't have any tables. The following component does not apply to this criterion: -IBM InfoSphere Master Data Management Standard Edition: - Provider Direct - Table cells and the relationships between them can not always be programmatically determined or set.
(h) Markup shall be used to associate data cells and	Supports with exceptions	The following component meets this criterion:

Criteria	Supporting Features	Remarks and Explanations
		Standard Edition: -Enterprise Viewer -Inspector -Provider Direct -Web Reports
(e) Redundant text links shall be provided for each active region of a server-side image map.	Not applicable	The following component does not apply to this criterion: Has no image maps. -IBM InfoSphere Master Data Management Standard Edition: - Data Remediation - Enterprise Viewer - Inspector - Provider Direct - Web Reports -IBM InfoSphere Master Data Management Application Toolkit: - MDM Application Toolkit
(f) Client-side image maps shall be provided instead of server-side image maps except where the regions cannot be defined with an available geometric shape.	Not applicable	The following component does not apply to this criterion: Has no image maps. -IBM InfoSphere Master Data Management Standard Edition: - Data Remediation - Enterprise Viewer - Inspector - Provider Direct - Web Reports -IBM InfoSphere Master Data Management Application Toolkit: - MDM Application Toolkit
(g) Row and column headers shall be identified for data tables.	Supports with exceptions	The following component meets this criterion: -IBM InfoSphere Master Data Management Standard Edition: - Data Remediation - Table cells and relationships between cells can be programmatically determined. The following component meets this criterion: The application contains many tables. Not every table within the application has been tested. Some tables are nested in other tables for formatting only. It can be difficult, but not impossible, to discern table structure through a screen readers in some situations but this hasn't been fully tested. -IBM InfoSphere Master Data Management Standard Edition: - Enterprise Viewer - Inspector - Web Reports The following component does not apply to this criterion: -IBM InfoSphere Master Data Management Application Toolkit: - MDM Application Toolkit - This is a toolkit and doesn't have any tables. The following component does not apply to this criterion: -IBM InfoSphere Master Data Management Standard Edition: - Provider Direct - Table cells and the relationships between them can not always be programmatically determined or set.
(h) Markup shall be used to associate data cells and	Supports with exceptions	The following component meets this criterion:

Criteria	Supporting Features	Remarks and Explanations
		- IBM InfoSphere Master Data Management Application Toolkit: - MDM Application Toolkit - This is a toolkit and doesn't have any flashing content.
(k) A text-only page, with equivalent information or functionality, shall be provided to make a web site comply with the provisions of this part, when compliance cannot be accomplished in any other way. The content of the text-only page shall be updated whenever the primary page changes.	Does not support	The following components do not apply to this criterion: -IBM InfoSphere Master Data Management Standard Edition: - Data Remediation - All pages within the application are accessible by text. The application contains no functionality through which an alternate text-only page is required. -IBM InfoSphere Master Data Management Application Toolkit: - MDM Application Toolkit - The user interface controls provided by the toolkit are accessible so a text-only implementation is not needed. The following components do not meet this criterion: There are areas within the application that only use graphical imagery to convey information and do not provide text-only alternatives for such information. -IBM InfoSphere Master Data Management Standard Edition: - Enterprise Viewer - Inspector - Provider Direct - Web Reports
(l) When pages utilize scripting languages to display content, or to create interface elements, the information provided by the script shall be identified with functional text that can be read by Assistive Technology.	Supports with exceptions	The following component meets this criterion: -IBM InfoSphere Master Data Management Application Toolkit: - MDM Application Toolkit - For the user interface controls provided by the toolkit, scripts are either accessible or have accessible alternatives when necessary. The following components do not apply to this criterion: Has no scripts. -IBM InfoSphere Master Data Management Standard Edition: - Data Remediation - Enterprise Viewer - Inspector - Web Reports The following component does not meet this criterion: -IBM InfoSphere Master Data Management Standard Edition: - Provider Direct - Not all scripts within the application are keyboard accessible.
(m) When a web page requires that an applet, plug-in or other application be present on the client system to interpret page content, the page must provide a link to a plug-in or applet that complies with §1194.21(a) through (l).	Not applicable	The following component does not apply to this criterion: Does not have any applets, plug-ins, or non-HTML content. -IBM InfoSphere Master Data Management Standard Edition: - Data Remediation - Enterprise Viewer - Inspector - Provider Direct - Web Reports -IBM InfoSphere Master Data Management Application Toolkit:

Criteria	Supporting Features	Remarks and Explanations
		- MDM Application Toolkit
(n) When electronic forms are designed to be completed on-line, the form shall allow people using Assistive Technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.	Supports with exceptions	The following component meets this criterion: -IBM InfoSphere Master Data Management Standard Edition: - Data Remediation - Form labels, controls, and elements can be programmatically determined. The following component does not apply to this criterion: -IBM InfoSphere Master Data Management Application Toolkit: - MDM Application Toolkit - This is a toolkit and doesn't have any form controls. The following components do not meet this criterion: Form element labels within the application cannot be programmatically determined due to the dynamic nature of the user interface toolkit used by the application. -IBM InfoSphere Master Data Management Standard Edition: - Enterprise Viewer - Inspector - Provider Direct - Web Reports
(o) A method shall be provided that permits users to skip repetitive navigation links.	Supports with exceptions	The following component meets this criterion: -IBM InfoSphere Master Data Management Standard Edition: - Data Remediation - This application provides a mechanism to skip over the main navigation links to get to the main content of the page. The following component does not apply to this criterion: -IBM InfoSphere Master Data Management Application Toolkit: - MDM Application Toolkit - This is a toolkit and mechanisms to skip to the main content is controlled by the application developer. The following components do not meet this criterion: Provides no method to skip over navigation links to get to the main content of any given page. -IBM InfoSphere Master Data Management Standard Edition: - Enterprise Viewer - Inspector - Provider Direct - Web Reports
(p) When a timed response is required, the user shall be alerted and given sufficient time to indicate more time is required.	Supports with exceptions	The following components meet this criterion: Contains no time sensitive functionality other than a session time-out capability. The session time-out capability is adjustable by an administrator and is globally applied to the entire application. -IBM InfoSphere Master Data Management Standard Edition: - Enterprise Viewer - Inspector - Web Reports The following components do not apply to this criterion:

Criteria	Supporting Features	Remarks and Explanations
		-IBM InfoSphere Master Data Management Standard Edition: - Data Remediation - This application has no time limits. -IBM InfoSphere Master Data Management Application Toolkit: - MDM Application Toolkit - There are no timed instructions and the user is not required to set input within a limited amount of time. This is a toolkit and timed responses are controlled by the application developer. The following component does not meet this criterion: -IBM InfoSphere Master Data Management Standard Edition: - Provider Direct - Due to security requirements for the application, the session duration is modifiable only by the system administrator on the application server, not the individual user.

Section 1194.31 Functional Performance - Detail

Criteria	Supporting Features	Remarks and Explanations
(a) At least one mode of operation and information retrieval that does not require user vision shall be provided, or support for Assistive Technology used by people who are blind or visually impaired shall be provided.	Supports with exception: See the following for supporting features: - 1194.21 a, b, c, d, e, f, h, i, l - 1194.22 all	The following components meet this criterion: -IBM InfoSphere Master Data Management Standard Edition: - Healthcare Point of Service Integrator - Master Data Service Engine - Command Line Interface - Data Remediation -IBM InfoSphere Master Data Management Application Toolkit: - MDM Application Toolkit -Installation Manager and Packaging Utility: - Wizard Mode - Silent, Console, and Command-line Modes The following components meet this criterion with exceptions: -IBM InfoSphere Master Data Management Standard Edition: - MDM Workbench - Enterprise Viewer - Inspector - Provider Direct - Web Reports
(b) At least one mode of operation and information retrieval that does not require visual acuity greater than 20/70 shall be provided in audio and enlarged print output working together or independently, or support for Assistive Technology used by people what are visually impaired shall be provided.	Supports with exception: See the following for supporting features: - 1194.21 c, g, i, j, l - 1194.22 n	The following components meet this criterion: -IBM InfoSphere Master Data Management Standard Edition: - Healthcare Point of Service Integrator - Master Data Service Engine - Command Line Interface - Data Remediation -Installation Manager and Packaging Utility: - Wizard Mode - Silent, Console, and Command-line Modes The following components meet this criterion with exceptions:

Criteria	Supporting Features	Remarks and Explanations
		-IBM InfoSphere Master Data Management Standard Edition: - Data Remediation - This application has no time limits. -IBM InfoSphere Master Data Management Application Toolkit: - MDM Application Toolkit - There are no timed instructions and the user is not required to set input within a limited amount of time. This is a toolkit and timed responses are controlled by the application developer. The following component does not meet this criterion: -IBM InfoSphere Master Data Management Standard Edition: - Provider Direct - Due to security requirements for the application, the session duration is modifiable only by the system administrator on the application server, not the individual user.

Section 1194.31 Functional Performance - Detail

Criteria	Supporting Features	Remarks and Explanations
(a) At least one mode of operation and information retrieval that does not require user vision shall be provided, or support for Assistive Technology used by people who are blind or visually impaired shall be provided.	Supports with exception: See the following for supporting features: - 1194.21 a, b, c, d, e, f, h, i, l - 1194.22 all	The following components meet this criterion: -IBM InfoSphere Master Data Management Standard Edition: - Healthcare Point of Service Integrator - Master Data Service Engine - Command Line Interface - Data Remediation -IBM InfoSphere Master Data Management Application Toolkit: - MDM Application Toolkit -Installation Manager and Packaging Utility: - Wizard Mode - Silent, Console, and Command-line Modes The following components meet this criterion with exceptions: -IBM InfoSphere Master Data Management Standard Edition: - MDM Workbench - Enterprise Viewer - Inspector - Provider Direct - Web Reports
(b) At least one mode of operation and information retrieval that does not require visual acuity greater than 20/70 shall be provided in audio and enlarged print output working together or independently, or support for Assistive Technology used by people what are visually impaired shall be provided.	Supports with exception: See the following for supporting features: - 1194.21 c, g, i, j, l - 1194.22 n	The following components meet this criterion: -IBM InfoSphere Master Data Management Standard Edition: - Healthcare Point of Service Integrator - Master Data Service Engine - Command Line Interface - Data Remediation -Installation Manager and Packaging Utility: - Wizard Mode - Silent, Console, and Command-line Modes The following components meet this criterion with exceptions:

Criteria	Supporting Features	Remarks and Explanations
	- 1194.21 a, b - 1194.22 l, p	- Healthcare Point of Service Integrator - Master Data Service Engine - Command Line Interface - Enterprise Viewer - Inspector - Web Reports - IBM InfoSphere Master Data Management Application Toolkit: - MDM Application Toolkit - Installation Manager and Packaging Utility: - Wizard Mode - Silent, Console, and Command-line Modes The following component meets this criterion with exceptions: - IBM InfoSphere Master Data Management Standard Edition: - MDM Workbench The following component does not apply to this criterion: - IBM InfoSphere Master Data Management Standard Edition: - Data Remediation The following component does not meet this criterion: - IBM InfoSphere Master Data Management Standard Edition: - Provider Direct

Section 1194.41 Information, Documentation, and Support - Detail

Criteria	Supporting Features	Remarks and Explanations
(a) Product support documentation provided to end-users shall be made available in alternate formats upon request, at no additional charge.	Supports with exceptions	The following component meets this criterion: -IBM InfoSphere Master Data Management Standard Edition: - Inspector for GSA HTML Help - Table cells and the relationships between them can be programmatically determined. The pages within the documentation are readable without cascading style sheets. Color is not used to convey information within the documentation. Flashing content is not used. Frames used within the documentation have a title and accessible frame source. The documentation has no non-text content. No form elements or labels are present within this documentation. The documentation has no image maps, multimedia, scripts, applets, plug-ins, or non-HTML content is not used within the documentation. Timed responses are not used within the documentation. The content within the documentation is accessible and therefore no alternative content needs to be provided. - Master Data Service Documentation: Information Center - Table cells and the relationships between them can be programmatically determined. The pages within the documentation are readable without cascading style sheets. Color is not used to convey information within the documentation. Flashing content is not used. Frames used within the documentation have a title and accessible frame

Criteria	Supporting Features	Remarks and Explanations
	- 1194.21 a, b - 1194.22 l, p	- Healthcare Point of Service Integrator - Master Data Service Engine - Command Line Interface - Enterprise Viewer - Inspector - Web Reports - IBM InfoSphere Master Data Management Application Toolkit: - MDM Application Toolkit - Installation Manager and Packaging Utility: - Wizard Mode - Silent, Console, and Command-line Modes The following component meets this criterion with exceptions: - IBM InfoSphere Master Data Management Standard Edition: - MDM Workbench The following component does not apply to this criterion: - IBM InfoSphere Master Data Management Standard Edition: - Data Remediation The following component does not meet this criterion: - IBM InfoSphere Master Data Management Standard Edition: - Provider Direct

Section 1194.41 Information, Documentation, and Support - Detail

Criteria	Supporting Features	Remarks and Explanations
(a) Product support documentation provided to end-users shall be made available in alternate formats upon request, at no additional charge.	Supports with exceptions	The following component meets this criterion: -IBM InfoSphere Master Data Management Standard Edition: - Inspector for GSA HTML Help - Table cells and the relationships between them can be programmatically determined. The pages within the documentation are readable without cascading style sheets. Color is not used to convey information within the documentation. Flashing content is not used. Frames used within the documentation have a title and accessible frame source. The documentation has no non-text content. No form elements or labels are present within this documentation. The documentation has no image maps, multimedia, scripts, applets, plug-ins, or non-HTML content is not used within the documentation. Timed responses are not used within the documentation. The content within the documentation is accessible and therefore no alternative content needs to be provided. - Master Data Service Documentation: Information Center - Table cells and the relationships between them can be programmatically determined. The pages within the documentation are readable without cascading style sheets. Color is not used to convey information within the documentation. Flashing content is not used. Frames used within the documentation have a title and accessible frame

Criteria	Supporting Features	Remarks and Explanations
		relationships between them can be determined. The default language for the PDF file can not be programmatically determined.
(b) End-users shall have access to a description of the accessibility and compatibility features of products in alternate formats or alternate methods upon request, at no additional charge.	Supports: Documentation includes a description of accessibility and compatibility features that make it easier for people with disabilities to use the product. Those descriptions are available in alternate formats upon request.	The following component meets this criterion: A product accessibility features section is provided. -IBM InfoSphere Master Data Management Standard Edition: - Data Model Description Document: PDF File - Inspector for GSA HTML Help - Master Data Service Documentation: Information Center -Information Center: - Core Framework: Documentation -Installation Manager and Packaging Utility: - Documentation: Information Center
(c) Support services for products shall accommodate the communication needs of end-users with disabilities.	Supports: In addition to standard IBM help desk and support Web sites, IBM has established a TTY telephone service for use by deaf or hard of hearing customers to access sales and support services.	

Other IBM products packaged with IBM InfoSphere Master Data Management Standard Edition 11.0

Product / Component name (web link to VPAT)	Status	Function provided by product
IBM Business Process Manager 8.0.1	Partially accessible	Provides tools for modeling, running, and monitoring Business Process Management applications.

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Online Information Centers have been replaced by the IBM Knowledge Center - Hosted Edition service. To request the current accessibility status for the IBM Knowledge Center - Hosted Edition service, visit the IBM Product Accessibility information web page (https://www-03.ibm.com/research/accessibility/requests/accvpat.nsf/bidxjs?OpenForm) and select the entry for IBM Knowledge Center - Hosted Edition.

VPAT for IBM InfoSphere Optim Archive Enterprise Edition 11.3.1

VPAT for IBM InfoSphere Optim Archive Enterprise Edition 11.3.1	
VPAT comments:	For a detailed description of the parent features and benefits, please refer to the following URL: http://www-03.ibm.com/software/products/en/infosphere-optim-archive This VPAT applies to following offerings: 5655ARD - IBM InfoSphere Optim Archive Enterprise Edition for z/OS 5655ARE - IBM InfoSphere Optim Archive Enterprise Edition for z/OS for Oracle Applications 5725F30 - IBM InfoSphere Optim Archive Enterprise Edition 5725F30 - IBM InfoSphere Optim Archive Enterprise Edition for Oracle Applications The product's IBM Knowledge Center documentation is hosted in the IBM Knowledge Center - Hosted Edition service. To request the current accessibility status for the IBM Knowledge Center - Hosted Edition service, visit the IBM Product Accessibility information web page (https://www-03.ibm.com/research/accessibility/requests/accvpat.nsf/bidxjs?OpenForm) and select the entry for IBM Knowledge Center - Hosted Edition.

VPAT Summary

Criteria	Status	Remarks and Explanations
1194.21 Software Applications and Operating Systems	Not Applicable	This product is a packaged suite - see links below for VPAT details on each component.

1194.22 Web-based Internet information and applications	Not Applicable	This product is a packaged suite - see links below for VPAT details on each component.
1194.23 Telecommunications Products	Not Applicable	This product is a packaged suite - see links below for VPAT details on each component.
1194.24 Video and Multi-Media Products	Not Applicable	This product is a packaged suite - see links below for VPAT details on each component.
1194.25 Self-Contained, Closed Products	Not Applicable	This product is a packaged suite - see links below for VPAT details on each component.
1194.26 Desktop and Portable Computers	Not Applicable	This product is a packaged suite - see links below for VPAT details on each component.
1194.31 Functional Performance Criteria	Not Applicable	This product is a packaged suite - see links below for VPAT details on each component.
1194.41 Information, documentation, and support	Not Applicable	This product is a packaged suite - see links below for VPAT details on each component. Also, see 1194.41 Information, Documentation, and Support regarding IBM's TTY line.

VPAT Details

1194.41 Information, documentation, and support

Criteria	**Supporting Features**	**Remarks and Explanations**
(a) Product support documentation provided to end-users shall be made available in alternate formats upon request, at no additional charge.	Not Applicable	
(b) End-users shall have access to a description of the accessibility and compatibility features of products in	Not Applicable	

alternate formats or alternate methods upon request, at no additional charge.		
(c) Support services for products shall accommodate the communication needs of end-users with disabilities.	Supports: Operating systems provide accessibility features that allow disabled users to customize their preferences. This application preserves those accessibility user preference settings. For example, if Sticky Keys option is selected by a mobility-impaired user, this option will continue to be activated when used with this application. In addition to standard IBM help desk and support Web sites, IBM has established a TTY telephone service for use by deaf or hard of hearing customers to access sales and support services.	
Other IBM products packaged with IBM InfoSphere Optim Archive Enterprise Edition 11.3.1		

The releases of other IBM products packaged with this product are listed in the table below. The Product / Component names are current as of the time this VPAT is published. This product may include later releases of the listed bundled products. When you request a VPAT for any other IBM products packaged with this product you will receive the latest version of the published VPAT.

Product / Component name (web link to VPAT)	Status	Function provided by product
IBM InfoSphere Classic Federation Server for z/OS 11.1	Accessible	InfoSphere Classic Federation for z/OS provides tools and applications for real-time SQL access to mainframe

		databases, files and some mainframe programs. Tools and applications issue JDBC, ODBC or CLI SQL commands to read and write data stored in VSAM and sequential files, as well as IMS DB, CA-IDMS, CA-DATACOM/DB, Adabas and DB2 UDB for z/OS databases. SELECT, INSERT, UPDATE, DELETE and procedure CALL are supported.
IBM InfoSphere BigInsights 3.0	Partially Accessible	IBM® InfoSphere® BigInsights™ Standard Edition is an analytics platform, based on open source Apache Hadoop, for analyzing massive volumes of unconventional data in its native format. The software enables advanced analysis and modeling of diverse data, and supports structured, semi-structured and unstructured content to provide maximum flexibility.
IBM InfoSphere Data Explorer 9.0	Partially Accessible	IBM InfoSphere Data Explorer, formally known as the Vivisimo Velocity Platform, can help organizations discover, navigate, and visualize vast amounts of structured and unstructured information across many enterprise systems and data repositories.
IBM InfoSphere Optim Z 11.3	Accessible	Provides test data management, archiving and data privacy capabilities for mainframe environments.
IBM InfoSphere Federation Server 10.5	Accessible	InfoSphere Federation Server provides IBM Optim Data Growth Solution access to Teradata and iSeries DB2 as well as

		other legacy data sources on the mainframe.
IBM InfoSphere Information Server 11.5	Partially Accessible	IBM InfoSphere Information Server is a market-leading data integration platform which includes a family of products that enable you to understand, cleanse, monitor, transform, and deliver data, as well as to collaborate to bridge the gap between business and IT. InfoSphere Information Server provides massively parallel processing (MPP) capabilities to deliver a highly scalable and flexible integration platform that handles a variety of data volumes (big, small, and everything in between).
IBM InfoSphere Optim Solution for Oracle Applications 11.3	Partially Accessible	Provides test data management, archiving and data privacy capabilities but goes further to deliver accelerators for faster deployments in Oracle environments.
IBM InfoSphere Optim 11.3	Partially Accessible	This is the base product. It takes command of enterprise data. It optimizes performance, reduces risks and controls costs. Optim Solutions empower you to manage and control application data, at every stage of the information lifecycle.
IBM InfoSphere Information Governance Catalog 11.5	Not Accessible	InfoSphere Information Governance Catalog provides comprehensive information integration capabilities to help you understand and govern your information. InfoSphere Information Governance Catalog encourages a

		standardized approach to discovering your IT assets and defining a common business language.
Disclaimer:		
IBM provides this data for general information on an AS IS basis. For formal representations on particular proposals, please contact an IBM Client Representative or call the IBM Federal Information Call Center at 1-800-333-6705 or TTY: 1-800-IBM-3383. Any third-party components or technologies not developed by or licensed by IBM that may be packaged with or engaged by the use of this product are not included in this Section 508 assessment.		

VPAT for IBM Integration Bus for Distributed Platforms 10.0.0.6

VPAT for IBM Integration Bus for Distributed Platforms 10.0.0.6		
VPAT comments:	For a full description of IBM Integration Bus for Distributed Platforms 10.0.0.6 see the product web site: http://www-03.ibm.com/software/products/en/ibm-integration-bus	
VPAT Summary		
Criteria	**Status**	**Remarks and Explanations**
1194.21 Software Applications and Operating Systems	Supports	Refer to Section 1194.21 in VPAT Details section below.
1194.22 Web-based Internet information and applications	Supports	Refer to Section 1194.22 in VPAT Details section below.
1194.23 Telecommunications Products	Not Applicable	Not Applicable
1194.24 Video and Multi-Media Products	Not Applicable	Not Applicable
1194.25 Self-Contained, Closed Products	Not Applicable	Not Applicable
1194.26 Desktop and Portable Computers	Not Applicable	Not Applicable

1194.31 Functional Performance Criteria	Supports	Refer to Section 1194.31 in VPAT Details section below.
1194.41 Information, documentation, and support	Supports	Refer to Section 1194.41 in VPAT Details section below.

VPAT Details

1194.21 Software Applications and Operating Systems

Criteria	Supporting Features	Remarks and Explanations
(a) When software is designed to run on a system that has a keyboard, product functions shall be executable from a keyboard where the function itself or the result of performing a function can be discerned textually.	Supports: A keyboard can be used to achieve all tasks in the application, allowing blind and mobility-impaired users to access information without the use of the mouse.	• The following components meet this criterion: ◦ IBM Integration Bus for Distributed Platforms 10.0.0.6: If focus can be moved to a component using a keyboard interface, then focus can be moved away from that component using only a keyboard interface, and, if it requires more than unmodified arrow or tab keys, the user is advised of the method for moving focus away. ▪ Single Package (Development Toolkit component) - All functionality of the content is operable through a keyboard interface without requiring specific timings for individual keystrokes. This is not a requirement where the underlying

		function requires input that depends on the path of the user's movement and not just the endpoints. There are some limitations of a third-party product - Eclipse. These can be overcome by use of the JAWS cursor. ▪ Integration Bus Single Package (Runtime component) - All functionality of the content is operable through a keyboard interface without requiring specific timings for individual keystrokes. This is not a requirement where the underlying function requires input that depends on the path of the user's movement and not just the endpoints.
(b) Applications shall not disrupt or disable activated features of other products that are identified as accessibility features, where those features are developed and documented according to industry standards. Applications also shall not disrupt or disable activated features of any operating system that are identified as	Supports: Operating systems provide accessibility features that allow disabled users to customize their preferences. This application preserves those accessibility user preference settings. For example, if Sticky Keys option is selected by a	• The following components meet this criterion: ○ IBM Integration Bus for Distributed Platforms 10.0.0.6: Component does not disrupt platform features that are defined in the platform

accessibility features where the application programming interface for those accessibility features has been documented by the manufacturer of the operating system and is available to the product developer.	mobility-impaired user, this option will continue to be activated when used with this application.	documentation as accessibility features. ▪ Single Package (Development Toolkit component) ▪ Integration Bus Single Package (Runtime component)
(c) A well-defined on-screen indication of the current focus shall be provided that moves among interactive interface elements as the input focus changes. The focus shall be programmatically exposed so that Assistive Technology can track focus and focus changes.	Supports: When using the application with a keyboard, users can tell where they are on the screen and the information is available to assistive technologies to communicate screen location to visually impaired users.	• The following components meet this criterion: ○ IBM Integration Bus for Distributed Platforms 10.0.0.6: Any keyboard operable user interface has a mode of operation where the keyboard focus indicator is visible. Exposes information and mechanisms necessary to track and modify focus, text insertion point, and selection attributes of user interface components. ▪ Single Package (Development Toolkit component) ▪ Integration Bus Single Package (Runtime component)
(d) Sufficient information about a user interface element including the identity, operation and state of the element shall be available to Assistive Technology. When an image represents a program element, the	Supports: This software application allows a screen reader to describe the user interface environment and controls to a blind user. For example, if you tab through a form and find a radio button,	• The following components do not apply to this criterion: ○ IBM Integration Bus for Distributed Platforms 10.0.0.6: ▪ Integration Bus Single Package (Runtime

information conveyed by the image must also be available in text.	the user would be able to determine it is a radio button and the current selection status of the button.	component) - The user interface is implemented via commands only. There are no interactive objects.
		• The following components meet this criterion:
		  ○ IBM Integration Bus for Distributed Platforms 10.0.0.6:
		    ▪ Single Package (Development Toolkit component) - Semantic information is provided about user interface objects.

(e) When bitmap images are used to identify controls, status indicators, or other programmatic elements, the meaning assigned to those images shall be consistent throughout an application's performance.	Supports:
	The meaning assigned to images used in the application is consistent and unique, minimizing confusion of the context of use for those images.
		• The following components do not apply to this criterion:
		  ○ IBM Integration Bus for Distributed Platforms 10.0.0.6:
		    ▪ Integration Bus Single Package (Runtime component) - The user interface is implemented via commands only. There are no interactive objects.
		• The following components meet this criterion:
		  ○ IBM Integration Bus for Distributed Platforms 10.0.0.6:
		    ▪ Single Package (Development Toolkit component) - Labels are associated with controls,

		objects, icons and images. The meaning of images is consistent throughout the application.
(f) Textual information shall be provided through operating system functions for displaying text. The minimum information that shall be made available is text content, text input caret location, and text attributes.	Supports: Text information is accessible so assistive technologies can communicate content, attributes and caret location to blind users.	• The following components meet this criterion: ○ IBM Integration Bus for Distributed Platforms 10.0.0.6: Text contents, text attributes, and the boundary of text rendered to the screen are programmatically determinable. ▪ Single Package (Development Toolkit component) ▪ Integration Bus Single Package (Runtime component)
(g) Applications shall not override user selected contrast and color selections and other individual display attributes.	Supports: System settings are inherited by the application so that customized preferences will not need to be continually reset. For example, color contrast settings enhanced for a low vision user would be preserved by the application.	• The following components meet this criterion: ○ IBM Integration Bus for Distributed Platforms 10.0.0.6: Component provides a mode of operation that allows user preferences for platform settings for color, contrast, font type, font size, and focus cursor. ▪ Single Package (Development Toolkit component)

		▪ Integration Bus Single Package (Runtime component)
(h) When animation is displayed, the information shall be displayable in at least one non-animated presentation mode at the option of the user.	Not Applicable	• The following components do not apply to this criterion: ○ IBM Integration Bus for Distributed Platforms 10.0.0.6: No animation. ▪ Single Package (Development Toolkit component) ▪ Integration Bus Single Package (Runtime component)
(i) Color coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.	Supports: Color is used only as an enhancement, and an alternate means to convey information or indicate an action is available to users with visual impairments.	• The following components meet this criterion: ○ IBM Integration Bus for Distributed Platforms 10.0.0.6: Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. ▪ Single Package (Development Toolkit component) ▪ Integration Bus Single Package (Runtime component)
(j) When a product permits a user to adjust color and contrast settings, a variety of color	Not Applicable	• The following components do not apply to this criterion:

<table>
<tr><td>selections capable of producing a range of contrast levels shall be provided.</td><td></td><td>IBM Integration Bus for Distributed Platforms 10.0.0.6: Color customization is not supported.
Single Package (Development Toolkit component)
Integration Bus Single Package (Runtime component)</td></tr>
<tr><td>(k) Software shall not use flashing or blinking text, objects, or other elements having a flash or blink frequency greater than 2 Hz and lower than 55 Hz.</td><td>Supports:
The use of blinking text, objects or elements has been avoided, reducing risk of seizures for users with photosensitive epilepsy.</td><td>The following components meet this criterion:
IBM Integration Bus for Distributed Platforms 10.0.0.6: User interface does not contain anything that flashes more than three times in any one second period.
Single Package (Development Toolkit component)
Integration Bus Single Package (Runtime component)</td></tr>
<tr><td>(l) When electronic forms are used, the form shall allow people using Assistive Technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.</td><td>Not Applicable</td><td>The following components do not apply to this criterion:
IBM Integration Bus for Distributed Platforms 10.0.0.6: No forms.
Single Package (Development Toolkit component)</td></tr>
</table>

		▪ Integration Bus Single Package (Runtime component)
1194.22 Web-based Internet information and applications		
Criteria	**Supporting Features**	**Remarks and Explanations**
(a) A text equivalent for every non-text element shall be provided (e.g., via "alt", "longdesc", or in element content).	Supports: The application design provides text equivalents for all images so that assistive technology can describe those images to blind users.	• The following components meet this criterion: ○ IBM Integration Bus for Distributed Platforms 10.0.0.6: ▪ Web User Interface - All non-text content that is presented to the user has a text alternative that serves the equivalent purpose.
(b) Equivalent alternatives for any multimedia presentation shall be synchronized with the presentation.	Not Applicable	• The following components do not apply to this criterion: ○ IBM Integration Bus for Distributed Platforms 10.0.0.6: ▪ Web User Interface - No prerecorded audio. No time-based media or prerecorded video. No live multimedia.
(c) Web pages shall be designed so that all information conveyed with color is also available without color, for example from context or markup.	Supports: Color is used only as an enhancement, and an alternate means to convey information or indicate an action is	• The following components meet this criterion: ○ IBM Integration Bus for Distributed Platforms 10.0.0.6: ▪ Web User Interface - Color is not used as the

	available to users with visual impairments.	only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.
(d) Documents shall be organized so they are readable without requiring an associated style sheet.	Supports: Web page content is readable without the use of a pre-defined style sheet, allowing low vision users to enable their own style sheets that enhance their viewing preferences.	• The following components meet this criterion: ○ IBM Integration Bus for Distributed Platforms 10.0.0.6: ▪ Web User Interface - Web pages are readable without requiring style sheets.
(e) Redundant text links shall be provided for each active region of a server-side image map.	Not Applicable	• The following components do not apply to this criterion: ○ IBM Integration Bus for Distributed Platforms 10.0.0.6: ▪ Web User Interface - No image maps.
(f) Client-side image maps shall be provided instead of server-side image maps except where the regions cannot be defined with an available geometric shape.	Not Applicable	• The following components do not apply to this criterion: ○ IBM Integration Bus for Distributed Platforms 10.0.0.6: ▪ Web User Interface - No image maps.
(g) Row and column headers shall be identified for data tables.	Supports: The application is designed to identify row and column headers for blind users so the location and context of	• The following components meet this criterion: ○ IBM Integration Bus for Distributed Platforms 10.0.0.6:

	the table cell are clear and can be communicated by a screen reader.	▪ Web User Interface - Table cells and relationships between cells can be programmatically determined.
(h) Markup shall be used to associate data cells and header cells for data tables that have two or more logical levels of row or column headers.	Supports: Complex tables are designed with additional attributes for blind users so the location and context of the table cell are clear and can be communicated by a screen reader.	• The following components meet this criterion: ○ IBM Integration Bus for Distributed Platforms 10.0.0.6: ▪ Web User Interface - Table cells and relationships between cells can be programmatically determined.
(i) Frames shall be titled with text that facilitates frame identification and navigation.	Not Applicable	• The following components do not apply to this criterion: ○ IBM Integration Bus for Distributed Platforms 10.0.0.6: ▪ Web User Interface - No frames.
(j) Pages shall be designed to avoid causing the screen to flicker with a frequency greater than 2 Hz and lower than 55 Hz.	Supports: The use of blinking text, objects or elements has been avoided, reducing risk of seizures for users with photosensitive epilepsy.	• The following components meet this criterion: ○ IBM Integration Bus for Distributed Platforms 10.0.0.6: ▪ Web User Interface - Web pages do not contain anything that flashes more than three

		times in any one second period.
(k) A text-only page, with equivalent information or functionality, shall be provided to make a web site comply with the provisions of this part, when compliance cannot be accomplished in any other way. The content of the text-only page shall be updated whenever the primary page changes.	Not Applicable	• The following components do not apply to this criterion: ○ IBM Integration Bus for Distributed Platforms 10.0.0.6: ▪ Web User Interface - Already accessible. Text-only page not required. However, all functionality in the Web User Interface is also available by alternative routes which are accessible i.e. the command line and the Development Toolkit.
(l) When pages utilize scripting languages to display content, or to create interface elements, the information provided by the script shall be identified with functional text that can be read by Assistive Technology.	Not Applicable	• The following components do not apply to this criterion: ○ IBM Integration Bus for Distributed Platforms 10.0.0.6: ▪ Web User Interface - No scripts.
(m) When a web page requires that an applet, plug-in or other application be present on the client system to interpret page content, the page must provide a link to a plug-in or applet that complies with §1194.21(a) through (l).	Not Applicable	• The following components do not apply to this criterion: ○ IBM Integration Bus for Distributed Platforms 10.0.0.6: ▪ Web User Interface - No applets, plug-ins, or non-HTML content.

(n) When electronic forms are designed to be completed on-line, the form shall allow people using Assistive Technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.	Not Applicable	• The following components do not apply to this criterion: ○ IBM Integration Bus for Distributed Platforms 10.0.0.6: ▪ Web User Interface - No forms.
(o) A method shall be provided that permits users to skip repetitive navigation links.	Supports: Web pages are designed so that repetitive navigation links can be skipping over, and blind users can navigate to the main content of the page more easily.	• The following components meet this criterion: ○ IBM Integration Bus for Distributed Platforms 10.0.0.6: ▪ Web User Interface - Methods are provided for skipping over navigation links to get to the main content of page. Note: This product uses WAI-ARIA to comply with this checkpoint. WAI-ARIA has been supported since Firefox 3.6 and JAWS 12.
(p) When a timed response is required, the user shall be alerted and given sufficient time to indicate more time is required.	Not Applicable	• The following components do not apply to this criterion: ○ IBM Integration Bus for Distributed Platforms 10.0.0.6: ▪ Web User Interface - No time limits.

1194.31 Functional Performance Criteria		
Criteria	**Supporting Features**	**Remarks and Explanations**

(a) At least one mode of operation and information retrieval that does not require user vision shall be provided, or support for Assistive Technology used by people who are blind or visually impaired shall be provided.	Supports:
	See the following for supporting features:
	- 1194.21 a, b, c, d, e, f, h, i, l
	- 1194.22 all
	- 1194.23 k1, k4
	- 1194.24 d
	- 1194.25 a, b, c, e, f, g
	- 1194.26 b, d
		• The following components meet this criterion:
		  ○ IBM Integration Bus for Distributed Platforms 10.0.0.6:
		    ▪ Single Package (Development Toolkit component)
		    ▪ Integration Bus Single Package (Runtime component)
		    ▪ Web User Interface

(b) At least one mode of operation and information retrieval that does not require visual acuity greater than 20/70 shall be provided in audio and enlarged print output working together or independently, or support for Assistive Technology used by people what are visually impaired shall be provided.	Supports:
	See the following for supporting features:
	- 1194.21 c, g, i, j, l
	- 1194.22 n
	- 1194.25 h
	- 1194.26 d
		• The following components do not apply to this criterion:
		  ○ IBM Integration Bus for Distributed Platforms 10.0.0.6:
		    ▪ Web User Interface
		• The following components meet this criterion:
		  ○ IBM Integration Bus for Distributed Platforms 10.0.0.6:
		    ▪ Single Package (Development Toolkit component)
		    ▪ Integration Bus Single Package (Runtime component)

(c) At least one mode of operation and information retrieval that does not require user hearing shall be provided, or support	Not Applicable	• The following components do not apply to this criterion:

for Assistive Technology used by people who are deaf or hard of hearing shall be provided.		◦ IBM Integration Bus for Distributed Platforms 10.0.0.6: ▪ Single Package (Development Toolkit component) ▪ Integration Bus Single Package (Runtime component) ▪ Web User Interface
(d) Where audio information is important for the use of the product, at least one mode of operation and information retrieval shall be provided in an enhanced auditory fashion, or support for assistive hearing devices shall be provided.	Not Applicable	• The following components do not apply to this criterion: ◦ IBM Integration Bus for Distributed Platforms 10.0.0.6: ▪ Single Package (Development Toolkit component) ▪ Integration Bus Single Package (Runtime component) ▪ Web User Interface
(e) At least one mode of operation and information retrieval that does not require user speech shall be provided, or support for Assistive Technology used by people with disabilities shall be provided.	Not Applicable	This is not a speech product.
(f) At least one mode of operation and information retrieval that does not require fine motor control or simultaneous actions and that is operable with limited reach and strength shall be provided.	Supports: See the following for supporting features: - 1194.21 a, b - 1194.22 l, p - 1194.23 k1, k2, k3	• The following components do not apply to this criterion: ◦ IBM Integration Bus for Distributed Platforms 10.0.0.6: ▪ Web User Interface • The following components meet this criterion:

	- 1194.25 b, j1, j2, j3, j4 - 1194.26 d	◦ IBM Integration Bus for Distributed Platforms 10.0.0.6: ▪ Single Package (Development Toolkit component) ▪ Integration Bus Single Package (Runtime component)
1194.41 Information, documentation, and support		
Criteria	**Supporting Features**	**Remarks and Explanations**
(a) Product support documentation provided to end-users shall be made available in alternate formats upon request, at no additional charge.	Supports: Product support documentation is provided in at least one accessible format.	• The following components meet this criterion: ◦ IBM Integration Bus for Distributed Platforms 10.0.0.6: ▪ Documentation for the Web - All images include text alternative No image maps No scripts. Captions are provided for prerecorded audio content in synchronized media, except when the media is a media alternative for text and is clearly labeled as such. No applets, plug-ins, or non-HTML content. An alternative for time-based media or audio description of the prerecorded video content is provided for

			synchronized media, except when the media is a media alternative for text and is clearly labeled as such. An embedded video is included but all information conveyed in the video is fully accessible in the text of the documentation. Accessible subtitles have also been added to the video. No time limits. Captions for live multimedia are provided. Web pages do not contain anything that flashes more than three times in any one second period. Form element labels can be programmatically determined. Note: This product uses WAI-ARIA to comply with this checkpoint. WAI-ARIA has been supported since Firefox 3.6 and JAWS 12. Only one form is included (feedback form) which is appropriately marked with label elements for accessibility. Table cells

		and relationships between cells can be programmatically determined. Methods are provided for skipping over navigation links to get to main content of page. Note: This product uses WAI-ARIA to comply with this checkpoint. WAI-ARIA has been supported since Firefox 3.6 and JAWS 12. Web pages are readable without requiring style sheets. A title and an accessible frame source are provided for each frame. Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. Already accessible. Text-only page not required.
(b) End-users shall have access to a description of the accessibility and compatibility features of products in	Supports: Documentation includes a description of accessibility and compatibility features that make it easier for people with disabilities to use the product.	• The following components meet this criterion: ○ IBM Integration Bus for Distributed Platforms 10.0.0.6:

alternate formats or alternate methods upon request, at no additional charge.	Those descriptions are available in alternate formats upon request.	▪ Documentation for the Web - Documentation is provided on all accessibility features including keyboard access. This can be found in Knowledge Center.
(c) Support services for products shall accommodate the communication needs of end-users with disabilities.	Supports: Operating systems provide accessibility features that allow disabled users to customize their preferences. This application preserves those accessibility user preference settings. For example, if Sticky Keys option is selected by a mobility-impaired user, this option will continue to be activated when used with this application. In addition to standard IBM help desk and support Web sites, IBM has established a TTY telephone service for use by deaf or hard of hearing customers to access sales and support services.	
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VPAT for IBM SPSS Modeler Server 18.0

VPAT for IBM SPSS Modeler Server 18.0	
VPAT comments:	For a detailed description of the parent features and benefits, please refer to the following URL: http://www-01.ibm.com/software/analytics/spss/products/modeler/ The product's IBM Knowledge Center documentation is hosted in the IBM Knowledge Center - Hosted Edition service. To request the current accessibility status for the IBM Knowledge Center - Hosted Edition service, visit the IBM Product Accessibility information web page (https://www-03.ibm.com/research/accessibility/requests/accvpat.nsf/bidxjs?OpenForm) and select the entry for IBM Knowledge Center - Hosted Edition.

VPAT Summary

Criteria	Status	Remarks and Explanations
1194.21 Software Applications and Operating Systems	Supports with exceptions	Refer to Section 1194.21 in VPAT Details section below.
1194.22 Web-based Internet information and applications	Supports	Refer to Section 1194.22 in VPAT Details section below.
1194.23 Telecommunications Products	Not Applicable	Not Applicable
1194.24 Video and Multi-Media Products	Not Applicable	Not Applicable
1194.25 Self-Contained, Closed Products	Not Applicable	Not Applicable
1194.26 Desktop and Portable Computers	Not Applicable	Not Applicable
1194.31 Functional Performance Criteria	Supports with exceptions	Refer to Section 1194.31 in VPAT Details section below.

1194.41 Information, documentation, and support	Supports with exceptions	Refer to Section 1194.41 in VPAT Details section below.

VPAT Details

1194.21 Software Applications and Operating Systems

Criteria	**Supporting Features**	**Remarks and Explanations**
(a) When software is designed to run on a system that has a keyboard, product functions shall be executable from a keyboard where the function itself or the result of performing a function can be discerned textually.	Supports: A keyboard can be used to achieve all tasks in the application, allowing blind and mobility-impaired users to access information without the use of the mouse.	• The following components meet this criterion: ○ IBM SPSS Deployment Manager 8.0: Keyboard equivalents are provided for all actions. ▪ Deployment Manager for Modeler Server ▪ Installer: Silent Install
(b) Applications shall not disrupt or disable activated features of other products that are identified as accessibility features, where those features are developed and documented according to industry standards. Applications also shall not disrupt or disable activated features of any operating system that are identified as accessibility features where the application programming interface for those accessibility features has been documented by the manufacturer of the operating system and is available to the product developer.	Supports: Operating systems provide accessibility features that allow disabled users to customize their preferences. This application preserves those accessibility user preference settings. For example, if Sticky Keys option is selected by a mobility-impaired user, this option will continue to be activated when used with this application.	• The following components meet this criterion: ○ IBM SPSS Deployment Manager 8.0: Does not interfere with keyboard accessibility features provided by the operating system. ▪ Deployment Manager for Modeler Server ▪ Installer: Silent Install
(c) A well-defined on-screen indication of the current focus shall be provided that moves among interactive interface elements	Does not support	• The following components do not apply to this criterion:

as the input focus changes. The focus shall be programmatically exposed so that Assistive Technology can track focus and focus changes.		○ IBM SPSS Deployment Manager 8.0: ▪ Installer: Silent Install - The user interface is implemented via commands only. There are no interactive objects. • The following components do not meet this criterion: ○ IBM SPSS Deployment Manager 8.0: ▪ Deployment Manager for Modeler Server - A visual focus indicator that moves among interactive objects as the input focus changes and is programmatically exposed to assistive technology is provided, except for some dialogs that lose focus when its pop up dialog is closed. Pressing Alt+Tab can make them get the focus again.
(d) Sufficient information about a user interface element including the identity, operation and state of the element shall be available to Assistive Technology. When an image represents a program element, the	Supports: This software application allows a screen reader to describe the user interface environment and controls to a blind user. For example, if you tab through a form and find a radio button, the user would be able to determine it	• The following components do not apply to this criterion: ○ IBM SPSS Deployment Manager 8.0: ▪ Installer: Silent Install - The command line interface has no user

information conveyed by the image must also be available in text.	is a radio button and the current selection status of the button.	interface objects. The command line interface has no controls, objects, icons, or images. • The following components meet this criterion: ○ IBM SPSS Deployment Manager 8.0: ▪ Deployment Manager for Modeler Server - Semantic information is provided about user interface objects. Labels are associated with controls, objects, icons and images. The meaning of images is consistent throughout the application.
(e) When bitmap images are used to identify controls, status indicators, or other programmatic elements, the meaning assigned to those images shall be consistent throughout an application's performance.	Supports: The meaning assigned to images used in the application is consistent and unique, minimizing confusion of the context of use for those images.	• The following components do not apply to this criterion: ○ IBM SPSS Deployment Manager 8.0: ▪ Installer: Silent Install - The command line interface has no controls, objects, icons, or images. • The following components meet this criterion: ○ IBM SPSS Deployment Manager 8.0: ▪ Deployment Manager for Modeler Server - Labels

		are associated with controls, objects, icons and images. The meaning of images is consistent throughout the application.
(f) Textual information shall be provided through operating system functions for displaying text. The minimum information that shall be made available is text content, text input caret location, and text attributes.	Supports: Text information is accessible so assistive technologies can communicate content, attributes and caret location to blind users.	• The following components meet this criterion: ○ IBM SPSS Deployment Manager 8.0: ▪ Deployment Manager for Modeler Server - Text is provided through standard system function calls or through an API (application programming interface) which supports interaction with assistive technology. ▪ Installer: Silent Install - The silent installation application outputs some information to the command prompt window but most information is written to a log text file.
(g) Applications shall not override user selected contrast and color selections and other individual display attributes.	Supports with exceptions	• The following components meet this criterion: ○ IBM SPSS Deployment Manager 8.0:

		▪ Installer: Silent Install - Systems settings are supported for high contrast for all user interface controls and client area content. System settings are inherited for font, size, and color for all elements of the user interface. • The following components meet this criterion with exceptions: o IBM SPSS Deployment Manager 8.0: ▪ Deployment Manager for Modeler Server - Systems settings are supported for high contrast for all user interface controls and client area content. System settings are not inherited for font, size, and color for all elements of the user interface.
(h) When animation is displayed, the information shall be displayable in at least one non-animated presentation mode at the option of the user.	Not Applicable	• The following components do not apply to this criterion: o IBM SPSS Deployment Manager 8.0: No animation. ▪ Deployment Manager for Modeler Server

		▪ Installer: Silent Install
(i) Color coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.	Supports: Color is used only as an enhancement, and an alternate means to convey information or indicate an action is available to users with visual impairments.	• The following components meet this criterion: ○ IBM SPSS Deployment Manager 8.0: Color is only used as an enhancement, not as the only way to convey information or indicate an action. ▪ Deployment Manager for Modeler Server ▪ Installer: Silent Install
(j) When a product permits a user to adjust color and contrast settings, a variety of color selections capable of producing a range of contrast levels shall be provided.	Not Applicable	• The following components do not apply to this criterion: ○ IBM SPSS Deployment Manager 8.0: Color customization is not supported. ▪ Deployment Manager for Modeler Server ▪ Installer: Silent Install
(k) Software shall not use flashing or blinking text, objects, or other elements having a flash or blink frequency greater than 2 Hz and lower than 55 Hz.	Supports: The use of blinking text, objects or elements has been avoided, reducing risk of seizures for users with photosensitive epilepsy.	• The following components meet this criterion: ○ IBM SPSS Deployment Manager 8.0: Does not use flashing or blinking text, objects, or other elements having a flash or blink frequency greater than 2 Hz and lower than 55 Hz. ▪ Deployment Manager for Modeler Server ▪ Installer: Silent Install

(l) When electronic forms are used, the form shall allow people using Assistive Technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.	Supports:
	The application design allows assistive technology access to information, field elements, and functionality required to complete and submit forms.
		• The following components meet this criterion:
		  ○ IBM SPSS Deployment Manager 8.0:
		    ▪ Deployment Manager for Modeler Server - Form fields allow assistive technology to access the information, field elements and functionality required for completion and submission of the form, including all directions and cues.
		    ▪ Installer: Silent Install - The silent installation application uses a response file that contains the settings used during installation. The response file can be edited using a text editor. It contains comments and recommended values for all settings.

1194.22 Web-based Internet information and applications		
Criteria	**Supporting Features**	**Remarks and Explanations**
(a) A text equivalent for every non-text element shall be provided (e.g., via "alt", "longdesc", or in element content).	Supports: The application design provides text equivalents for all images so that	• The following components meet this criterion: ○ IBM Information Center 3.6.2, 3.6.2.1:

	assistive technology can describe those images to blind users.	▪ Core Framework User Interface - All non-text content that is presented to the user has a text alternative that serves the equivalent purpose.
(b) Equivalent alternatives for any multimedia presentation shall be synchronized with the presentation.	Not Applicable	• The following components do not apply to this criterion: ○ IBM Information Center 3.6.2, 3.6.2.1: ▪ Core Framework User Interface - No prerecorded audio. No time-based media or prerecorded video. No live multimedia.
(c) Web pages shall be designed so that all information conveyed with color is also available without color, for example from context or markup.	Supports: Color is used only as an enhancement, and an alternate means to convey information or indicate an action is available to users with visual impairments.	• The following components meet this criterion: ○ IBM Information Center 3.6.2, 3.6.2.1: ▪ Core Framework User Interface - Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.

(d) Documents shall be organized so they are readable without requiring an associated style sheet.	Supports: Web page content is readable without the use of a pre-defined style sheet, allowing low vision users to enable their own style sheets that enhance their viewing preferences.	• The following components meet this criterion: ○ IBM Information Center 3.6.2, 3.6.2.1: ▪ Core Framework User Interface - This application relies on CSS in order to render properly and be usable. However, the application provides equivalent facilitation for low-vision users by utilizing the user's system display settings, including high contrast mode. Users may also control the font sizes using the device or browser settings.
(e) Redundant text links shall be provided for each active region of a server-side image map.	Not Applicable	• The following components do not apply to this criterion: ○ IBM Information Center 3.6.2, 3.6.2.1: ▪ Core Framework User Interface - No image maps.
(f) Client-side image maps shall be provided instead of server-side image maps except where the regions cannot be defined with an available geometric shape.	Not Applicable	• The following components do not apply to this criterion: ○ IBM Information Center 3.6.2, 3.6.2.1:

		▪ Core Framework User Interface - No image maps.
(g) Row and column headers shall be identified for data tables.	Supports: The application is designed to identify row and column headers for blind users so the location and context of the table cell are clear and can be communicated by a screen reader.	• The following components meet this criterion: ○ IBM Information Center 3.6.2, 3.6.2.1: ▪ Core Framework User Interface - Table cells and relationships between cells can be programmatically determined.
(h) Markup shall be used to associate data cells and header cells for data tables that have two or more logical levels of row or column headers.	Supports: Complex tables are designed with additional attributes for blind users so the location and context of the table cell are clear and can be communicated by a screen reader.	• The following components meet this criterion: ○ IBM Information Center 3.6.2, 3.6.2.1: ▪ Core Framework User Interface - Table cells and relationships between cells can be programmatically determined.
(i) Frames shall be titled with text that facilitates frame identification and navigation.	Supports: Meaningful text titles are used to describe the purpose of frames so blind users can easily navigate to the desired area.	• The following components meet this criterion: ○ IBM Information Center 3.6.2, 3.6.2.1: ▪ Core Framework User Interface - A title and an accessible frame source

		are provided for each frame.
(j) Pages shall be designed to avoid causing the screen to flicker with a frequency greater than 2 Hz and lower than 55 Hz.	Supports: The use of blinking text, objects or elements has been avoided, reducing risk of seizures for users with photosensitive epilepsy.	• The following components meet this criterion: ○ IBM Information Center 3.6.2, 3.6.2.1: ▪ Core Framework User Interface - Web pages do not contain anything that flashes more than three times in any one second period.
(k) A text-only page, with equivalent information or functionality, shall be provided to make a web site comply with the provisions of this part, when compliance cannot be accomplished in any other way. The content of the text-only page shall be updated whenever the primary page changes.	Not Applicable	• The following components do not apply to this criterion: ○ IBM Information Center 3.6.2, 3.6.2.1: ▪ Core Framework User Interface - Already accessible. Text-only page not required.
(l) When pages utilize scripting languages to display content, or to create interface elements, the information provided by the script shall be identified with functional text that can be read by Assistive Technology.	Supports: Alternatives to scripting language are provided, allowing users access to the content via keyboard and assistive technology.	• The following components meet this criterion: ○ IBM Information Center 3.6.2, 3.6.2.1: ▪ Core Framework User Interface - Scripts are keyboard accessible. If the content affected by scripting is not

		accessible, an alternative is provided.
(m) When a web page requires that an applet, plug-in or other application be present on the client system to interpret page content, the page must provide a link to a plug-in or applet that complies with §1194.21(a) through (l).	Not Applicable	• The following components do not apply to this criterion: ○ IBM Information Center 3.6.2, 3.6.2.1: ▪ Core Framework User Interface - No applets, plug-ins, or non-HTML content.
(n) When electronic forms are designed to be completed on-line, the form shall allow people using Assistive Technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.	Supports: The application design allows assistive technology access to information, field elements, and functionality required to complete and submit forms.	• The following components meet this criterion: ○ IBM Information Center 3.6.2, 3.6.2.1: ▪ Core Framework User Interface - Form element labels can be programmatically determined. Note: This product uses WAI-ARIA to comply with this checkpoint. WAI-ARIA has been supported since Firefox 3.6 and JAWS 12.
(o) A method shall be provided that permits users to skip repetitive navigation links.	Supports: Web pages are designed so that repetitive navigation links can be skipping over, and blind users can navigate to the main content of the page more easily.	• The following components meet this criterion: ○ IBM Information Center 3.6.2, 3.6.2.1: ▪ Core Framework User Interface - Methods are

		provided for skipping over navigation links to get to main content of page. Note: This product uses WAI-ARIA to comply with this checkpoint. WAI-ARIA has been supported since Firefox 3.6 and JAWS 12.
(p) When a timed response is required, the user shall be alerted and given sufficient time to indicate more time is required.	Not Applicable	• The following components do not apply to this criterion: ○ IBM Information Center 3.6.2, 3.6.2.1: ▪ Core Framework User Interface - No time limits.
1194.31 Functional Performance Criteria		
Criteria	**Supporting Features**	**Remarks and Explanations**
(a) At least one mode of operation and information retrieval that does not require user vision shall be provided, or support for Assistive Technology used by people who are blind or visually impaired shall be provided.	Supports with exceptions See the following for supporting features: - 1194.21 a, b, c, d, e, f, h, i, l - 1194.22 all - 1194.23 k1, k4 - 1194.24 d - 1194.25 a, b, c, e, f, g - 1194.26 b, d	• The following components meet this criterion: ○ IBM SPSS Deployment Manager 8.0: ▪ Installer: Silent Install ○ IBM Information Center 3.6.2, 3.6.2.1: ▪ Core Framework User Interface • The following components meet this criterion with exceptions:

		○ IBM SPSS Deployment Manager 8.0: ▪ Deployment Manager for Modeler Server
(b) At least one mode of operation and information retrieval that does not require visual acuity greater than 20/70 shall be provided in audio and enlarged print output working together or independently, or support for Assistive Technology used by people what are visually impaired shall be provided.	Supports with exceptions See the following for supporting features: - 1194.21 c, g, i, j, l - 1194.22 n - 1194.25 h - 1194.26 d	• The following components meet this criterion: ○ IBM SPSS Deployment Manager 8.0: ▪ Installer: Silent Install ○ IBM Information Center 3.6.2, 3.6.2.1: ▪ Core Framework User Interface • The following components meet this criterion with exceptions: ○ IBM SPSS Deployment Manager 8.0: ▪ Deployment Manager for Modeler Server
(c) At least one mode of operation and information retrieval that does not require user hearing shall be provided, or support for Assistive Technology used by people who are deaf or hard of hearing shall be provided.	Not Applicable	• The following components do not apply to this criterion: ○ IBM SPSS Deployment Manager 8.0: ▪ Deployment Manager for Modeler Server ▪ Installer: Silent Install ○ IBM Information Center 3.6.2, 3.6.2.1: ▪ Core Framework User Interface

(d) Where audio information is important for the use of the product, at least one mode of operation and information retrieval shall be provided in an enhanced auditory fashion, or support for assistive hearing devices shall be provided.	Not Applicable	• The following components do not apply to this criterion: ○ IBM SPSS Deployment Manager 8.0: ▪ Deployment Manager for Modeler Server ▪ Installer: Silent Install ○ IBM Information Center 3.6.2, 3.6.2.1: ▪ Core Framework User Interface
(e) At least one mode of operation and information retrieval that does not require user speech shall be provided, or support for Assistive Technology used by people with disabilities shall be provided.	Not Applicable	This is not a speech product.
(f) At least one mode of operation and information retrieval that does not require fine motor control or simultaneous actions and that is operable with limited reach and strength shall be provided.	Supports: See the following for supporting features: - 1194.21 a, b - 1194.22 l, p - 1194.23 k1, k2, k3 - 1194.25 b, j1, j2, j3, j4 - 1194.26 d	• The following components meet this criterion: ○ IBM SPSS Deployment Manager 8.0: ▪ Deployment Manager for Modeler Server ▪ Installer: Silent Install ○ IBM Information Center 3.6.2, 3.6.2.1: ▪ Core Framework User Interface

1194.41 Information, documentation, and support		
Criteria	**Supporting Features**	**Remarks and Explanations**
(a) Product support documentation provided to end-users shall be made available in alternate formats upon request, at no additional charge.	Supports with exceptions	• The following components meet this criterion: All non-text content that is presented to the user has a text alternative that serves the equivalent purpose. No image maps. No prerecorded audio. No applets, plug-ins, or non-HTML content. No time-based media or prerecorded video. No time limits. No live multimedia. Web pages do not contain anything that flashes more than three times in any one second period. Table cells and relationships between cells can be programmatically determined. A title and an accessible frame source are provided for each frame. Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. Already accessible. Text-only page not required. ○ IBM SPSS Modeler Server 18.0: ▪ Product Documentation - No scripts. No forms. Methods are provided for skipping over navigation links to get to the main content of the page. Note: This product uses WAI-ARIA to comply with this

		checkpoint. WAI-ARIA has been supported since Firefox 3.6 and JAWS 12. This application relies on CSS in order to render properly and be usable. The application provides equivalent facilitation for low-vision users by utilizing the user's system display settings, including high contrast mode. Users may also control the font sizes using the device or browser settings. ○ IBM Information Center 3.6.2, 3.6.2.1: ▪ Core Framework Documentation - Form element labels can be programmatically determined. Note: This product uses WAI-ARIA to comply with this checkpoint. WAI-ARIA has been supported since Firefox 3.6 and JAWS 12. Web pages are readable without requiring style sheets. Scripts are keyboard accessible. If the content affected by

		scripting is not accessible, an alternative is provided. Methods are provided for skipping over navigation links to get to main content of page. Note: This product uses WAI-ARIA to comply with this checkpoint. WAI-ARIA has been supported since Firefox 3.6 and JAWS 12.
		• The following components meet this criterion with exceptions:
		  ○ IBM SPSS Deployment Manager 8.0:
		    ▪ Deployment Manager Help - Text alternatives are not provided for all visible non-text content. No image maps. No prerecorded audio. No time-based media or prerecorded video. No live multimedia. Form element labels can be programmatically determined. Table cells and relationships between cells can be programmatically determined. Web pages

		are not readable without requiring style sheets and equivalent facilitation is not provided. Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. Scripts are keyboard accessible. If the content affected by scripting is not accessible, an alternative is provided. A link is provided to a directly accessible applet, plug-in or other application. Alternate content is provided for those applets, plug-ins or other applications that are not directly accessible. No time limits. Web pages do not contain anything that flashes more than three times in any one second period. There is a method for skipping to main content and bypassing blocks of content that are

		repeated on multiple Web pages. However, WAI-ARIA techniques have not been implemented. A title and an accessible frame source are provided for each frame. A text-only page cannot provide equivalent functionality for a Web application and is not provided.
(b) End-users shall have access to a description of the accessibility and compatibility features of products in alternate formats or alternate methods upon request, at no additional charge.	Supports: Documentation includes a description of accessibility and compatibility features that make it easier for people with disabilities to use the product. Those descriptions are available in alternate formats upon request.	• The following components meet this criterion: Documentation is provided on all accessibility features including keyboard access. ○ IBM SPSS Deployment Manager 8.0: ▪ Deployment Manager Help ○ IBM SPSS Modeler Server 18.0: ▪ Product Documentation ○ IBM Information Center 3.6.2, 3.6.2.1: ▪ Core Framework Documentation
(c) Support services for products shall accommodate the communication needs of end-users with disabilities.	Supports: Operating systems provide accessibility features that allow disabled users to customize their preferences. This application preserves those accessibility user preference settings. For example, if	

	Sticky Keys option is selected by a mobility-impaired user, this option will continue to be activated when used with this application. In addition to standard IBM help desk and support Web sites, IBM has established a TTY telephone service for use by deaf or hard of hearing customers to access sales and support services.	

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VPAT for WebSphere Service Registry & Repository v8.5

06/22/2017 05:00:28 EDT
State of Arkansas

VPAT for WebSphere Service Registry & Repository v8.5	
VPAT comments:	For a detailed description of the parent features and benefits, please refer to the following URL: http://www.ibm.com/software/products/en/wsrr

VPAT Summary

Criteria	Status	Remarks and Explanations
Section 1194.21 Software Applications and Operating Systems	Supports	Refer to Section 1194.21 in VPAT Details section below.
Section 1194.22 Web-based Internet information & applications	Supports	Refer to Section 1194.22 in VPAT Details section below.
Section 1194.23 Telecommunications Products	Not applicable	Not applicable
Section 1194.24 Video and Multi-media Products	Not applicable	Not applicable
Section 1194.25 Self-Contained, Closed Products	Not applicable	Not applicable
Section 1194.26 Desktop and Portable Computers	Not applicable	Not applicable
Section 1194.31 Functional Performance Criteria	Supports	Refer to Section 1194.31 in VPAT Details section below.
Section 1194.41 Information, Documentation, and Support	Supports	Refer to Section 1194.41 in VPAT Details section below.

VPAT Details

Section 1194.21 Software Applications and Operating Systems - Detail

Criteria	Supporting Features	Remarks and Explanations
(a) When software is designed to run on a system that has a keyboard, product functions shall be executable from a keyboard where the function itself or the result of performing a function can be discerned textually.	Supports: A keyboard can be used to achieve all tasks in the application, allowing blind and mobility-impaired users to access information without the use of the mouse.	The following component meets this criterion: - WebSphere Service Registry & Repository v8.5: - Studio - The software presents primarily in a graphical form, and is not suitable for blind/low vision users. However all functionality is available in a standard editor.
(b) Applications shall not disrupt or disable activated features of other products that are identified as accessibility features, where those features are developed and documented according to industry standards. Applications also shall not disrupt or disable activated features of any operating system that are identified as accessibility features where the application programming interface for those accessibility features has been documented by the manufacturer of the operating system and is available to the product developer.	Supports: Operating systems provide accessibility features that allow disabled users to customize their preferences. This application preserves those accessibility user preference settings. For example, if Sticky Keys option is selected by a mobility-impaired user, this option will continue to be activated when used with this application.	The following component meets this criterion: - WebSphere Service Registry & Repository: - Studio - No interference.
(c) A well-defined on-screen indication of the current focus shall be provided that moves among interactive interface elements as the input focus changes. The focus shall be programmatically exposed so that Assistive Technology can track focus and focus changes.	Not applicable	The following component does not apply to this criterion: - WebSphere Service Registry & Repository: - Studio - The software presents primarily in a graphical form, and is not suitable for blind/low vision users. However this functionality is available in a standard editor.
(d) Sufficient information about a user interface element including the identity, operation and state of the element shall be available to Assistive Technology. When an image represents a program element, the information conveyed by the image must also be available in text.	Not applicable	The following component does not apply to this criterion: - WebSphere Service Registry & Repository: - Studio - The software presents primarily in a graphical form, and is not suitable for blind/low vision users. However this functionality is available in a standard editor.
(e) When bitmap images are used to identify controls, status indicators, or other programmatic elements, the meaning assigned to those images shall be consistent throughout an application's performance.	Not applicable	The following component does not apply to this criterion: - WebSphere Service Registry & Repository: - Studio - The software presents primarily in a graphical form, and is not suitable for blind/low

Criteria	Supporting Features	Remarks and Explanations
		vision users. However this functionality is available in a standard editor.
(f) Textual information shall be provided through operating system functions for displaying text. The minimum information that shall be made available is text content, text input caret location, and text attributes.	Supports: Text information is accessible so assistive technologies can communicate content, attributes and caret location to blind users.	The following component meets this criterion: - WebSphere Service Registry & Repository: - Studio - Using Eclipse environment.
(g) Applications shall not override user selected contrast and color selections and other individual display attributes.	Supports: System settings are inherited by the application so that customized preferences will not need to be continually reset. For example, color contrast settings enhanced for a low vision user would be preserved by the application.	The following component meets this criterion: - WebSphere Service Registry & Repository: - Studio - Operating system settings used.
(h) When animation is displayed, the information shall be displayable in at least one non-animated presentation mode at the option of the user.	Not applicable	The following component does not apply to this criterion: - WebSphere Service Registry & Repository: - Studio - No animation used.
(i) Color coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.	Supports: Color is used only as an enhancement, and an alternate means to convey information or indicate an action is available to users with visual impairments.	The following component meets this criterion: - WebSphere Service Registry & Repository: - Studio - No special use of color.
(j) When a product permits a user to adjust color and contrast settings, a variety of color selections capable of producing a range of contrast levels shall be provided.	Not applicable	The following component does not apply to this criterion: - WebSphere Service Registry & Repository: - Studio - No color customization.
(k) Software shall not use flashing or blinking text, objects, or other elements having a flash or blink frequency greater than 2 Hz and lower than 55 Hz.	Supports: The use of blinking text, objects or elements has been avoided, reducing risk of seizures for users with photosensitive epilepsy.	The following component meets this criterion: - WebSphere Service Registry & Repository: - Studio - No flashing/blinking objects.
(l) When electronic forms are used, the form shall allow people using Assistive Technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.	Not applicable	The following component does not apply to this criterion: - WebSphere Service Registry & Repository: - Studio - The software presents primarily in a graphical form, and is not suitable for blind/low vision users. However this functionality is available in a standard editor.

Section 1194.22 Web-based Internet information and applications - Detail

Criteria	Supporting Features	Remarks and Explanations
(a) A text equivalent for every non-text element shall be provided (e.g., via "alt", "longdesc", or in element content).	Supports: The application design provides text equivalents for all images so that assistive technology can describe those images to blind users.	The following component meets this criterion: - WebSphere Service Registry & Repository: - Web UI and Dashboard - Images have text alternatives Although graphical/pictorial views are accessible, all data is available in textual format. For the Dashboard UI: The content of graphical widgets in Business Space is hidden from the screen reader, as the content is available in accessible form in the Details widget.
(b) Equivalent alternatives for any multimedia presentation shall be synchronized with the presentation.	Not applicable	The following component does not apply to this criterion: - WebSphere Service Registry & Repository: - Web UI and Dashboard - No multimedia used.
(c) Web pages shall be designed so that all information conveyed with color is also available without color, for example from context or markup.	Supports: Color is used only as an enhancement, and an alternate means to convey information or indicate an action is available to users with visual impairments.	The following component meets this criterion: - WebSphere Service Registry & Repository: - Web UI and Dashboard - Information can be determined without color.
(d) Documents shall be organized so they are	Supports:	The following component meets this criterion:

Criteria	Supporting Features	Remarks and Explanations
readable without requiring an associated style sheet.	Web page content is readable without the use of a pre-defined style sheet, allowing low vision users to enable their own style sheets that enhance their viewing preferences.	- WebSphere Service Registry & Repository: - Web UI and Dashboard - Readable without stylesheets For the Dashboard UI: The dashboard makes use of CSS for styling. Some of the CSS styling used in the Dashboard UI is specifically to provide a usable experience for low-vision users. This has been tested in high-contrast mode, and works.
(e) Redundant text links shall be provided for each active region of a server-side image map.	Not applicable	The following component does not apply to this criterion: - WebSphere Service Registry & Repository: - Web UI and Dashboard - No image maps.
(f) Client-side image maps shall be provided instead of server-side image maps except where the regions cannot be defined with an available geometric shape.	Not applicable	The following component does not apply to this criterion: - WebSphere Service Registry & Repository: - Web UI and Dashboard - No image maps.
(g) Row and column headers shall be identified for data tables.	Supports: The application is designed to identify row and column headers for blind users so the location and context of the table cell are clear and can be communicated by a screen reader.	The following component meets this criterion: - WebSphere Service Registry & Repository: - Web UI and Dashboard - Can be determined. For the Dashboard UI: This product uses WAI-ARIA to comply with this checkpoint. WAI-ARIA is supported using Firefox version 3.6 or later and JAWS version 12 or later.
(h) Markup shall be used to associate data cells and header cells for data tables that have two or more logical levels of row or column headers.	Supports: Complex tables are designed with additional attributes for blind users so the location and context of the table cell are clear and can be communicated by a screen reader.	The following component meets this criterion: - WebSphere Service Registry & Repository: - Web UI and Dashboard - Can be determined. For the Dashboard UI: This product uses WAI-ARIA to comply with this checkpoint. WAI-ARIA is supported using Firefox version 3.6 or later and JAWS version 12 or later.
(i) Frames shall be titled with text that facilitates frame identification and navigation.	Supports: Meaningful text titles are used to describe the purpose of frames so blind users can easily navigate to the desired area.	The following component meets this criterion: - WebSphere Service Registry & Repository: - Web UI and Dashboard - Provided
(j) Pages shall be designed to avoid causing the screen to flicker with a frequency greater than 2 Hz and lower than 55 Hz.	Not applicable	The following component does not apply to this criterion: - WebSphere Service Registry & Repository: - Web UI and Dashboard - No flashing content.
(k) A text-only page, with equivalent information or functionality, shall be provided to make a web site comply with the provisions of this part, when compliance cannot be accomplished in any other way. The content of the text-only page shall be updated whenever the primary page changes.	Supports: When necessary, the application has been designed with text-only pages to communicate equivalent information to disabled users.	The following component does not apply to this criterion: - WebSphere Service Registry & Repository: - Web UI and Dashboard - Graph view is not accessible but users can use tabular view instead. For the Dashboard UI: Graphical widgets are not accessible, but users can use the details widget to view the information instead.
(l) When pages utilize scripting languages to display content, or to create interface elements, the information provided by the script shall be identified with functional text that can be read by Assistive Technology.	Supports: Alternatives to scripting language are provided, allowing users access to the content via keyboard and assistive technology.	The following component meets this criterion: - WebSphere Service Registry & Repository: - Web UI and Dashboard - Scripts and Dojo widgets are keyboard accessible . Firefox v3.6 or above must be used as a browser. For the Dashboard UI: This product uses WAI-ARIA to comply with this checkpoint. WAI-ARIA is supported using Firefox version 3.6 or later and JAWS version 12 or later.
(m) When a web page requires that an applet, plug-in or other application be present on the client system to interpret page content, the page must provide a link to a plug-in or applet that complies with §1194.21(a) through (l).	Not applicable	The following component does not apply to this criterion: - WebSphere Service Registry & Repository: - Web UI and Dashboard - Applets and plugins not used.
(n) When electronic forms are designed to be completed on-line, the form shall allow people using	Supports: The application design allows assistive	The following component meets this criterion:

Criteria	Supporting Features	Remarks and Explanations
Assistive Technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.	technology access to information, field elements, and functionality required to complete and submit forms.	- WebSphere Service Registry & Repository: - Web UI and Dashboard - Labels can be determined. For the Dashboard UI: This product uses WAI-ARIA to comply with this checkpoint. WAI-ARIA is supported using Firefox version 3.6 or later and JAWS version 12 or later.
(o) A method shall be provided that permits users to skip repetitive navigation links.	Supports: Web pages are designed so that repetitive navigation links can be skipping over, and blind users can navigate to the main content of the page more easily.	The following component meets this criterion: - WebSphere Service Registry & Repository: - Web UI and Dashboard - Provided. For the Dashboard UI: This product uses WAI-ARIA landmarks to comply with this checkpoint. WAI-ARIA landmarks are supported by Firefox version 3.6 or later and JAWS 12 version or later.
(p) When a timed response is required, the user shall be alerted and given sufficient time to indicate more time is required.	Not applicable	The following component does not apply to this criterion: - WebSphere Service Registry & Repository: - Web UI and Dashboard - There are no time based settings to consider in either UI.

Section 1194.31 Functional Performance - Detail

Criteria	Supporting Features	Remarks and Explanations
(a) At least one mode of operation and information retrieval that does not require user vision shall be provided, or support for Assistive Technology used by people who are blind or visually impaired shall be provided.	Supports: See the following for supporting features: - 1194.21 a, b, c, d, e, f, h, i, l - 1194.22 all	The following components meet this criterion: -WebSphere Service Registry & Repository: - Studio - Web UI and Dashboard
(b) At least one mode of operation and information retrieval that does not require visual acuity greater than 20/70 shall be provided in audio and enlarged print output working together or independently, or support for Assistive Technology used by people what are visually impaired shall be provided.	Supports: See the following for supporting features: - 1194.21 c, g, i, j, l - 1194.22 n	The following components meet this criterion: -WebSphere Service Registry & Repository: - Studio - Web UI and Dashboard
(c) At least one mode of operation and information retrieval that does not require user hearing shall be provided, or support for Assistive Technology used by people who are deaf or hard of hearing shall be provided.	Not applicable	The following components do not apply to this criterion: -WebSphere Service Registry & Repository: - Studio - Web UI and Dashboard
(d) Where audio information is important for the use of the product, at least one mode of operation and information retrieval shall be provided in an enhanced auditory fashion, or support for assistive hearing devices shall be provided.	Not applicable	The following components do not apply to this criterion: -WebSphere Service Registry & Repository: - Studio - Web UI and Dashboard
(e) At least one mode of operation and information retrieval that does not require user speech shall be provided, or support for Assistive Technology used by people with disabilities shall be provided.	Not applicable	
(f) At least one mode of operation and information retrieval that does not require fine motor control or simultaneous actions and that is operable with limited reach and strength shall be provided.	Supports: See the following for supporting features: - 1194.21 a, b - 1194.22 l, p	The following components meet this criterion: -WebSphere Service Registry & Repository: - Studio - Web UI and Dashboard

Section 1194.41 Information, Documentation, and Support - Detail

Criteria	Supporting Features	Remarks and Explanations
(a) Product support documentation provided to end-users shall be made available in alternate formats upon request, at no additional charge.	Supports: Product support documentation is provided in at least one accessible format.	The following component meets this criterion: - WebSphere Service Registry & Repository: - Information Center - Images have alt text. Client-side image maps provide alternative text for hot spots. No server-side image maps. Table cells and

Criteria	Supporting Features	Remarks and Explanations
		relationships can be determined. The information center is readable with style sheets disabled. Color is not used as the only way to convey information. Frames have titles. No flashing content in the info center. Skip to main content link in accessibility links No multimedia used. The documentation does not use form elements. Scripts, applets and plug-ins are not used in the information center. No time limit for reading content in the info center. Text-only page is not needed.
(b) End-users shall have access to a description of the accessibility and compatibility features of products in alternate formats or alternate methods upon request, at no additional charge.	Supports: Documentation includes a description of accessibility and compatibility features that make it easier for people with disabilities to use the product. Those descriptions are available in alternate formats upon request.	The following component meets this criterion: - WebSphere Service Registry & Repository: - Information Center - Accessibility and keyboard shortcuts in the information center.
(c) Support services for products shall accommodate the communication needs of end-users with disabilities.	Supports: In addition to standard IBM help desk and support Web sites, IBM has established a TTY telephone service for use by deaf or hard of hearing customers to access sales and support services.	

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Online Information Centers have been replaced by the IBM Knowledge Center - Hosted Edition service. To request the current accessibility status for the IBM Knowledge Center - Hosted Edition service, visit the IBM Product Accessibility information web page (https://www-03.ibm.com/research/accessibility/requests/accvpat.nsf/bidxjs?OpenForm) and select the entry for IBM Knowledge Center - Hosted Edition.

VPAT for CICS Transaction Gateway 9.1

VPAT for CICS Transaction Gateway 9.1	
VPAT comments:	For a detailed description of the features and benefits, please refer to the following URL: http://www-03.ibm.com/software/products/en/cics-ctg

VPAT Summary		
Criteria	**Status**	**Remarks and Explanations**
1194.21 Software Applications and Operating Systems	Supports	Refer to Section 1194.21 in VPAT Details section below.
1194.22 Web-based Internet information and applications	Supports	Refer to Section 1194.22 in VPAT Details section below.
1194.23 Telecommunications Products	Not Applicable	Not Applicable
1194.24 Video and Multi-Media Products	Not Applicable	Not Applicable
1194.25 Self-Contained, Closed Products	Not Applicable	Not Applicable
1194.26 Desktop and Portable Computers	Not Applicable	Not Applicable
1194.31 Functional Performance Criteria	Supports	Refer to Section 1194.31 in VPAT Details section below.
1194.41 Information, documentation, and support	Supports	Refer to Section 1194.41 in VPAT Details section below.

VPAT Details		
1194.21 Software Applications and Operating Systems		
Criteria	**Supporting Features**	**Remarks and Explanations**
(a) When software is designed to run on a system that has a keyboard, product functions shall be executable from a	Supports: A keyboard can be used to achieve all tasks in the application, allowing blind	• The following components meet this criterion: ○ CICS Transaction Gateway 9.1:

keyboard where the function itself or the result of performing a function can be discerned textually.	and mobility-impaired users to access information without the use of the mouse.	▪ Base - Back tab does not work on cicsterm. It is still possible to navigate using other function keys.
(b) Applications shall not disrupt or disable activated features of other products that are identified as accessibility features, where those features are developed and documented according to industry standards. Applications also shall not disrupt or disable activated features of any operating system that are identified as accessibility features where the application programming interface for those accessibility features has been documented by the manufacturer of the operating system and is available to the product developer.	Supports: Operating systems provide accessibility features that allow disabled users to customize their preferences. This application preserves those accessibility user preference settings. For example, if Sticky Keys option is selected by a mobility-impaired user, this option will continue to be activated when used with this application.	• The following components meet this criterion: ○ CICS Transaction Gateway 9.1: ▪ Base - No components will interfere with accessibility features of the operating system
(c) A well-defined on-screen indication of the current focus shall be provided that moves among interactive interface elements as the input focus changes. The focus shall be programmatically exposed so that Assistive Technology can track focus and focus changes.	Supports: When using the application with a keyboard, users can tell where they are on the screen and the information is available to assistive technologies to communicate screen location to visually impaired users.	• The following components meet this criterion: ○ CICS Transaction Gateway 9.1: ▪ Base - Cicsterm provides an indication of cursor coordinates which change as the cursor moves. All other interfaces which require input from the user are purely text-based (the accessible alternative to the GUI configuration tool is manually editing

		the text configuration files).
(d) Sufficient information about a user interface element including the identity, operation and state of the element shall be available to Assistive Technology. When an image represents a program element, the information conveyed by the image must also be available in text.	Supports: This software application allows a screen reader to describe the user interface environment and controls to a blind user. For example, if you tab through a form and find a radio button, the user would be able to determine it is a radio button and the current selection status of the button.	• The following components meet this criterion: ○ CICS Transaction Gateway 9.1: ▪ Base - Interface objects have required information. Labels are associated with objects. No images are used as programmatic elements.
(e) When bitmap images are used to identify controls, status indicators, or other programmatic elements, the meaning assigned to those images shall be consistent throughout an application's performance.	Supports: The meaning assigned to images used in the application is consistent and unique, minimizing confusion of the context of use for those images.	• The following components meet this criterion: ○ CICS Transaction Gateway 9.1: ▪ Base - Labels are associated with objects. No images are used as programmatic elements.
(f) Textual information shall be provided through operating system functions for displaying text. The minimum information that shall be made available is text content, text input caret location, and text attributes.	Supports: Text information is accessible so assistive technologies can communicate content, attributes and caret location to blind users.	• The following components meet this criterion: ○ CICS Transaction Gateway 9.1: ▪ Base - Textual information is provided through operating system functions for displaying text so that assistive technologies can communicate content, attributes and

		caret location to blind users.
(g) Applications shall not override user selected contrast and color selections and other individual display attributes.	Supports: System settings are inherited by the application so that customized preferences will not need to be continually reset. For example, color contrast settings enhanced for a low vision user would be preserved by the application.	• The following components meet this criterion: ○ CICS Transaction Gateway 9.1: ▪ Base - Yes Applications do not override user selected contrast and color selections and other individual display attributes, so that customized preferences will not need to be continually reset.
(h) When animation is displayed, the information shall be displayable in at least one non-animated presentation mode at the option of the user.	Not Applicable	• The following components do not apply to this criterion: ○ CICS Transaction Gateway 9.1: ▪ Base - There are no animations.
(i) Color coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.	Supports: Color is used only as an enhancement, and an alternate means to convey information or indicate an action is available to users with visual impairments.	• The following components meet this criterion: ○ CICS Transaction Gateway 9.1: ▪ Base - Cicsterm displays user data (in the form of CICS maps) on a screen. Cicsterm itself does not use color to convey information but the user data displayed via Cicsterm may do so and the responsibility is

		on the user to produce accessible CICS map screens.
(j) When a product permits a user to adjust color and contrast settings, a variety of color selections capable of producing a range of contrast levels shall be provided.	Supports: When color customization is supported, a variety of color selections and a range of contrast improves accessibility for users with vision impairments.	• The following components meet this criterion: ○ CICS Transaction Gateway 9.1: ▪ Base - Cicsterm has a binding file, which allows colors to be customized.
(k) Software shall not use flashing or blinking text, objects, or other elements having a flash or blink frequency greater than 2 Hz and lower than 55 Hz.	Supports: The use of blinking text, objects or elements has been avoided, reducing risk of seizures for users with photosensitive epilepsy.	• The following components meet this criterion: ○ CICS Transaction Gateway 9.1: ▪ Base - Only standard operating system cursors are used.
(l) When electronic forms are used, the form shall allow people using Assistive Technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.	Supports: The application design allows assistive technology access to information, field elements, and functionality required to complete and submit forms.	• The following components meet this criterion: ○ CICS Transaction Gateway 9.1: ▪ Base - The only component where this applies is Cicsterm. On Cicsterm full field tabbing is enabled and current cursor coordinates reported via a status line.

1194.22 Web-based Internet information and applications		
Criteria	**Supporting Features**	**Remarks and Explanations**

(a) A text equivalent for every non-text element shall be provided (e.g., via "alt", "longdesc", or in element content).	Supports:
	The application design provides text equivalents for all images so that assistive technology can describe those images to blind users.
		• The following components meet this criterion:
		  ○ CICS Transaction Gateway 9.1:
		    ▪ HTML Documentation - The images used are provided with labels which are readable by JAWS. There are no animations. There are no graphs or charts.
		    ▪ Plug-in to CICS Explorer - All non-text content is explained in alternate text or in the surrounding text.

(b) Equivalent alternatives for any multimedia presentation shall be synchronized with the presentation.	Not Applicable	• The following components do not apply to this criterion:
		  ○ CICS Transaction Gateway 9.1:
		    ▪ HTML Documentation - There is no live multimedia. There is no multimedia.
		    ▪ Plug-in to CICS Explorer - Plug-in does not contain any pre-recorded audio content No synchronized media No multi-media

(c) Web pages shall be designed so that all information conveyed with color is also available without color, for example from context or markup.	Supports:
	Color is used only as an enhancement, and an alternate means to convey information or indicate an action is available to users with visual impairments.
		• The following components meet this criterion:
		  ○ CICS Transaction Gateway 9.1:
		    ▪ HTML Documentation - Color is not used as the only visual means of conveying information.
		    ▪ Plug-in to CICS Explorer - Color is not used as a means of conveying information.

(d) Documents shall be organized so they are readable without requiring an associated style sheet.	Supports:
	Web page content is readable without the use of a pre-defined style sheet, allowing low vision users to enable their own style sheets that enhance their viewing preferences.
		• The following components meet this criterion:
		  ○ CICS Transaction Gateway 9.1:
		    ▪ HTML Documentation - Documentation is readable without requiring stylesheets. Style sheets are used to control text format and position. CSS is not used to generate content that conveys important information or includes images. Text decoration and color are not used as the only way to convey meaning.
		    ▪ Plug-in to CICS Explorer - Style sheets are not used

(e) Redundant text links shall be provided for each active region of a server-side image map.	Not Applicable	• The following components do not apply to this criterion: ○ CICS Transaction Gateway 9.1: ▪ HTML Documentation - There are no image maps. ▪ Plug-in to CICS Explorer - No image maps are used
(f) Client-side image maps shall be provided instead of server-side image maps except where the regions cannot be defined with an available geometric shape.	Not Applicable	• The following components do not apply to this criterion: ○ CICS Transaction Gateway 9.1: ▪ HTML Documentation - There are no image maps. ▪ Plug-in to CICS Explorer - No image maps are used
(g) Row and column headers shall be identified for data tables.	Not Applicable	• The following components do not apply to this criterion: ○ CICS Transaction Gateway 9.1: ▪ HTML Documentation - Tables are used for layout only, so this checkpoint does not apply. ▪ Plug-in to CICS Explorer - N/A
(h) Markup shall be used to associate data cells and header cells for data tables that	Not Applicable	• The following components do not apply to this criterion: ○ CICS Transaction Gateway 9.1:

have two or more logical levels of row or column headers.		▪ HTML Documentation - Tables are used for layout only, so this checkpoint does not apply. ▪ Plug-in to CICS Explorer - N/A
(i) Frames shall be titled with text that facilitates frame identification and navigation.	Supports: Meaningful text titles are used to describe the purpose of frames so blind users can easily navigate to the desired area.	• The following components meet this criterion: ○ CICS Transaction Gateway 9.1: ▪ HTML Documentation - The HTML-based documentation uses accessible source for frames. The Web-based samples do not contain frames. ▪ Plug-in to CICS Explorer - Frame titles are provided.
(j) Pages shall be designed to avoid causing the screen to flicker with a frequency greater than 2 Hz and lower than 55 Hz.	Supports: The use of blinking text, objects or elements has been avoided, reducing risk of seizures for users with photosensitive epilepsy.	• The following components meet this criterion: ○ CICS Transaction Gateway 9.1: ▪ HTML Documentation - There is no moving, blinking or flickering content ▪ Plug-in to CICS Explorer - No flashing content.
(k) A text-only page, with equivalent information or functionality, shall be	Supports:	• The following components do not apply to this criterion:

provided to make a web site comply with the provisions of this part, when compliance cannot be accomplished in any other way. The content of the text-only page shall be updated whenever the primary page changes.	When necessary, the application has been designed with text-only pages to communicate equivalent information to disabled users.	◦ CICS Transaction Gateway 9.1: ▪ Plug-in to CICS Explorer - No text only pages are required as all pages are designed to be accessible • The following components meet this criterion: ◦ CICS Transaction Gateway 9.1: ▪ HTML Documentation - All pages of the API reference doc are accessible so text-only is not required. A text-only version of the readme file is provided.
(l) When pages utilize scripting languages to display content, or to create interface elements, the information provided by the script shall be identified with functional text that can be read by Assistive Technology.	Not Applicable	• The following components do not apply to this criterion: ◦ CICS Transaction Gateway 9.1: ▪ HTML Documentation - No scripts in the Web-based sections of the product. ▪ Plug-in to CICS Explorer - No scripts.
(m) When a web page requires that an applet, plug-in or other application be present on the client system to interpret page content, the page must provide a link to a plug-in or applet that complies with §1194.21(a) through (l).	Not Applicable	• The following components do not apply to this criterion: ◦ CICS Transaction Gateway 9.1: ▪ HTML Documentation - No flash content ▪ Plug-in to CICS Explorer - No Applets or plug-ins.

(n) When electronic forms are designed to be completed on-line, the form shall allow people using Assistive Technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.	Supports: The application design allows assistive technology access to information, field elements, and functionality required to complete and submit forms.	• The following components meet this criterion: ○ CICS Transaction Gateway 9.1: ▪ HTML Documentation - Where appropriate all forms will have labels. ▪ Plug-in to CICS Explorer - All forms are accessible
(o) A method shall be provided that permits users to skip repetitive navigation links.	Supports: Web pages are designed so that repetitive navigation links can be skipping over, and blind users can navigate to the main content of the page more easily.	• The following components meet this criterion: ○ CICS Transaction Gateway 9.1: ▪ HTML Documentation - Navigation includes a rich set of accessible options, including: Table of Contents, Search and inline links to related topics. ▪ Plug-in to CICS Explorer - Able to get to main content page.
(p) When a timed response is required, the user shall be alerted and given sufficient time to indicate more time is required.	Not Applicable	• The following components do not apply to this criterion: ○ CICS Transaction Gateway 9.1: ▪ HTML Documentation - There are no timed responses. ▪ Plug-in to CICS Explorer - No time limits.

1194.31 Functional Performance Criteria		
Criteria	**Supporting Features**	**Remarks and Explanations**
(a) At least one mode of operation and information retrieval that does not require user vision shall be provided, or support for Assistive Technology used by people who are blind or visually impaired shall be provided.	Supports: See the following for supporting features: - 1194.21 a, b, c, d, e, f, h, i, l - 1194.22 all - 1194.23 k1, k4 - 1194.24 d - 1194.25 a, b, c, e, f, g - 1194.26 b, d	• The following components meet this criterion: ○ CICS Transaction Gateway 9.1: ▪ Base ▪ HTML Documentation ▪ Plug-in to CICS Explorer
(b) At least one mode of operation and information retrieval that does not require visual acuity greater than 20/70 shall be provided in audio and enlarged print output working together or independently, or support for Assistive Technology used by people what are visually impaired shall be provided.	Supports: See the following for supporting features: - 1194.21 c, g, i, j, l - 1194.22 n - 1194.25 h - 1194.26 d	• The following components meet this criterion: ○ CICS Transaction Gateway 9.1: ▪ Base ▪ HTML Documentation ▪ Plug-in to CICS Explorer
(c) At least one mode of operation and information retrieval that does not require user hearing shall be provided, or support for Assistive Technology used by people who are deaf or hard of hearing shall be provided.	Supports: See the following for other supporting features: - 1194.22 b, m - 1194.23 k4 - 1194.24 c - 1194.25 e, f	• The following components do not apply to this criterion: ○ CICS Transaction Gateway 9.1: ▪ HTML Documentation ▪ Plug-in to CICS Explorer • The following components meet this criterion: ○ CICS Transaction Gateway 9.1: ▪ Base
(d) Where audio information is important for the use of the product, at least one mode of operation and information retrieval shall be	Supports: See the following for other supporting features:	• The following components do not apply to this criterion: ○ CICS Transaction Gateway 9.1:

provided in an enhanced auditory fashion, or support for assistive hearing devices shall be provided.	- 1194.23 k4 - 1194.25 e, f	▪ HTML Documentation ▪ Plug-in to CICS Explorer • The following components meet this criterion: ○ CICS Transaction Gateway 9.1: ▪ Base
(e) At least one mode of operation and information retrieval that does not require user speech shall be provided, or support for Assistive Technology used by people with disabilities shall be provided.	Not Applicable	This is not a speech product.
(f) At least one mode of operation and information retrieval that does not require fine motor control or simultaneous actions and that is operable with limited reach and strength shall be provided.	Supports: See the following for supporting features: - 1194.21 a, b - 1194.22 l, p - 1194.23 k1, k2, k3 - 1194.25 b, j1, j2, j3, j4 - 1194.26 d	• The following components do not apply to this criterion: ○ CICS Transaction Gateway 9.1: ▪ HTML Documentation ▪ Plug-in to CICS Explorer • The following components meet this criterion: ○ CICS Transaction Gateway 9.1: ▪ Base
1194.41 Information, documentation, and support		
Criteria	**Supporting Features**	**Remarks and Explanations**
(a) Product support documentation provided to end-users shall be made available in alternate formats upon request, at no additional charge.	Supports: Product support documentation is provided in at least one accessible format.	• The following components meet this criterion: ○ CICS Transaction Gateway 9.1: ▪ Information Center - All documentation is provided using a document plug-in to the Eclipse Information

		Center framework. It contains PDF and accessible XHTML. all images are provided with alternative text. Screen images are provided as accessible textual screen mockups. No issues identified. No issues identified
(b) End-users shall have access to a description of the accessibility and compatibility features of products in alternate formats or alternate methods upon request, at no additional charge.	Supports: Documentation includes a description of accessibility and compatibility features that make it easier for people with disabilities to use the product. Those descriptions are available in alternate formats upon request.	• The following components meet this criterion: ○ CICS Transaction Gateway 9.1: ▪ Information Center - No issues identified
(c) Support services for products shall accommodate the communication needs of end-users with disabilities.	Supports: Operating systems provide accessibility features that allow disabled users to customize their preferences. This application preserves those accessibility user preference settings. For example, if Sticky Keys option is selected by a mobility-impaired user, this option will continue to be activated when used with this application. In addition to standard IBM help desk and support Web sites, IBM has established a TTY telephone service for use by deaf or hard of hearing	

	customers to access sales and support services.	

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VPAT for IBM Cognos Analytics 11.0.2, 11.0.3, 11.0.4, 11.0.5

VPAT for IBM Cognos Analytics 11.0.2, 11.0.3, 11.0.4, 11.0.5	
VPAT comments:	For a detailed description of the parent features and benefits, please refer to the following URL: http://www.ibm.com/analytics/us/en/technology/products/cognos-analytics/ The following components have functional equivalence for a user requiring accessible access: - Cube Designer provides accessible equivalence for Framework Manager - Authoring provides accessible equivalence for Query Studio and Analysis Studio There is no requirement to use Adobe Professional to achieve accessibility compliance in Cognos PDF reports. All the methods for authoring accessible PDF reports is available to the author within Cognos tools. For example, - Table of contents: There is a Table of Contents page that can be included in a report by the report author from the Report Studio toolbox.

	- Alternate text: It is a property available to be set by the report author in Authoring. - Charts: The report author provides an equivalent cross-tab for representing data in a visualization such as a chart from within Authoring. The product's IBM Knowledge Center documentation is hosted in the IBM Knowledge Center - Hosted Edition service. To request the current accessibility status for the IBM Knowledge Center - Hosted Edition service, visit the IBM Product Accessibility information web page (https://www-03.ibm.com/research/accessibility/requests/accvpat.nsf/bidxjs?OpenForm) and select the entry for IBM Knowledge Center - Hosted Edition.

VPAT Summary

Criteria	**Status**	**Remarks and Explanations**
1194.21 Software Applications and Operating Systems	Supports	Refer to Section 1194.21 in VPAT Details section below.
1194.22 Web-based Internet information and applications	Supports	Refer to Section 1194.22 in VPAT Details section below.
1194.23 Telecommunications Products	Not Applicable	Not Applicable
1194.24 Video and Multi-Media Products	Supports	Refer to Section 1194.24 in VPAT Details section below.
1194.25 Self-Contained, Closed Products	Not Applicable	Not Applicable
1194.26 Desktop and Portable Computers	Not Applicable	Not Applicable
1194.31 Functional Performance Criteria	Supports	Refer to Section 1194.31 in VPAT Details section below.
1194.41 Information, documentation, and support	Supports	Refer to Section 1194.41 in VPAT Details section below.

VPAT Details

1194.21 Software Applications and Operating Systems

Criteria	Supporting Features	Remarks and Explanations
(a) When software is designed to run on a system that has a keyboard, product functions shall be executable from a keyboard where the function itself or the result of performing a function can be discerned textually.	Supports: A keyboard can be used to achieve all tasks in the application, allowing blind and mobility-impaired users to access information without the use of the mouse.	• The following components meet this criterion: ○ IBM Cognos Analytics 11.0.2, 11.0.3, 11.0.4, 11.0.5: All functionality of the content is operable through a keyboard interface without requiring specific timings for individual keystrokes. This is not a requirement where the underlying function requires input that depends on the path of the user's movement and not just the endpoints. If focus can be moved to a component using a keyboard interface, then focus can be moved away from that component using only a keyboard interface, and, if it requires more than unmodified arrow or tab keys, the user is advised of the method for moving focus away. ▪ Administration & Deployment: Cognos Configuration ▪ Author, Analyze & Create: Cognos For Microsoft Office ▪ Installer: GUI and Silent Install ▪ Model & Design: Framework Manager/Cube Designer/Map Manager/Transformer/Metrics

		Designer/Dynamic Query Analyzer ▪ Lifecycle Manager Application ○ WebSphere Application Server Liberty (embeddable only) 8.5.5.x: ▪ Command Line Tools, Utilities, and Scripts - Provides a CLI that is operable with a keyboard only.
(b) Applications shall not disrupt or disable activated features of other products that are identified as accessibility features, where those features are developed and documented according to industry standards. Applications also shall not disrupt or disable activated features of any operating system that are identified as accessibility features where the application programming interface for those accessibility features has been documented by the manufacturer of the operating system and is available to the product developer.	Supports: Operating systems provide accessibility features that allow disabled users to customize their preferences. This application preserves those accessibility user preference settings. For example, if Sticky Keys option is selected by a mobility-impaired user, this option will continue to be activated when used with this application.	• The following components meet this criterion: ○ IBM Cognos Analytics 11.0.2, 11.0.3, 11.0.4, 11.0.5: Component does not disrupt platform features that are defined in the platform documentation as accessibility features. ▪ Administration & Deployment: Cognos Configuration ▪ Author, Analyze & Create: Cognos For Microsoft Office ▪ Installer: GUI and Silent Install ▪ Model & Design: Framework Manager/Cube Designer/Map Manager/Transformer/Metrics Designer/Dynamic Query Analyzer ▪ Lifecycle Manager Application ○ WebSphere Application Server Liberty (embeddable only) 8.5.5.x:

		▪ Command Line Tools, Utilities, and Scripts - Does not interfere with keyboard accessibility features provided by the operating system.
(c) A well-defined on-screen indication of the current focus shall be provided that moves among interactive interface elements as the input focus changes. The focus shall be programmatically exposed so that Assistive Technology can track focus and focus changes.	Supports: When using the application with a keyboard, users can tell where they are on the screen and the information is available to assistive technologies to communicate screen location to visually impaired users.	• The following components meet this criterion: ○ IBM Cognos Analytics 11.0.2, 11.0.3, 11.0.4, 11.0.5: Exposes information and mechanisms necessary to track and modify focus, text insertion point, and selection attributes of user interface components. Any keyboard operable user interface has a mode of operation where the keyboard focus indicator is visible. ▪ Administration & Deployment: Cognos Configuration ▪ Author, Analyze & Create: Cognos For Microsoft Office ▪ Installer: GUI and Silent Install ▪ Model & Design: Framework Manager/Cube Designer/Map Manager/Transformer/Metrics Designer/Dynamic Query Analyzer ▪ Lifecycle Manager Application • The following components do not apply to this criterion:

		◦ WebSphere Application Server Liberty (embeddable only) 8.5.5.x: ▪ Command Line Tools, Utilities, and Scripts - This checkpoint does not apply to CLI applications. The user interface is implemented via commands only. There are no interactive objects.
(d) Sufficient information about a user interface element including the identity, operation and state of the element shall be available to Assistive Technology. When an image represents a program element, the information conveyed by the image must also be available in text.	Supports: This software application allows a screen reader to describe the user interface environment and controls to a blind user. For example, if you tab through a form and find a radio button, the user would be able to determine it is a radio button and the current selection status of the button.	• The following components meet this criterion: ◦ IBM Cognos Analytics 11.0.2, 11.0.3, 11.0.4, 11.0.5: Semantic information is provided about user interface objects. ▪ Administration & Deployment: Cognos Configuration ▪ Author, Analyze & Create: Cognos For Microsoft Office ▪ Installer: GUI and Silent Install ▪ Model & Design: Framework Manager/Cube Designer/Map Manager/Transformer/Metrics Designer/Dynamic Query Analyzer ▪ Lifecycle Manager Application • The following components do not apply to this criterion: ◦ WebSphere Application Server Liberty (embeddable only) 8.5.5.x: ▪ Command Line Tools, Utilities, and Scripts - This

		checkpoint does not apply to CLI applications. The command line interface has no user interface objects. This checkpoint does not apply to CLI applications. The command line interface has no controls, objects, icons, or images.
(e) When bitmap images are used to identify controls, status indicators, or other programmatic elements, the meaning assigned to those images shall be consistent throughout an application's performance.	Supports: The meaning assigned to images used in the application is consistent and unique, minimizing confusion of the context of use for those images.	• The following components meet this criterion: ○ IBM Cognos Analytics 11.0.2, 11.0.3, 11.0.4, 11.0.5: Labels are associated with controls, objects, icons and images. The meaning of images is consistent throughout the application. ▪ Administration & Deployment: Cognos Configuration ▪ Author, Analyze & Create: Cognos For Microsoft Office ▪ Installer: GUI and Silent Install ▪ Model & Design: Framework Manager/Cube Designer/Map Manager/Transformer/Metrics Designer/Dynamic Query Analyzer ▪ Lifecycle Manager Application • The following components do not apply to this criterion: ○ WebSphere Application Server Liberty (embeddable only) 8.5.5.x:

		▪ Command Line Tools, Utilities, and Scripts - This checkpoint does not apply to CLI applications. The command line interface has no controls, objects, icons, or images.
(f) Textual information shall be provided through operating system functions for displaying text. The minimum information that shall be made available is text content, text input caret location, and text attributes.	Supports: Text information is accessible so assistive technologies can communicate content, attributes and caret location to blind users.	• The following components meet this criterion: ○ IBM Cognos Analytics 11.0.2, 11.0.3, 11.0.4, 11.0.5: Text contents, text attributes, and the boundary of text rendered to the screen are programmatically determinable. ▪ Administration & Deployment: Cognos Configuration ▪ Author, Analyze & Create: Cognos For Microsoft Office ▪ Installer: GUI and Silent Install ▪ Model & Design: Framework Manager/Cube Designer/Map Manager/Transformer/Metrics Designer/Dynamic Query Analyzer ▪ Lifecycle Manager Application ○ WebSphere Application Server Liberty (embeddable only) 8.5.5.x: ▪ Command Line Tools, Utilities, and Scripts - Text is provided through standard system function calls or through API which supports

		interaction with assistive technology.
(g) Applications shall not override user selected contrast and color selections and other individual display attributes.	Supports: System settings are inherited by the application so that customized preferences will not need to be continually reset. For example, color contrast settings enhanced for a low vision user would be preserved by the application.	• The following components meet this criterion: ○ IBM Cognos Analytics 11.0.2, 11.0.3, 11.0.4, 11.0.5: Component provides a mode of operation that allows user preferences for platform settings for color, contrast, font type, font size, and focus cursor. ▪ Administration & Deployment: Cognos Configuration ▪ Author, Analyze & Create: Cognos For Microsoft Office ▪ Installer: GUI and Silent Install ▪ Model & Design: Framework Manager/Cube Designer/Map Manager/Transformer/Metrics Designer/Dynamic Query Analyzer ▪ Lifecycle Manager Application ○ WebSphere Application Server Liberty (embeddable only) 8.5.5.x: ▪ Command Line Tools, Utilities, and Scripts - High contrast settings are supported, as controlled by the operating system. Font, size, and color settings are supported, as controlled by the operating system.

(h) When animation is displayed, the information shall be displayable in at least one non-animated presentation mode at the option of the user.	Supports:
	Application provides an option to display animation in a non-animated mode, allowing users with vision impairments equal access to the same information and reliable interaction with assistive technology.
		• The following components meet this criterion:
		  ○ IBM Cognos Analytics 11.0.2, 11.0.3, 11.0.4, 11.0.5:
		    ▪ Lifecycle Manager Application - An option to display animation in a non-animated presentation mode is provided.
		• The following components do not apply to this criterion:
		  ○ IBM Cognos Analytics 11.0.2, 11.0.3, 11.0.4, 11.0.5: No animation.
		    ▪ Administration & Deployment: Cognos Configuration
		    ▪ Author, Analyze & Create: Cognos For Microsoft Office
		    ▪ Installer: GUI and Silent Install
		    ▪ Model & Design: Framework Manager/Cube Designer/Map Manager/Transformer/Metrics Designer/Dynamic Query Analyzer
		  ○ WebSphere Application Server Liberty (embeddable only) 8.5.5.x:
		    ▪ Command Line Tools, Utilities, and Scripts - This checkpoint does not apply to CLI. Command line interfaces do not support animation.

(i) Color coding shall not be used as the only means of conveying information,	Supports:	• The following components meet this criterion:

<table>
<tr><td>indicating an action, prompting a response, or distinguishing a visual element.</td><td>Color is used only as an enhancement, and an alternate means to convey information or indicate an action is available to users with visual impairments.</td><td>IBM Cognos Analytics 11.0.2, 11.0.3, 11.0.4, 11.0.5: Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.
Administration & Deployment: Cognos Configuration
Author, Analyze & Create: Cognos For Microsoft Office
Installer: GUI and Silent Install
Model & Design: Framework Manager/Cube Designer/Map Manager/Transformer/Metrics Designer/Dynamic Query Analyzer
Lifecycle Manager Application
The following components do not apply to this criterion:
WebSphere Application Server Liberty (embeddable only) 8.5.5.x:
Command Line Tools, Utilities, and Scripts - All output is displayed in a single-color text. Color is not used to convey information.</td></tr>
<tr><td>(j) When a product permits a user to adjust color and contrast settings, a variety of color selections capable of producing a range of contrast levels shall be provided.</td><td>Supports:
When color customization is supported, a variety of color selections and a range of contrast improves accessibility for users with vision impairments.</td><td>The following components meet this criterion:
IBM Cognos Analytics 11.0.2, 11.0.3, 11.0.4, 11.0.5: Color customization is supported and a variety of color selections capable of</td></tr>
</table>

		producing a range of contrast levels is provided. ▪ Author, Analyze & Create: Cognos For Microsoft Office ▪ Model & Design: Framework Manager/Cube Designer/Map Manager/Transformer/Metrics Designer/Dynamic Query Analyzer ▪ Lifecycle Manager Application • The following components do not apply to this criterion: o IBM Cognos Analytics 11.0.2, 11.0.3, 11.0.4, 11.0.5: Color customization is not supported. ▪ Administration & Deployment: Cognos Configuration ▪ Installer: GUI and Silent Install o WebSphere Application Server Liberty (embeddable only) 8.5.5.x: ▪ Command Line Tools, Utilities, and Scripts - Color customization is not provided.
(k) Software shall not use flashing or blinking text, objects, or other elements having a flash or blink frequency greater than 2 Hz and lower than 55 Hz.	Supports: The use of blinking text, objects or elements has been avoided, reducing risk of seizures for users with photosensitive epilepsy.	• The following components meet this criterion: o IBM Cognos Analytics 11.0.2, 11.0.3, 11.0.4, 11.0.5: User interface does not contain anything that flashes more than three times in any one second period.

		▪ Administration & Deployment: Cognos Configuration ▪ Author, Analyze & Create: Cognos For Microsoft Office ▪ Installer: GUI and Silent Install ▪ Model & Design: Framework Manager/Cube Designer/Map Manager/Transformer/Metrics Designer/Dynamic Query Analyzer ▪ Lifecycle Manager Application ○ WebSphere Application Server Liberty (embeddable only) 8.5.5.x: ▪ Command Line Tools, Utilities, and Scripts - No flashing or blinking objects presented to the CLI.
(l) When electronic forms are used, the form shall allow people using Assistive Technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.	Supports: The application design allows assistive technology access to information, field elements, and functionality required to complete and submit forms.	• The following components meet this criterion: ○ IBM Cognos Analytics 11.0.2, 11.0.3, 11.0.4, 11.0.5: Form fields allow assistive technology to access the information, field elements and functionality required for completion and submission of the form, including all directions and cues. ▪ Author, Analyze & Create: Cognos For Microsoft Office ▪ Installer: GUI and Silent Install ▪ Model & Design: Framework Manager/Cube Designer/Map

		Manager/Transformer/Metrics Designer/Dynamic Query Analyzer ▪ Lifecycle Manager Application • The following components do not apply to this criterion: ○ IBM Cognos Analytics 11.0.2, 11.0.3, 11.0.4, 11.0.5: ▪ Administration & Deployment: Cognos Configuration - No forms. ○ WebSphere Application Server Liberty (embeddable only) 8.5.5.x: ▪ Command Line Tools, Utilities, and Scripts - This checkpoint does not apply to CLI applications. The command line interface has no forms.
1194.22 Web-based Internet information and applications		
Criteria	**Supporting Features**	**Remarks and Explanations**
(a) A text equivalent for every non-text element shall be provided (e.g., via "alt", "longdesc", or in element content).	Supports: The application design provides text equivalents for all images so that assistive technology can describe those images to blind users.	• The following components meet this criterion: ○ IBM Cognos Analytics 11.0.2, 11.0.3, 11.0.4, 11.0.5: All non-text content that is presented to the user has a text alternative that serves the equivalent purpose. ▪ Administration & Deployment: Cognos Administrator ▪ Developer: Cognos Mash-up Service ▪ Active Report ▪ Reports in HTML

		▪ Author & Create: Cognos Workspace/Event Studio/Authoring/Dashboarding/Query Studio/Analysis Studio
(b) Equivalent alternatives for any multimedia presentation shall be synchronized with the presentation.	Supports: Synchronized captions, transcripts, text and/or audio descriptions of multimedia presentations are provided to ensure meaningful interpretation by disabled users.	• The following components meet this criterion: ○ IBM Cognos Analytics 11.0.2, 11.0.3, 11.0.4, 11.0.5: ▪ Author & Create: Cognos Workspace/Event Studio/Authoring/Dashboarding/Query Studio/Analysis Studio - Captions are provided for prerecorded audio content in synchronized media, except when the media is a media alternative for text and is clearly labeled as such. An alternative for time-based media or audio description of the prerecorded video content is provided for synchronized media, except when the media is a media alternative for text and is clearly labeled as such. Captions are provided for live multimedia. • The following components do not apply to this criterion: ○ IBM Cognos Analytics 11.0.2, 11.0.3, 11.0.4, 11.0.5: No prerecorded audio. No time-based media or prerecorded video. No live multimedia. ▪ Administration & Deployment: Cognos Administrator ▪ Developer: Cognos Mash-up Service ▪ Active Report

		▪ Reports in HTML

(c) Web pages shall be designed so that all information conveyed with color is also available without color, for example from context or markup.	Supports:
	Color is used only as an enhancement, and an alternate means to convey information or indicate an action is available to users with visual impairments.
		• The following components meet this criterion:
		  ○ IBM Cognos Analytics 11.0.2, 11.0.3, 11.0.4, 11.0.5: Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.
		    ▪ Administration & Deployment: Cognos Administrator
		    ▪ Developer: Cognos Mash-up Service
		    ▪ Active Report
		    ▪ Reports in HTML
		    ▪ Author & Create: Cognos Workspace/Event Studio/Authoring/Dashboarding/Query Studio/Analysis Studio

(d) Documents shall be organized so they are readable without requiring an associated style sheet.	Supports:
	Web page content is readable without the use of a pre-defined style sheet, allowing low vision users to enable their own style sheets that enhance their viewing preferences.
		• The following components meet this criterion:
		  ○ IBM Cognos Analytics 11.0.2, 11.0.3, 11.0.4, 11.0.5: Web pages are readable without requiring style sheets.
		    ▪ Administration & Deployment: Cognos Administrator
		    ▪ Developer: Cognos Mash-up Service
		    ▪ Active Report
		    ▪ Reports in HTML
		    ▪ Author & Create: Cognos Workspace/Event Studio/Authoring/Dashboarding/Query Studio/Analysis Studio

(e) Redundant text links shall be provided for each active region of a server-side image map.	Supports:
	Text links are utilized for any server-side maps to provide URL information when the map is activated so users can tell where they are being redirected to.
		• The following components meet this criterion:
		  ○ IBM Cognos Analytics 11.0.2, 11.0.3, 11.0.4, 11.0.5: Client-side image maps are used and alternative text is provided for image map hot spots. Equivalent text links are provided for server-side image maps.
		    ▪ Administration & Deployment: Cognos Administrator
		    ▪ Developer: Cognos Mash-up Service
		    ▪ Active Report
		    ▪ Reports in HTML
		    ▪ Author & Create: Cognos Workspace/Event Studio/Authoring/Dashboarding/Query Studio/Analysis Studio

(f) Client-side image maps shall be provided instead of server-side image maps except where the regions cannot be defined with an available geometric shape.	Supports:
	Alternative text is utilized for any client-side image maps to provide URL information when the map is activated so users can tell where they are being redirected to.
		• The following components meet this criterion:
		  ○ IBM Cognos Analytics 11.0.2, 11.0.3, 11.0.4, 11.0.5: Client-side image maps are used and alternative text is provided for image map hot spots. Equivalent text links are provided for server-side image maps.
		    ▪ Administration & Deployment: Cognos Administrator
		    ▪ Developer: Cognos Mash-up Service
		    ▪ Active Report
		    ▪ Reports in HTML
		    ▪ Author & Create: Cognos Workspace/Event Studio/Authoring/Dashboarding/Query Studio/Analysis Studio

(g) Row and column headers shall be identified for data tables.	Supports: The application is designed to identify row and column headers	• The following components meet this criterion:

	for blind users so the location and context of the table cell are clear and can be communicated by a screen reader.	○ IBM Cognos Analytics 11.0.2, 11.0.3, 11.0.4, 11.0.5: Table cells and relationships between cells can be programmatically determined. ▪ Administration & Deployment: Cognos Administrator ▪ Developer: Cognos Mash-up Service ▪ Active Report ▪ Reports in HTML ▪ Author & Create: Cognos Workspace/Event Studio/Authoring/Dashboarding/Query Studio/Analysis Studio
(h) Markup shall be used to associate data cells and header cells for data tables that have two or more logical levels of row or column headers.	Supports: Complex tables are designed with additional attributes for blind users so the location and context of the table cell are clear and can be communicated by a screen reader.	• The following components meet this criterion: ○ IBM Cognos Analytics 11.0.2, 11.0.3, 11.0.4, 11.0.5: Table cells and relationships between cells can be programmatically determined. ▪ Administration & Deployment: Cognos Administrator ▪ Developer: Cognos Mash-up Service ▪ Active Report ▪ Reports in HTML ▪ Author & Create: Cognos Workspace/Event Studio/Authoring/Dashboarding/Query Studio/Analysis Studio
(i) Frames shall be titled with text that facilitates frame identification and navigation.	Supports: Meaningful text titles are used to describe the purpose of frames so blind users can easily navigate to the desired area.	• The following components meet this criterion: ○ IBM Cognos Analytics 11.0.2, 11.0.3, 11.0.4, 11.0.5: A title and an accessible frame source are provided for each frame. ▪ Administration & Deployment: Cognos Administrator ▪ Developer: Cognos Mash-up Service ▪ Active Report

<table>
<tr><td></td><td></td><td>Reports in HTML
Author & Create: Cognos Workspace/Event Studio/Authoring/Dashboarding/Query Studio/Analysis Studio</td></tr>
<tr><td>(j) Pages shall be designed to avoid causing the screen to flicker with a frequency greater than 2 Hz and lower than 55 Hz.</td><td>Supports:
The use of blinking text, objects or elements has been avoided, reducing risk of seizures for users with photosensitive epilepsy.</td><td>The following components meet this criterion:
IBM Cognos Analytics 11.0.2, 11.0.3, 11.0.4, 11.0.5: Web pages do not contain anything that flashes more than three times in any one second period.
Administration & Deployment: Cognos Administrator
Developer: Cognos Mash-up Service
Active Report
Reports in HTML
Author & Create: Cognos Workspace/Event Studio/Authoring/Dashboarding/Query Studio/Analysis Studio</td></tr>
<tr><td>(k) A text-only page, with equivalent information or functionality, shall be provided to make a web site comply with the provisions of this part, when compliance cannot be accomplished in any other way. The content of the text-only page shall be updated whenever the primary page changes.</td><td>Supports:
When necessary, the application has been designed with text-only pages to communicate equivalent information to disabled users.</td><td>The following components meet this criterion:
IBM Cognos Analytics 11.0.2, 11.0.3, 11.0.4, 11.0.5: Since it was determined accessibility cannot be accomplished in any other way, a text-only page with equivalent information or functionality is provided.
Active Report
Reports in HTML
Author & Create: Cognos Workspace/Event Studio/Authoring/Dashboarding/Query Studio/Analysis Studio
The following components do not apply to this criterion:</td></tr>
</table>

		○ IBM Cognos Analytics 11.0.2, 11.0.3, 11.0.4, 11.0.5: Already accessible. Text-only page not required. ▪ Administration & Deployment: Cognos Administrator ▪ Developer: Cognos Mash-up Service
(l) When pages utilize scripting languages to display content, or to create interface elements, the information provided by the script shall be identified with functional text that can be read by Assistive Technology.	Supports: Alternatives to scripting language are provided, allowing users access to the content via keyboard and assistive technology.	• The following components meet this criterion: ○ IBM Cognos Analytics 11.0.2, 11.0.3, 11.0.4, 11.0.5: Scripts are keyboard accessible. If the content affected by scripting is not accessible, an alternative is provided. ▪ Administration & Deployment: Cognos Administrator ▪ Developer: Cognos Mash-up Service ▪ Reports in HTML ▪ Author & Create: Cognos Workspace/Event Studio/Authoring/Dashboarding/Query Studio/Analysis Studio • The following components do not apply to this criterion: ○ IBM Cognos Analytics 11.0.2, 11.0.3, 11.0.4, 11.0.5: ▪ Active Report - No scripts.
(m) When a web page requires that an applet, plug-in or other application be present on the client system to interpret page content, the page must provide a link to a plug-in or applet that complies with §1194.21(a) through (l).	Supports: An alternative to inaccessible applets or plug-ins is provided for efficient use by disabled users.	• The following components meet this criterion: ○ IBM Cognos Analytics 11.0.2, 11.0.3, 11.0.4, 11.0.5: A link is provided to a directly accessible applet, plug-in or other application. Alternate content is provided for those applets, plug-ins or other applications that are not directly accessible. ▪ Developer: Cognos Mash-up Service ▪ Reports in HTML

		▪ Author & Create: Cognos Workspace/Event Studio/Authoring/Dashboarding/Query Studio/Analysis Studio • The following components do not apply to this criterion: ○ IBM Cognos Analytics 11.0.2, 11.0.3, 11.0.4, 11.0.5: No applets, plug-ins, or non-HTML content. ▪ Administration & Deployment: Cognos Administrator ▪ Active Report
(n) When electronic forms are designed to be completed on-line, the form shall allow people using Assistive Technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.	Supports: The application design allows assistive technology access to information, field elements, and functionality required to complete and submit forms.	• The following components meet this criterion: ○ IBM Cognos Analytics 11.0.2, 11.0.3, 11.0.4, 11.0.5: Form element labels can be programmatically determined. Note: This product uses WAI-ARIA to comply with this checkpoint. WAI-ARIA has been supported since Firefox 3.6 and JAWS 12. ▪ Administration & Deployment: Cognos Administrator ▪ Developer: Cognos Mash-up Service ▪ Active Report ▪ Reports in HTML ▪ Author & Create: Cognos Workspace/Event Studio/Authoring/Dashboarding/Query Studio/Analysis Studio
(o) A method shall be provided that permits users to skip repetitive navigation links.	Supports: Web pages are designed so that repetitive navigation links can be skipping over, and blind users	• The following components meet this criterion: ○ IBM Cognos Analytics 11.0.2, 11.0.3, 11.0.4, 11.0.5: Methods are provided for skipping over navigation links to get to the main content of the page. Note: This product uses

	can navigate to the main content of the page more easily.	WAI-ARIA to comply with this checkpoint. WAI-ARIA has been supported since Firefox 3.6 and JAWS 12. ▪ Administration & Deployment: Cognos Administrator ▪ Developer: Cognos Mash-up Service ▪ Active Report ▪ Reports in HTML ▪ Author & Create: Cognos Workspace/Event Studio/Authoring/Dashboarding/Query Studio/Analysis Studio
(p) When a timed response is required, the user shall be alerted and given sufficient time to indicate more time is required.	Supports: When a timed response is required, an option to request more time to complete the action is provided to the user.	• The following components meet this criterion: ○ IBM Cognos Analytics 11.0.2, 11.0.3, 11.0.4, 11.0.5: The user is allowed to turn off, adjust or extend all time limits that are not a real-time, essential or 20-hour exception. ▪ Administration & Deployment: Cognos Administrator ▪ Developer: Cognos Mash-up Service ▪ Active Report ▪ Reports in HTML ▪ Author & Create: Cognos Workspace/Event Studio/Authoring/Dashboarding/Query Studio/Analysis Studio
1194.24 Video and Multi-Media Products		
Criteria	**Supporting Features**	**Remarks and Explanations**
(a) All analog television displays 13 inches and larger, and computer equipment that includes analog	Not Applicable	

television receiver or display circuitry, shall be equipped with caption decoder circuitry which appropriately receives, decodes, and displays closed captions from broadcast, cable, videotape, and DVD signals. As soon as practicable, but not later than July 1, 2002, widescreen digital television (DTV) displays measuring at least 7.8 inches vertically, DTV sets with conventional displays measuring at least 13 inches vertically, and stand-alone DTV tuners, whether or not they are marketed with display screens, and computer equipment that includes DTV receiver or display circuitry, shall be equipped with caption decoder circuitry which appropriately receives, decodes, and displays closed captions from broadcast, cable, videotape, and DVD signals.		
(b) Television tuners, including tuner cards for use in computers, shall be equipped with secondary audio program playback circuitry.	Not Applicable	
(c) All training and informational video and multimedia productions which support the agency's mission, regardless of format, that contain speech or other audio information necessary for the comprehension of	Supports: Training and informational video and multimedia provided with the product supports captioning for relevant audio for deaf and hard of hearing users.	• The following components meet this criterion: ○ IBM Cognos Analytics 11.0.2, 11.0.3, 11.0.4, 11.0.5: ▪ Author & Create: Cognos Workspace/Event Studio/Authoring/Dashboarding/Query Studio/Analysis Studio - Captions are

the content, shall be open or closed captioned.		provided for prerecorded audio content in synchronized media, except when the media is a media alternative for text and is clearly labeled as such.
		• The following components do not apply to this criterion:
		  ○ IBM Cognos Analytics 11.0.2, 11.0.3, 11.0.4, 11.0.5: No prerecorded audio.
		    ▪ Administration & Deployment: Cognos Configuration
		    ▪ Administration & Deployment: Cognos Administrator
		    ▪ Developer: Cognos Mash-up Service
		    ▪ Author, Analyze & Create: Cognos For Microsoft Office
		    ▪ Active Report
		    ▪ Installer: GUI and Silent Install
		    ▪ Model & Design: Framework Manager/Cube Designer/Map Manager/Transformer/Metrics Designer/Dynamic Query Analyzer
		    ▪ Reports in HTML
		    ▪ Lifecycle Manager Application
		  ○ WebSphere Application Server Liberty (embeddable only) 8.5.5.x:
		    ▪ Command Line Tools, Utilities, and Scripts - This checkpoint does not apply to CLI. No significant audio or video elements are used.

(d) All training and informational video and multimedia productions which support the agency's mission, regardless of format, that contain	Supports: Training and informational video and multimedia provided with the product supports audio	• The following components meet this criterion: ○ IBM Cognos Analytics 11.0.2, 11.0.3, 11.0.4, 11.0.5:

visual information necessary for the comprehension of the content, shall be audio described.	descriptions of visual information for blind users.	▪ Author & Create: Cognos Workspace/Event Studio/Authoring/Dashboarding/Query Studio/Analysis Studio - An alternative for time-based media or audio description of the prerecorded video content is provided for synchronized media, except when the media is a media alternative for text and is clearly labeled as such. • The following components do not apply to this criterion: o IBM Cognos Analytics 11.0.2, 11.0.3, 11.0.4, 11.0.5: ▪ Administration & Deployment: Cognos Configuration - No prerecorded audio and no prerecorded video media. ▪ Administration & Deployment: Cognos Administrator - No time-based media or prerecorded video. ▪ Developer: Cognos Mash-up Service - No time-based media or prerecorded video. ▪ Author, Analyze & Create: Cognos For Microsoft Office - No prerecorded audio and no prerecorded video media. ▪ Active Report - No time-based media or prerecorded video. ▪ Installer: GUI and Silent Install - No prerecorded audio and no prerecorded video media. ▪ Model & Design: Framework Manager/Cube Designer/Map Manager/Transformer/Metrics

		Designer/Dynamic Query Analyzer - No prerecorded audio and no prerecorded video media. ▪ Reports in HTML - No time-based media or prerecorded video. ▪ Lifecycle Manager Application - No prerecorded audio and no prerecorded video media. ○ WebSphere Application Server Liberty (embeddable only) 8.5.5.x: ▪ Command Line Tools, Utilities, and Scripts - This checkpoint does not apply to CLI. No significant audio or video elements are used.
(e) Display or presentation of alternate text presentation or audio descriptions shall be user-selectable unless permanent.	Not Applicable	
1194.31 Functional Performance Criteria		
Criteria	**Supporting Features**	**Remarks and Explanations**
(a) At least one mode of operation and information retrieval that does not require user vision shall be provided, or support for Assistive Technology used by people who are blind or visually impaired shall be provided.	Supports: See the following for supporting features: - 1194.21 a, b, c, d, e, f, h, i, l - 1194.22 all - 1194.23 k1, k4 - 1194.24 d - 1194.25 a, b, c, e, f, g - 1194.26 b, d	• The following components meet this criterion: ○ IBM Cognos Analytics 11.0.2, 11.0.3, 11.0.4, 11.0.5: ▪ Administration & Deployment: Cognos Configuration ▪ Administration & Deployment: Cognos Administrator ▪ Developer: Cognos Mash-up Service ▪ Author, Analyze & Create: Cognos For Microsoft Office ▪ Active Report

		▪ Installer: GUI and Silent Install ▪ Model & Design: Framework Manager/Cube Designer/Map Manager/Transformer/Metrics Designer/Dynamic Query Analyzer ▪ Reports in HTML ▪ Lifecycle Manager Application ▪ Author & Create: Cognos Workspace/Event Studio/Authoring/Dashboarding/Query Studio/Analysis Studio ○ WebSphere Application Server Liberty (embeddable only) 8.5.5.x: ▪ Command Line Tools, Utilities, and Scripts
(b) At least one mode of operation and information retrieval that does not require visual acuity greater than 20/70 shall be provided in audio and enlarged print output working together or independently, or support for Assistive Technology used by people what are visually impaired shall be provided.	Supports: See the following for supporting features: - 1194.21 c, g, i, j, l - 1194.22 n - 1194.25 h - 1194.26 d	• The following components meet this criterion: ○ IBM Cognos Analytics 11.0.2, 11.0.3, 11.0.4, 11.0.5: ▪ Administration & Deployment: Cognos Configuration ▪ Administration & Deployment: Cognos Administrator ▪ Developer: Cognos Mash-up Service ▪ Author, Analyze & Create: Cognos For Microsoft Office ▪ Active Report ▪ Installer: GUI and Silent Install ▪ Model & Design: Framework Manager/Cube Designer/Map Manager/Transformer/Metrics Designer/Dynamic Query Analyzer ▪ Reports in HTML ▪ Lifecycle Manager Application

		▪ Author & Create: Cognos Workspace/Event Studio/Authoring/Dashboarding/Query Studio/Analysis Studio ○ WebSphere Application Server Liberty (embeddable only) 8.5.5.x: ▪ Command Line Tools, Utilities, and Scripts
(c) At least one mode of operation and information retrieval that does not require user hearing shall be provided, or support for Assistive Technology used by people who are deaf or hard of hearing shall be provided.	Supports: See the following for other supporting features: - 1194.22 b, m - 1194.23 k4 - 1194.24 c - 1194.25 e, f	• The following components meet this criterion: ○ IBM Cognos Analytics 11.0.2, 11.0.3, 11.0.4, 11.0.5: ▪ Administration & Deployment: Cognos Configuration ▪ Administration & Deployment: Cognos Administrator ▪ Developer: Cognos Mash-up Service ▪ Author, Analyze & Create: Cognos For Microsoft Office ▪ Active Report ▪ Installer: GUI and Silent Install ▪ Reports in HTML ▪ Author & Create: Cognos Workspace/Event Studio/Authoring/Dashboarding/Query Studio/Analysis Studio • The following components do not apply to this criterion: ○ IBM Cognos Analytics 11.0.2, 11.0.3, 11.0.4, 11.0.5: ▪ Model & Design: Framework Manager/Cube Designer/Map Manager/Transformer/Metrics Designer/Dynamic Query Analyzer ▪ Lifecycle Manager Application

		○ WebSphere Application Server Liberty (embeddable only) 8.5.5.x: ▪ Command Line Tools, Utilities, and Scripts

(d) Where audio information is important for the use of the product, at least one mode of operation and information retrieval shall be provided in an enhanced auditory fashion, or support for assistive hearing devices shall be provided.	Supports:
	See the following for other supporting features:
	- 1194.23 k4
	- 1194.25 e, f
		• The following components meet this criterion:
		  ○ IBM Cognos Analytics 11.0.2, 11.0.3, 11.0.4, 11.0.5:
		    ▪ Installer: GUI and Silent Install
		• The following components do not apply to this criterion:
		  ○ IBM Cognos Analytics 11.0.2, 11.0.3, 11.0.4, 11.0.5:
		    ▪ Administration & Deployment: Cognos Configuration
		    ▪ Administration & Deployment: Cognos Administrator
		    ▪ Developer: Cognos Mash-up Service
		    ▪ Author, Analyze & Create: Cognos For Microsoft Office
		    ▪ Active Report
		    ▪ Model & Design: Framework Manager/Cube Designer/Map Manager/Transformer/Metrics Designer/Dynamic Query Analyzer
		    ▪ Reports in HTML
		    ▪ Lifecycle Manager Application
		    ▪ Author & Create: Cognos Workspace/Event Studio/Authoring/Dashboarding/Query Studio/Analysis Studio
		  ○ WebSphere Application Server Liberty (embeddable only) 8.5.5.x:

		▪ Command Line Tools, Utilities, and Scripts
(e) At least one mode of operation and information retrieval that does not require user speech shall be provided, or support for Assistive Technology used by people with disabilities shall be provided.	Not Applicable	This is not a speech product.
(f) At least one mode of operation and information retrieval that does not require fine motor control or simultaneous actions and that is operable with limited reach and strength shall be provided.	Supports: See the following for supporting features: - 1194.21 a, b - 1194.22 l, p - 1194.23 k1, k2, k3 - 1194.25 b, j1, j2, j3, j4 - 1194.26 d	• The following components meet this criterion: ○ IBM Cognos Analytics 11.0.2, 11.0.3, 11.0.4, 11.0.5: ▪ Administration & Deployment: Cognos Configuration ▪ Administration & Deployment: Cognos Administrator ▪ Developer: Cognos Mash-up Service ▪ Author, Analyze & Create: Cognos For Microsoft Office ▪ Installer: GUI and Silent Install ▪ Model & Design: Framework Manager/Cube Designer/Map Manager/Transformer/Metrics Designer/Dynamic Query Analyzer ▪ Reports in HTML ▪ Lifecycle Manager Application ▪ Author & Create: Cognos Workspace/Event Studio/Authoring/Dashboarding/Query Studio/Analysis Studio ○ WebSphere Application Server Liberty (embeddable only) 8.5.5.x: ▪ Command Line Tools, Utilities, and Scripts

		• The following components do not apply to this criterion: ◦ IBM Cognos Analytics 11.0.2, 11.0.3, 11.0.4, 11.0.5: ▪ Active Report

1194.41 Information, documentation, and support

Criteria	Supporting Features	Remarks and Explanations
(a) Product support documentation provided to end-users shall be made available in alternate formats upon request, at no additional charge.	Supports: Product support documentation is provided in at least one accessible format.	• The following components meet this criterion: ◦ IBM Cognos Analytics 11.0.2, 11.0.3, 11.0.4, 11.0.5: All non-text content that is presented to the user has a text alternative that serves the equivalent purpose. ▪ Cognos Reports in PDF - Document does not include text or images that flash more than 2 times in a one second period. Table cells are identified and relationships between cells are provided and programmatically available. An accessible method is provided for navigating long documents. Information that is conveyed by color is also evident without color, including sufficient contrast between text

		and the page background. Document elements are presented in a logical reading order. Document information, structure, and relationships are defined and programmatically available. The primary language of the document is defined. No forms. ▪ Cognos Online Help - Since it was determined accessibility cannot be accomplished in any other way, a text-only page with equivalent information or functionality is provided. Table cells and relationships between cells can be programmatically determined. A title and an accessible frame source are provided for each frame. No prerecorded audio. No live multimedia. Scripts are keyboard accessible. If the content affected by scripting is not accessible, an

			alternative is provided. No time-based media or prerecorded video. The user is allowed to turn off, adjust or extend all time limits that are not a real-time, essential or 20-hour exception. Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. Methods are provided for skipping over navigation links to get to the main content of the page. Note: This product uses WAI-ARIA to comply with this checkpoint. WAI-ARIA has been supported since Firefox 3.6 and JAWS 12. Web pages do not contain anything that flashes more than three times in any one second period. Web pages are readable without requiring style sheets. Form element labels can be programmatically

		determined. Note: This product uses WAI-ARIA to comply with this checkpoint. WAI-ARIA has been supported since Firefox 3.6 and JAWS 12. Client-side image maps are used and alternative text is provided for image map hot spots. Equivalent text links are provided for server-side image maps. No applets, plug-ins, or non-HTML content. ○ WebSphere Application Server Liberty (embeddable only) 8.5.5.x: ▪ Readmes, Licenses, and configuration files - All documents are text only. All files are text only, therefore they are typically black text on white background unless the user has specified other colors and contrasts using Operating System options. Support high contrast mode. When the sequence in which content is presented affects its meaning, a

		correct reading sequence can be programmatically determined. Meaningful sequence is maintained, e.g., steps in procedures, ordered lists, ability to read tables in an ordered fashion. There are no forms to submit. There is no flashing content. All documents are text only. No documents have an excessive length. ○ IBM Business Intelligence Pattern 2.0, 2.2: ▪ Cognos On-Line Help - All graphics have a text alternative, either as ALT text or are explained fully in the body text of the documentation. There are no image maps in the documentation. There is no time-based media in the documentation. There is no live multimedia in the documentation. Search terms input box can be programmatically determined. Tables have

		a predictable structure. CSS are used but can be replaced. You can also set high contrast and large font mode. You can still see and read all text. Color is not the only method used to convey information. Scripts are keyboard accessible. There are no applets, plug-ins, or non-HTML content. The documentation does not have timed responses. This documentation does not have flashing content. Methods are provided for skipping over navigation links to get to main content of page. Each frame in the documentation has a title and is accessible. Content is accessible.
(b) End-users shall have access to a description of the accessibility and compatibility features of products in alternate formats or alternate methods upon request, at no additional charge.	Supports: Documentation includes a description of accessibility and compatibility features that make it easier for people with disabilities to use the product.	• The following components meet this criterion: ○ IBM Cognos Analytics 11.0.2, 11.0.3, 11.0.4, 11.0.5: ▪ Cognos Online Help - Documentation is

	Those descriptions are available in alternate formats upon request.	provided on all accessibility features including keyboard access. ○ WebSphere Application Server Liberty (embeddable only) 8.5.5.x: ▪ Readmes, Licenses, and configuration files - All documents are text only. There are no special accessibility features included that require documentation. ○ IBM Business Intelligence Pattern 2.0, 2.2: ▪ Cognos On-Line Help - The documentation indicates if accessibility features are available in the product, and if so, it describes how to use those accessibility features. • The following components do not apply to this criterion: ○ IBM Cognos Analytics 11.0.2, 11.0.3, 11.0.4, 11.0.5: ▪ Cognos Reports in PDF - This component does not cover documentation.

(c) Support services for products shall accommodate the communication needs of end-users with disabilities.	Supports: Operating systems provide accessibility features that allow disabled users to customize their preferences. This application preserves those accessibility user preference settings. For example, if Sticky Keys option is selected by a mobility-impaired user, this option will continue to be activated when used with this application. In addition to standard IBM help desk and support Web sites, IBM has established a TTY telephone service for use by deaf or hard of hearing customers to access sales and support services.	

Other IBM products packaged with IBM Cognos Analytics 11.0.2, 11.0.3, 11.0.4, 11.0.5

The releases of other IBM products packaged with this product are listed in the table below. The Product / Component names are current as of the time this VPAT is published. This product may include later releases of the listed bundled products. When you request a VPAT for any other IBM products packaged with this product you will receive the latest version of the published VPAT.

Product / Component name (web link to VPAT)	Status	Function provided by product
IBM Tivoli Directory Server 6.3	Accessible	IBM® Security Directory Server provides a trusted identity data infrastructure for authentication.
IBM Tivoli Directory Integrator 7.1.1	Accessible	IBM® Security Directory Integrator helps build an authoritative data infrastructure by integrating data from directories, databases,

		collaborative systems, applications and other data sources.
IBM Cognos Insight 10.2, 10.2.1, 10.2.2, 10.3	Accessible	IBM® Cognos® Insight provides the power to analyze data, explore scenarios, and influence decisions by creating managed workspaces. Cognos Insight workspaces can communicate results to line-of-business managers as interactive managed workspaces. Because Cognos Insight supports write-back, these workspaces can be used to gather and consolidate management targets, commitments, and forecasts.
IBM DB2 for Linux, Unix, and Windows 10.5	Accessible	IBM® DB2® for Linux, UNIX and Windows is a next generation data platform for transactional and analytical operations. It provides continuous availability of data to keep transactional workloads and analytics operating at maximum efficiency.
IBM SPSS Modeler Desktop 17.0, 17.1	Partially Accessible	IBM SPSS Modeler is an extensive predictive analytics platform that is designed to bring predictive intelligence to decisions made by individuals, groups, systems and the enterprise.
IBM Cognos TM1 10.2.2, 10.2.2.1, 10.2.2.2	Partially Accessible	IBM Cognos® TM1® is an enterprise planning software platform that can transform your entire planning cycle, from target setting and budgeting to reporting, score carding, analysis and forecasting.
IBM Cognos Analysis For Microsoft Excel 10.2.2.1, 10.2.2.2, 10.3	Accessible	IBM Cognos® Analysis for Microsoft Excel brings the benefits, power and familiarity of Excel to the arena of modern enterprise

		performance management. Cognos Analysis for Microsoft Excel enables business analysts, financial analysts, line-of-business managers and others to explore and analyze data from a variety of different sources—including IBM Cognos TM1 and IBM Cognos Business Intelligence—without IT support.
IBM WebSphere Application Server 8.5.5.1 to 8.5.5.x	Partially Accessible	Provides an application serving environment for hosting web-based enterprise applications. http://www-03.ibm.com/software/products/en/was-overview/
Disclaimer:		
IBM provides this data for general information on an AS IS basis. For formal representations on particular proposals, please contact an IBM Client Representative or call the IBM Federal Information Call Center at 1-800-333-6705 or TTY: 1-800-IBM-3383. Any third-party components or technologies not developed by or licensed by IBM that may be packaged with or engaged by the use of this product are not included in this Section 508 assessment.		

VPAT for IBM Rational Application Developer for WebSphere Software 9.5

VPAT for IBM Rational Application Developer for WebSphere Software 9.5	
VPAT comments:	This VPAT applies to IBM Rational Application Developer for WebSphere Software 9.5 PID# - 5724-J19

VPAT Summary		
Criteria	**Status**	**Remarks and Explanations**
1194.21 Software Applications and Operating Systems	Supports	Refer to Section 1194.21 in VPAT Details section below.

1194.22 Web-based Internet information and applications	Not Applicable	Not Applicable
1194.23 Telecommunications Products	Not Applicable	Not Applicable
1194.24 Video and Multi-Media Products	Not Applicable	Not Applicable
1194.25 Self-Contained, Closed Products	Not Applicable	Not Applicable
1194.26 Desktop and Portable Computers	Not Applicable	Not Applicable
1194.31 Functional Performance Criteria	Supports	Refer to Section 1194.31 in VPAT Details section below.
1194.41 Information, documentation, and support	Supports	Refer to Section 1194.41 in VPAT Details section below.

VPAT Details

1194.21 Software Applications and Operating Systems

Criteria	**Supporting Features**	**Remarks and Explanations**
(a) When software is designed to run on a system that has a keyboard, product functions shall be executable from a keyboard where the function itself or the result of performing a function can be discerned textually.	Supports: A keyboard can be used to achieve all tasks in the application, allowing blind and mobility-impaired users to access information without the use of the mouse.	• The following components meet this criterion: ○ IBM Rational Application Developer for WebSphere Software 9.5: ▪ J2C Tools - This was tested and verified. ▪ Cordova Tools - We don't provide mnemonics for Cordova tools, but we do test all dialogs, wizards and UI widgets are accessible using the keyboard

		▪ Debug Tools - All functions are keyboard accessible ▪ JSF - This was tested and verified ▪ Portal Tools - All the wizards and screens provided by portal tooling have keyboard actions ▪ SCA Tools - The user can tab and select all controls. ▪ Test and Profiling - Test and Profiling Tools provides keyboard access to all functions ▪ Web RAD Tools - Keyboard options are provided ○ IBM WebSphere Application Server Developer Tools for Eclipse V8.5, 8.5.5: ▪ JavaEE Tools - Keyboard equivalents are provided for all actions ▪ XML Web Services - Yes Tested with keyboard ▪ J2EE Extensions - This was tested and verified. ▪ Web RAD Tools - Keyboard options are provided

		▪ Server Tools - This was tested and verified. ▪ Aries Tools - Functions and controls are operable using keyboards ▪ Debug Tools - All functions are keyboard accessible
(b) Applications shall not disrupt or disable activated features of other products that are identified as accessibility features, where those features are developed and documented according to industry standards. Applications also shall not disrupt or disable activated features of any operating system that are identified as accessibility features where the application programming interface for those accessibility features has been documented by the manufacturer of the operating system and is available to the product developer.	Supports: Operating systems provide accessibility features that allow disabled users to customize their preferences. This application preserves those accessibility user preference settings. For example, if Sticky Keys option is selected by a mobility-impaired user, this option will continue to be activated when used with this application.	• The following components meet this criterion: ○ IBM Rational Application Developer for WebSphere Software 9.5: ▪ J2C Tools - This was tested and verified. ▪ Cordova Tools - No mnemonics are added. Hence, no way to interfere with underlying OS accessibility ▪ Debug Tools - OS keyboard accessibility is not interfered with ▪ JSF - This was tested and verified ▪ Portal Tools - All the OS based key combinations work fine while s/w is running. ▪ SCA Tools - We don't have code that interferes with accessibility.

		▪ Test and Profiling - Test and Profiling Tools does not interfere with the keyboard accessibility features built into the operating system. ▪ Web RAD Tools - No interference or key conflicts are present. ○ IBM WebSphere Application Server Developer Tools for Eclipse V8.5, 8.5.5: ▪ JavaEE Tools - None ▪ XML Web Services - No interfere ▪ J2EE Extensions - This was tested and verified. ▪ Web RAD Tools - No interference or key conflicts are present. ▪ Server Tools - This was tested and verified. ▪ Aries Tools - Tested ▪ Debug Tools - OS keyboard accessibility is not interfered with
(c) A well-defined on-screen indication of the current focus shall be provided that moves among interactive interface elements as the input focus changes. The focus shall be programmatically exposed so that Assistive Technology can track focus and focus changes.	Supports: When using the application with a keyboard, users can tell where they are on the screen and the information is available to assistive technologies to communicate screen location to visually impaired users.	• The following components do not apply to this criterion: ○ IBM Rational Application Developer for WebSphere Software 9.5: ▪ Web RAD Tools - Base Eclipse provides this

		(cont.) - IBM WebSphere Application Server Developer Tools for Eclipse V8.5, 8.5.5: - Web RAD Tools - Base Eclipse provides this - The following components meet this criterion: - IBM Rational Application Developer for WebSphere Software 9.5: - J2C Tools - This was tested and verified. - Cordova Tools - Whenever a control gets the focus, it is immediately highlighted for easy identification. When lost, the highlight is removed and the focus is passed to the next control - Debug Tools - Provides focus indicator - JSF - This was tested and verified. These tools were used during the accessibility tests: Inspect32, JAWS. - Portal Tools - Focus indicated with cursor in fields and highlighted buttons, menu items, and selections in selection lists.

		▪ SCA Tools - The user can use Eclipse's keyboard navigation to gain focus of all SCA controls. ▪ Test and Profiling - A visual focus indicator is supported ○ IBM WebSphere Application Server Developer Tools for Eclipse V8.5, 8.5.5: ▪ JavaEE Tools - Verified using JAWS ▪ XML Web Services - Yes Tested with JAWS ▪ J2EE Extensions - This was tested and verified. ▪ Server Tools - This was tested and verified. ▪ Aries Tools - Tested with JAWS ▪ Debug Tools - Provides focus indicator
(d) Sufficient information about a user interface element including the identity, operation and state of the element shall be available to Assistive Technology. When an image represents a program element, the information conveyed by the image must also be available in text.	Supports: This software application allows a screen reader to describe the user interface environment and controls to a blind user. For example, if you tab through a form and find a radio button, the user would be able to determine it is a radio button and the current selection status of the button.	• The following components meet this criterion: ○ IBM Rational Application Developer for WebSphere Software 9.5: ▪ J2C Tools - This was tested and verified. ▪ Cordova Tools - Each control has a descriptive label and informational text. Assistive

		technologies can easily read the text associated to the control has a descriptive label and informational text. Assistive technologies can easily read the text associated to the control Each control has a descriptive label and informational text. Assistive technologies can easily read the text associated to the control ▪ Debug Tools - Information provided Labels are associated with visuals, and are consistent ▪ JSF - This was tested and verified. These tools were used during the accessibility tests: Inspect32, JAWS. ▪ Portal Tools - Information about user information objects is provided UI Items (images, icons etc.) have text associated with them. ▪ SCA Tools - All controls can be read by a screen reader.

		- Test and Profiling - Screen reader text provides sufficient information. The screen reader announces labels associated with user interface elements - Web RAD Tools - Text conveys all necessary information Image use is consistent o IBM WebSphere Application Server Developer Tools for Eclipse V8.5, 8.5.5: - JavaEE Tools - Hover text available for error markers on the editors, consistent strings show up for all messages along with icons. Editors use images for various wizards. These are consistent with the wizards/nodes on all editors. - XML Web Services - Yes Tested with JAWS - J2EE Extensions - This was tested and verified. - Web RAD Tools - Text conveys all necessary information Image use is consistent - Server Tools - This was tested and verified.

		▪ Aries Tools - Tested with JAWS ▪ Debug Tools - Information provided Labels are associated with visuals, and are consistent
(e) When bitmap images are used to identify controls, status indicators, or other programmatic elements, the meaning assigned to those images shall be consistent throughout an application's performance.	Supports: The meaning assigned to images used in the application is consistent and unique, minimizing confusion of the context of use for those images.	• The following components meet this criterion: ○ IBM Rational Application Developer for WebSphere Software 9.5: ▪ J2C Tools - This was tested and verified. ▪ Cordova Tools - Each control has a descriptive label and informational text. Assistive technologies can easily read the text associated to the control ▪ Debug Tools - Labels are associated with visuals, and are consistent ▪ JSF - This was tested and verified. These tools were used during the accessibility tests: Inspect32, JAWS. ▪ Portal Tools - UI Items (images, icons etc.) have text associated with them.

		▪ SCA Tools - All controls can be read by a screen reader. ▪ Test and Profiling - The screen reader announces labels associated with user interface elements ▪ Web RAD Tools - Image use is consistent ○ IBM WebSphere Application Server Developer Tools for Eclipse V8.5, 8.5.5: ▪ JavaEE Tools - Editors use images for various wizards. These are consistent with the wizards/nodes on all editors. ▪ XML Web Services - Yes Tested with JAWS ▪ J2EE Extensions - This was tested and verified. ▪ Web RAD Tools - Image use is consistent ▪ Server Tools - This was tested and verified. ▪ Aries Tools - Tested with JAWS ▪ Debug Tools - Labels are associated with visuals, and are consistent

(f) Textual information shall be provided through operating system functions for displaying text. The minimum information that shall be made available is text content, text input caret location, and text attributes.	Supports: Text information is accessible so assistive technologies can communicate content, attributes and caret location to blind users.	• The following components meet this criterion: ○ IBM Rational Application Developer for WebSphere Software 9.5: ▪ J2C Tools - This was tested and verified ▪ Cordova Tools - Assistive technologies can easily read the text associated to the control. Ran accessibility tests to ensure this ▪ Debug Tools - Text is accessible ▪ JSF - This was tested and verified. These tools were used during the accessibility tests: Inspect32, JAWS. ▪ Portal Tools - text has been displayed in a standard way and verified using JAWS. ▪ SCA Tools - All controls can be read by a screen reader. ▪ Test and Profiling - All text is read by the screen reader ▪ Web RAD Tools - All text rendered through SWT. ○ IBM WebSphere Application Server Developer Tools for Eclipse V8.5, 8.5.5:

		▪ JavaEE Tools - Verified using JAWS ▪ XML Web Services - Images have hover over help ▪ J2EE Extensions - This was tested and verified. ▪ Web RAD Tools - All text rendered through SWT. ▪ Server Tools - This was tested and verified. ▪ Aries Tools - Tested with JAWS ▪ Debug Tools - Text is accessible
(g) Applications shall not override user selected contrast and color selections and other individual display attributes.	Supports: System settings are inherited by the application so that customized preferences will not need to be continually reset. For example, color contrast settings enhanced for a low vision user would be preserved by the application.	• The following components do not apply to this criterion: o IBM Rational Application Developer for WebSphere Software 9.5: ▪ Web RAD Tools - Non-Applicable Base Eclipse provides this o IBM WebSphere Application Server Developer Tools for Eclipse V8.5, 8.5.5: ▪ Web RAD Tools - Non-Applicable Base Eclipse provides this • The following components meet this criterion: o IBM Rational Application Developer for WebSphere Software 9.5:

		▪ J2C Tools - This was tested and verified ▪ Cordova Tools - Inherited support from Eclipse tools ▪ Debug Tools - High contrast tested Styles inherited ▪ JSF - This was tested and verified. ▪ Portal Tools - Compliant ▪ SCA Tools - SCA does not change or interfere with Eclipse's support of this. SCA dialogs use the font setting defined in the Eclipse preferences. ▪ Test and Profiling - Contrast and colors are customizable Control Panel Display tab can be used to set font, size, color ○ IBM WebSphere Application Server Developer Tools for Eclipse V8.5, 8.5.5: ▪ JavaEE Tools - Standard support derived from SWT controls None ▪ XML Web Services - Can use high contrast for user control and

		content SWT widgets inherit color and fonts ▪ J2EE Extensions - This was tested and verified. ▪ Server Tools - This was tested and verified. ▪ Aries Tools - High contrast tested Standard SWT controls. ▪ Debug Tools - High contrast tested Styles inherited
(h) When animation is displayed, the information shall be displayable in at least one non-animated presentation mode at the option of the user.	Supports: Application provides an option to display animation in a non-animated mode, allowing users with vision impairments equal access to the same information and reliable interaction with assistive technology.	• The following components do not apply to this criterion: o IBM Rational Application Developer for WebSphere Software 9.5: ▪ J2C Tools - No animation ▪ Cordova Tools - No animation ▪ JSF - This checkpoint does not apply ▪ Portal Tools - No Animation used ▪ SCA Tools - No animation is included ▪ Test and Profiling - There is no animation in the Test and Profiling Tools component ▪ Web RAD Tools - Non-Applicable

		○ IBM WebSphere Application Server Developer Tools for Eclipse V8.5, 8.5.5: ▪ JavaEE Tools - None ▪ XML Web Services - No animation ▪ J2EE Extensions - No animation ▪ Web RAD Tools - Non-Applicable ▪ Server Tools - We don't use animation ▪ Aries Tools - No animation • The following components meet this criterion: ○ IBM Rational Application Developer for WebSphere Software 9.5: ▪ Debug Tools - Animations are described by screen readers ○ IBM WebSphere Application Server Developer Tools for Eclipse V8.5, 8.5.5: ▪ Debug Tools - Animations are described by screen readers
(i) Color coding shall not be used as the only means of conveying information, indicating	Supports: Color is used only as an enhancement, and an alternate means to convey information or indicate an action is	• The following components do not apply to this criterion:

an action, prompting a response, or distinguishing a visual element.	available to users with visual impairments.	○ IBM WebSphere Application Server Developer Tools for Eclipse V8.5, 8.5.5: ▪ Server Tools - We don't use color to convey information or indicate an action. ▪ Aries Tools - Not used to convey information or action. • The following components meet this criterion: ○ IBM Rational Application Developer for WebSphere Software 9.5: ▪ J2C Tools - This was tested and verified ▪ Cordova Tools - Labels that require special attention in order for the tools to work are highlighted with different colors and are dynamic depending on the state of the configuration of the requirements ▪ Debug Tools - Colors are used for enhancement ▪ JSF - This was tested and verified. ▪ Portal Tools - Compliant ▪ SCA Tools - Color is not used to convey additional information.

		▪ Test and Profiling - Coverage data is presented through textual percentages and not just through colored indicators ▪ Web RAD Tools - Color, alone, does not convey information o IBM WebSphere Application Server Developer Tools for Eclipse V8.5, 8.5.5: ▪ JavaEE Tools - Colors are used to indicate errors/warnings in editors ▪ XML Web Services - Color is not used to indicate selection in the WSDL and XML schema Editors. ▪ J2EE Extensions - This was tested and verified. ▪ Web RAD Tools - Color, alone, does not convey information ▪ Debug Tools - Colors are used for enhancement
(j) When a product permits a user to adjust color and contrast settings, a variety of color selections capable of producing a range of contrast levels shall be provided.	Supports: When color customization is supported, a variety of color selections and a range of contrast improves	• The following components do not apply to this criterion: o IBM Rational Application Developer for WebSphere Software 9.5:

	accessibility for users with vision impairments.	▪ J2C Tools - No color customization ▪ JSF - This checkpoint does not apply ▪ Portal Tools - Color customization not supported. ▪ SCA Tools - Color not used. ▪ Web RAD Tools - Non-Applicable ○ IBM WebSphere Application Server Developer Tools for Eclipse V8.5, 8.5.5: ▪ JavaEE Tools - Color customization not supported by the component ▪ XML Web Services - No Support for customized color ▪ J2EE Extensions - No color customization ▪ Web RAD Tools - Non-Applicable ▪ Server Tools - We don't use color ▪ Aries Tools - No customization. • The following components meet this criterion: ○ IBM Rational Application Developer for WebSphere Software 9.5:

		▪ Cordova Tools - We do provide a meaning to customize the color palette of the Cordova console, which shows the output of the operations and differentiates the error from standard output through colors ▪ Debug Tools - Color customization supported ▪ Test and Profiling - A wide range of contrast levels are supported ○ IBM WebSphere Application Server Developer Tools for Eclipse V8.5, 8.5.5: ▪ Debug Tools - Color customization supported
(k) Software shall not use flashing or blinking text, objects, or other elements having a flash or blink frequency greater than 2 Hz and lower than 55 Hz.	Supports: The use of blinking text, objects or elements has been avoided, reducing risk of seizures for users with photosensitive epilepsy.	• The following components do not apply to this criterion: ○ IBM Rational Application Developer for WebSphere Software 9.5: ▪ J2C Tools - No flashing ▪ Cordova Tools - No flashing ▪ JSF - This checkpoint does not apply ▪ SCA Tools - No flashing controls are used.

		▪ Test and Profiling - No flashing or blinking is used ▪ Web RAD Tools - Base Eclipse would adhere to this ○ IBM WebSphere Application Server Developer Tools for Eclipse V8.5, 8.5.5: ▪ JavaEE Tools - The component does not use flashing elements ▪ XML Web Services - No flashing or blinking items ▪ J2EE Extensions - No Timing ▪ Web RAD Tools - Base Eclipse would adhere to this ▪ Server Tools - No flashing or blinking items. ▪ Aries Tools - No blinking items. • The following components meet this criterion: ○ IBM Rational Application Developer for WebSphere Software 9.5: ▪ Debug Tools - No flashing/blinking ▪ Portal Tools - No contents to blink, flicker or move.

		◦ IBM WebSphere Application Server Developer Tools for Eclipse V8.5, 8.5.5: ▪ Debug Tools - No flashing/blinking
(l) When electronic forms are used, the form shall allow people using Assistive Technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.	Supports: The application design allows assistive technology access to information, field elements, and functionality required to complete and submit forms.	• The following components do not apply to this criterion: ◦ IBM Rational Application Developer for WebSphere Software 9.5: ▪ J2C Tools - No forms ▪ Test and Profiling - Test and Profiling Tools does not make use of electronic forms ◦ IBM WebSphere Application Server Developer Tools for Eclipse V8.5, 8.5.5: ▪ JavaEE Tools - Electronic forms are not used by the component. ▪ XML Web Services - Do not use forms ▪ J2EE Extensions - No forms • The following components meet this criterion: ◦ IBM Rational Application Developer for WebSphere Software 9.5: ▪ Cordova Tools - Each control has a descriptive label and informational text. Assistive

		technologies can easily read the text associated to the control ▪ Debug Tools - Forms are accessible ▪ JSF - This was tested and verified. These tools were used during the accessibility tests: Inspect32, JAWS. ▪ Portal Tools - All wizards and dialogs have keyboard equivalent shortcuts. ▪ SCA Tools - All forms can be traversed using Eclipse's keyboard navigation. ▪ Web RAD Tools - Support provided by SWT in base Eclipse ○ IBM WebSphere Application Server Developer Tools for Eclipse V8.5, 8.5.5: ▪ Web RAD Tools - Support provided by SWT in base Eclipse ▪ Server Tools - This was tested and verified. ▪ Aries Tools - Tested with JAWS ▪ Debug Tools - Forms are accessible

1194.31 Functional Performance Criteria		
Criteria	**Supporting Features**	**Remarks and Explanations**
(a) At least one mode of operation and information retrieval that does not require user vision shall be provided, or support for Assistive Technology used by people who are blind or visually impaired shall be provided.	Supports: See the following for supporting features: - 1194.21 a, b, c, d, e, f, h, i, l - 1194.22 all - 1194.23 k1, k4 - 1194.24 d - 1194.25 a, b, c, e, f, g - 1194.26 b, d	• The following components meet this criterion: ○ IBM Rational Application Developer for WebSphere Software 9.5: ▪ J2C Tools ▪ Cordova Tools ▪ Debug Tools ▪ JSF ▪ Portal Tools ▪ SCA Tools ▪ Test and Profiling ▪ Web RAD Tools ○ IBM WebSphere Application Server Developer Tools for Eclipse V8.5, 8.5.5: ▪ JavaEE Tools ▪ XML Web Services ▪ J2EE Extensions ▪ Web RAD Tools ▪ Server Tools ▪ Aries Tools ▪ Debug Tools
(b) At least one mode of operation and information retrieval that does not require visual acuity greater than 20/70 shall be provided in audio and enlarged print output working together or independently, or support for Assistive Technology used by	Supports: See the following for supporting features: - 1194.21 c, g, i, j, l - 1194.22 n - 1194.25 h - 1194.26 d	• The following components meet this criterion: ○ IBM Rational Application Developer for WebSphere Software 9.5: ▪ J2C Tools ▪ Cordova Tools ▪ Debug Tools

people what are visually impaired shall be provided.		▪ JSF ▪ Portal Tools ▪ SCA Tools ▪ Test and Profiling ▪ Web RAD Tools o IBM WebSphere Application Server Developer Tools for Eclipse V8.5, 8.5.5: ▪ JavaEE Tools ▪ XML Web Services ▪ J2EE Extensions ▪ Web RAD Tools ▪ Server Tools ▪ Aries Tools ▪ Debug Tools
(c) At least one mode of operation and information retrieval that does not require user hearing shall be provided, or support for Assistive Technology used by people who are deaf or hard of hearing shall be provided.	Not Applicable	• The following components do not apply to this criterion: o IBM Rational Application Developer for WebSphere Software 9.5: ▪ J2C Tools ▪ Cordova Tools ▪ Debug Tools ▪ JSF ▪ Portal Tools ▪ SCA Tools ▪ Test and Profiling ▪ Web RAD Tools o IBM WebSphere Application Server Developer Tools for Eclipse V8.5, 8.5.5: ▪ JavaEE Tools ▪ XML Web Services ▪ J2EE Extensions

		▪ Web RAD Tools ▪ Server Tools ▪ Aries Tools ▪ Debug Tools
(d) Where audio information is important for the use of the product, at least one mode of operation and information retrieval shall be provided in an enhanced auditory fashion, or support for assistive hearing devices shall be provided.	Not Applicable	• The following components do not apply to this criterion: ○ IBM Rational Application Developer for WebSphere Software 9.5: ▪ J2C Tools ▪ Cordova Tools ▪ Debug Tools ▪ JSF ▪ Portal Tools ▪ SCA Tools ▪ Test and Profiling ▪ Web RAD Tools ○ IBM WebSphere Application Server Developer Tools for Eclipse V8.5, 8.5.5: ▪ JavaEE Tools ▪ XML Web Services ▪ J2EE Extensions ▪ Web RAD Tools ▪ Server Tools ▪ Aries Tools ▪ Debug Tools
(e) At least one mode of operation and information retrieval that does not require user speech shall be provided, or support for Assistive Technology used by people with disabilities shall be provided.	Not Applicable	This is not a speech product.

(f) At least one mode of operation and information retrieval that does not require fine motor control or simultaneous actions and that is operable with limited reach and strength shall be provided.	Supports: See the following for supporting features: - 1194.21 a, b - 1194.22 l, p - 1194.23 k1, k2, k3 - 1194.25 b, j1, j2, j3, j4 - 1194.26 d	• The following components meet this criterion: ○ IBM Rational Application Developer for WebSphere Software 9.5: ▪ J2C Tools ▪ Cordova Tools ▪ Debug Tools ▪ JSF ▪ Portal Tools ▪ SCA Tools ▪ Test and Profiling ▪ Web RAD Tools ○ IBM WebSphere Application Server Developer Tools for Eclipse V8.5, 8.5.5: ▪ JavaEE Tools ▪ XML Web Services ▪ J2EE Extensions ▪ Web RAD Tools ▪ Server Tools ▪ Aries Tools ▪ Debug Tools
1194.41 Information, documentation, and support		
Criteria	**Supporting Features**	**Remarks and Explanations**
(a) Product support documentation provided to end-users shall be made available in alternate formats upon request, at no additional charge.	Supports: Product support documentation is provided in at least one accessible format.	• The following components meet this criterion: ○ IBM Rational Application Developer for WebSphere Software 9.5: ▪ UA Documentation - Scripts are keyboard accessible Links

		provided for plugins No timed responses No flashing information Keyboard shortcuts to skip to content Title and frame source are provided for frames Text-only pages provided where necessary Text alternatives provided no image maps Captions provided no time-based media no live multimedia Form labels can be programmatically determined Tables are accessible Web pages can be read without style sheets Color is not used as the sole means of conveying information ○ IBM WebSphere Application Server Developer Tools for Eclipse V8.5, 8.5.5: ▪ UA Documentation - Text alternatives provided no image maps Captions provided no time-based media no live multimedia Form labels can be programmatically determined Tables are accessible Web pages

		can be read without style sheets Color is not used as the sole means of conveying information Scripts are keyboard accessible Links provided for plugins No timed responses No flashing information Keyboard shortcuts to skip to content Title and frame source are provided for frames Text-only pages provided where necessary
(b) End-users shall have access to a description of the accessibility and compatibility features of products in alternate formats or alternate methods upon request, at no additional charge.	Supports: Documentation includes a description of accessibility and compatibility features that make it easier for people with disabilities to use the product. Those descriptions are available in alternate formats upon request.	• The following components meet this criterion: ○ IBM Rational Application Developer for WebSphere Software 9.5: ▪ UA Documentation - Accessibility features documented ○ IBM WebSphere Application Server Developer Tools for Eclipse V8.5, 8.5.5: ▪ UA Documentation - Accessibility features documented

(c) Support services for products shall accommodate the communication needs of end-users with disabilities.	Supports: Operating systems provide accessibility features that allow disabled users to customize their preferences. This application preserves those accessibility user preference settings. For example, if Sticky Keys option is selected by a mobility-impaired user, this option will continue to be activated when used with this application. In addition to standard IBM help desk and support Web sites, IBM has established a TTY telephone service for use by deaf or hard of hearing customers to access sales and support services.	
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IBM provides this data for general information on an AS IS basis. All product and/or component names are current as of the time this VPAT is published. For formal representations on particular proposals, please contact an IBM Client Representative or call the IBM Federal Information Call Center at 1-800-333-6705 or TTY: 1-800-IBM-3383. Any third-party components or technologies not developed by or licensed by IBM that may be packaged with or engaged by the use of this product are not included in this Section 508 assessment.		

VPAT for IBM Rational Collaborative Lifecycle Management v6.0.x

VPAT for IBM Rational Collaborative Lifecycle Management v6.0.x	
VPAT comments:	This IBM Rational Collaborative Lifecycle Management (CLM) product is a packaged suite containing the bundled components listed in the packaging section below. Please refer to that section for the component(s) overall status, links to VPAT details, and the function that each component provides.

	For a detailed description of the parent features and benefits, please refer to the following URLs: http://www-03.ibm.com/software/products/en/ratlclm and https://jazz.net/products/clm/ This CLM 6.0.x package includes: - IBM Rational Team Concert 6.0.x - IBM Rational Quality Manager 6.0.x - IBM Rational DOORS Next Generation 6.0.x as well as the following, separately installable Products included as Supporting Programs: - IBM DB2 for Linux, Unix, and Windows 10.5 - IBM WebSphere Application Server 8.5.5

VPAT Summary

Criteria	Status	Remarks and Explanations
1194.21 Software Applications and Operating Systems	Not Applicable	This product is a packaged suite - see links below for VPAT details on each component.
1194.22 Web-based Internet information and applications	Not Applicable	This product is a packaged suite - see links below for VPAT details on each component.
1194.23 Telecommunications Products	Not Applicable	This product is a packaged suite - see links below for VPAT details on each component.
1194.24 Video and Multi-Media Products	Not Applicable	This product is a packaged suite - see links below for VPAT details on each component.
1194.25 Self-Contained, Closed Products	Not Applicable	This product is a packaged suite - see links below for VPAT details on each component.

1194.26 Desktop and Portable Computers	Not Applicable	This product is a packaged suite - see links below for VPAT details on each component.
1194.31 Functional Performance Criteria	Not Applicable	This product is a packaged suite - see links below for VPAT details on each component.
1194.41 Information, documentation, and support	Not Applicable	This product is a packaged suite - see links below for VPAT details on each component. Also, see 1194.41 Information, Documentation, and Support regarding IBM's TTY line.
VPAT Details		
1194.41 Information, documentation, and support		
Criteria	**Supporting Features**	**Remarks and Explanations**
(a) Product support documentation provided to end-users shall be made available in alternate formats upon request, at no additional charge.	Not Applicable	
(b) End-users shall have access to a description of the accessibility and compatibility features of products in alternate formats or alternate methods upon request, at no additional charge.	Not Applicable	
(c) Support services for products shall accommodate the communication needs of end-users with disabilities.	Supports: Operating systems provide accessibility features that allow disabled users to customize their preferences. This application preserves those accessibility user preference settings. For example, if Sticky Keys option is selected by a	

	mobility-impaired user, this option will continue to be activated when used with this application. In addition to standard IBM help desk and support Web sites, IBM has established a TTY telephone service for use by deaf or hard of hearing customers to access sales and support services.	

Other IBM products packaged with IBM Rational Collaborative Lifecycle Management v6.0.x

The releases of other IBM products packaged with this product are listed in the table below. The Product / Component names are current as of the time this VPAT is published. This product may include later releases of the listed bundled products. When you request a VPAT for any other IBM products packaged with this product you will receive the latest version of the published VPAT.

Product / Component name (web link to VPAT)	**Status**	**Function provided by product**
IBM Rational Quality Manager 6.0	Partially Accessible	IBM® Rational® Quality Manager is a collaborative hub for business-driven software and systems quality across virtually any platform and type of testing. This software helps teams share information seamlessly, use automation to accelerate project schedules and report on metrics for informed release decisions. For a detailed description of the RQM features and benefits, please refer to the following URL: https://jazz.net/products/rational-quality-manager/

[IBM DB2 for Linux, Unix, and Windows 10.5]	Accessible	IBM® DB2® for Linux, UNIX and Windows is a next generation data platform for transactional and analytical operations. It provides continuous availability of data to keep transactional workloads and analytics operating at maximum efficiency. And, it delivers breakthrough in-memory performance enabling speed of thought analytics without the constraints of other in-memory solutions with the simplicity of "load and go" setup. DB2 is optimized to deliver industry-leading performance while lowering costs and improving IT productivity. For a detailed description of DB2 features and benefits, please refer to the following URL: http://www.ibm.com/software/data/db2/linux-unix-windows/index.html
[IBM Rational DOORS Next Generation 6.0]	Partially Accessible	IBM Rational DOORS Next Generation offers a smarter way to manage your requirements that can help your teams reduce development costs, accelerate time to market, and lower cost of quality. Designed for collaboration, it provides a single platform for managing requirements so your teams can work more effectively across disciplines, time zones and supply chains. For a detailed description of the RDNG features and benefits, please refer to the following URL: https://jazz.net/products/rational-doors-next-generation/

IBM WebSphere Application Server 8.5.5	Accessible	IBM® WebSphere® Application Server products provide a choice of fast, flexible and secure application servers to develop and manage applications on premises or on cloud. They are certified to Java EE and support a broad set of programming models from lightweight development environments to large enterprise deployments—on premises and on cloud. For a detailed description of WAS features and benefits, please refer to the following URL: http://www.ibm.com/software/products/en/was-overview/
IBM Rational Team Concert 6.0	Partially Accessible	IBM Rational Team Concert helps build better software and products with an all-in-one agile environment for development teams. This includes agile, formal and hybrid planning and reporting that are all on a common platform. RTC provides collaborative change management capabilities. These capabilities are available separately and can be integrated with popular source control systems. For a detailed description of the RTC features and benefits, please refer to the following URL: https://jazz.net/products/rational-team-concert/
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IBM provides this data for general information on an AS IS basis. All product and/or component names are current as of the time this VPAT is published. For formal representations on particular proposals, please contact an IBM Client Representative or call the IBM Federal Information Call Center at 1-800-333-6705 or TTY: 1-800-IBM-3383. Any third-party components or technologies not developed by or licensed by IBM that may be packaged with or engaged by the use of this product are not included in this Section 508 assessment.		

VPAT for IBM Rational Functional Tester 8.5.0.1, 8.5.1, 8.6

06/22/2017 05:00:27 EDT
State of Arkansas

VPAT for IBM Rational Functional Tester 8.5.0.1, 8.5.1, 8.6	
VPAT comments:	For a detailed description of the parent features and benefits, please refer to the following URL: http://www-03.ibm.com/software/products/en/functional For JAWS screen reader to work on Java Swing based UI http://www-01.ibm.com/support/docview.wss?uid=swg21647679

VPAT Summary

Criteria	Status	Remarks and Explanations
Section 1194.21 Software Applications and Operating Systems	Supports	Refer to Section 1194.21 in VPAT Details section below.
Section 1194.22 Web-based Internet information & applications	Supports	Refer to Section 1194.22 in VPAT Details section below.
Section 1194.23 Telecommunications Products	Not applicable	Not applicable
Section 1194.24 Video and Multi-media Products	Supports	Refer to Section 1194.24 in VPAT Details section below.
Section 1194.25 Self-Contained, Closed Products	Not applicable	Not applicable
Section 1194.26 Desktop and Portable Computers	Not applicable	Not applicable
Section 1194.31 Functional Performance Criteria	Supports	Refer to Section 1194.31 in VPAT Details section below.
Section 1194.41 Information, Documentation, and Support	Supports	Refer to Section 1194.41 in VPAT Details section below.

VPAT Details

Section 1194.21 Software Applications and Operating Systems - Detail

Criteria	Supporting Features	Remarks and Explanations
(a) When software is designed to run on a system that has a keyboard, product functions shall be executable from a keyboard where the function itself or the result of performing a function can be discerned textually.	Supports: A keyboard can be used to achieve all tasks in the application, allowing blind and mobility-impaired users to access information without the use of the mouse.	The following components meet this criterion: - IBM Rational Functional Tester 8.5.0.1 - Rational Functional tester allows user to achieve functionalities through keyboard.
(b) Applications shall not disrupt or disable activated features of other products that are identified as accessibility features, where those features are developed and documented according to industry standards. Applications also shall not disrupt or disable activated features of any operating system that are identified as accessibility features where the application programming interface for those accessibility features has been documented by the manufacturer of the operating system and is available to the product developer.	Supports: Operating systems provide accessibility features that allow disabled users to customize their preferences. This application preserves those accessibility user preference settings. For example, if Sticky Keys option is selected by a mobility-impaired user, this option will continue to be activated when used with this application.	The following components meet this criterion: - IBM Rational Functional Tester - Does not interfere with activated accessibility settings.
(c) A well-defined on-screen indication of the current focus shall be provided that moves among interactive interface elements as the input focus changes. The focus shall be programmatically exposed so that Assistive Technology can track focus and focus changes.	Supports: When using the application with a keyboard, users can tell where they are on the screen and the information is available to assistive technologies to communicate screen location to visually impaired users.	The following components meet this criterion: - IBM Rational Functional Tester - The focus is very well distinguish and visible.
(d) Sufficient information about a user interface element including the identity, operation and state of the element shall be available to Assistive Technology. When an image represents a program element, the information conveyed by the image must also be available in text.	Supports: This software application allows a screen reader to describe the user interface environment and controls to a blind user. For example, if you tab through a form and find a radio button, the user would be able to determine it is a radio button and the current selection status of the button.	The following components meet this criterion: - IBM Rational Functional Tester - Basic details of controls are available to assistive technology. Images/icons used in Rational Functional tester have unique and consistent meaning.
(e) When bitmap images are used to identify controls, status indicators, or other programmatic	Supports: The meaning assigned to images used	The following components meet this criterion:

Criteria	Supporting Features	Remarks and Explanations
elements, the meaning assigned to those images shall be consistent throughout an application's performance.	in the application is consistent and unique, minimizing confusion of the context of use for those images.	- IBM Rational Functional Tester - Images/icons used in Rational Functional tester have unique and consistent meaning.
(f) Textual information shall be provided through operating system functions for displaying text. The minimum information that shall be made available is text content, text input caret location, and text attributes.	Supports: Text information is accessible so assistive technologies can communicate content, attributes and caret location to blind users.	The following components meet this criterion: - IBM Rational Functional Tester - Textual information is available through assitive technology for various controls used in Rational Functional Tester wizard.
(g) Applications shall not override user selected contrast and color selections and other individual display attributes.	Supports: System settings are inherited by the application so that customized preferences will not need to be continually reset. For example, color contrast settings enhanced for a low vision user would be preserved by the application.	The following components meet this criterion: - IBM Rational Functional Tester - Does not interfere with user specific system settings and the settings are inherited.
(h) When animation is displayed, the information shall be displayable in at least one non-animated presentation mode at the option of the user.	Supports: Application provides an option to display animation in a non-animated mode, allowing users with vision impairments equal access to the same information and reliable interaction with assistive technology.	The following components meet this criterion: - IBM Rational Functional Tester - Animation is not used.
(i) Color coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.	Supports: Color is used only as an enhancement, and an alternate means to convey information or indicate an action is available to users with visual impairments.	The following components meet this criterion: - IBM Rational Functional Tester - Color is used as an enhancement & information is also conveyed through text / tooltip.
(j) When a product permits a user to adjust color and contrast settings, a variety of color selections capable of producing a range of contrast levels shall be provided.	Supports: When color customization is supported, a variety of color selections and a range of contrast improves accessibility for users with vision impairments.	The following components meet this criterion: - IBM Rational Functional Tester - Color customization is allowed, wide variety has been provided using the color palette.
(k) Software shall not use flashing or blinking text, objects, or other elements having a flash or blink frequency greater than 2 Hz and lower than 55 Hz.	Supports: The use of blinking text, objects or elements has been avoided, reducing risk of seizures for users with photosensitive epilepsy.	The following components meet this criterion: - IBM Rational Functional Tester - Usage of flashing or blinking avoided.
(l) When electronic forms are used, the form shall allow people using Assistive Technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.	Supports: The application design allows assistive technology access to information, field elements, and functionality required to complete and submit forms.	The following components meet this criterion: - IBM Rational Functional Tester - Forms have not been used but for similar controls the required information is available.

Section 1194.22 Web-based Internet information and applications - Detail

Criteria	Supporting Features	Remarks and Explanations
(a) A text equivalent for every non-text element shall be provided (e.g., via "alt", "longdesc", or in element content).	Not applicable	
(b) Equivalent alternatives for any multimedia presentation shall be synchronized with the presentation.	Supports: Synchronized captions, transcripts, text and/or audio descriptions of multimedia presentations are provided to ensure meaningful interpretation by disabled users.	The following components meet this criterion: - IBM Rational Functional Tester - Information is also provided through alternative ways as text/tooltip.
(c) Web pages shall be designed so that all information conveyed with color is also available without color, for example from context or markup.	Not applicable	
(d) Documents shall be organized so they are readable without requiring an associated style sheet.	Not applicable	
(e) Redundant text links shall be provided for each active region of a server-side image map.	Not applicable	
(f) Client-side image maps shall be provided instead of server-side image maps except where the regions cannot be defined with an available geometric shape.	Not applicable	

Criteria	Supporting Features	Remarks and Explanations
(g) Row and column headers shall be identified for data tables.	Not applicable	
(h) Markup shall be used to associate data cells and header cells for data tables that have two or more logical levels of row or column headers.	Not applicable	
(i) Frames shall be titled with text that facilitates frame identification and navigation.	Not applicable	
(j) Pages shall be designed to avoid causing the screen to flicker with a frequency greater than 2 Hz and lower than 55 Hz.	Not applicable	
(k) A text-only page, with equivalent information or functionality, shall be provided to make a web site comply with the provisions of this part, when compliance cannot be accomplished in any other way. The content of the text-only page shall be updated whenever the primary page changes.	Not applicable	
(l) When pages utilize scripting languages to display content, or to create interface elements, the information provided by the script shall be identified with functional text that can be read by Assistive Technology.	Not applicable	
(m) When a web page requires that an applet, plug-in or other application be present on the client system to interpret page content, the page must provide a link to a plug-in or applet that complies with §1194.21(a) through (l).	Not applicable	
(n) When electronic forms are designed to be completed on-line, the form shall allow people using Assistive Technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.	Not applicable	
(o) A method shall be provided that permits users to skip repetitive navigation links.	Not applicable	
(p) When a timed response is required, the user shall be alerted and given sufficient time to indicate more time is required.	Supports: When a timed response is required, an option to request more time to complete the action is provided to the user.	The following components meet this criterion: - IBM Rational Functional Tester - Rational Functional Tester provides user to increase the time out for response as required.

Section 1194.24 Video and Multi-media Products - Detail

Criteria	Supporting Features	Remarks and Explanations
(a) All analog television displays 13 inches and larger, and computer equipment that includes analog television receiver or display circuitry, shall be equipped with caption decoder circuitry which appropriately receives, decodes, and displays closed captions from broadcast, cable, videotape, and DVD signals. As soon as practicable, but not later than July 1, 2002, widescreen digital television (DTV) displays measuring at least 7.8 inches vertically, DTV sets with conventional displays measuring at least 13 inches vertically, and stand-alone DTV tuners, whether or not they are marketed with display screens, and computer equipment that includes DTV receiver or display circuitry, shall be equipped with caption decoder circuitry which appropriately receives, decodes, and displays closed captions from broadcast, cable, videotape, and DVD signals.	Not applicable	
(b) Television tuners, including tuner cards for use in computers, shall be equipped with secondary audio program playback circuitry.	Not applicable	
(c) All training and informational video and multimedia productions which support the agency's mission, regardless of format, that contain speech or other audio information necessary for the comprehension of the content, shall be open or closed captioned.	Supports: Training and informational video and multimedia provided with the product supports captioning for relevant audio for deaf and hard of hearing users.	The following components meet this criterion: - IBM Rational Functional Tester - Information is also provided through alternative ways as text/tooltip.

Criteria	Supporting Features	Remarks and Explanations
(d) All training and informational video and multimedia productions which support the agency's mission, regardless of format, that contain visual information necessary for the comprehension of the content, shall be audio described.	Supports: Training and informational video and multimedia provided with the product supports audio descriptions of visual information for blind users.	The following components meet this criterion: - IBM Rational Functional Tester - Information is also provided through alternative ways as text/tooltip.
(e) Display or presentation of alternate text presentation or audio descriptions shall be user-selectable unless permanent.	Not applicable	

Section 1194.31 Functional Performance - Detail

Criteria	Supporting Features	Remarks and Explanations
(a) At least one mode of operation and information retrieval that does not require user vision shall be provided, or support for Assistive Technology used by people who are blind or visually impaired shall be provided.	Supports: See the following for supporting features: - 1194.21 a, b, c, d, e, f, h, i, l - 1194.22 all	The following components meet this criterion: - IBM Rational Functional Tester
(b) At least one mode of operation and information retrieval that does not require visual acuity greater than 20/70 shall be provided in audio and enlarged print output working together or independently, or support for Assistive Technology used by people what are visually impaired shall be provided.	Supports: See the following for supporting features: - 1194.21 c, g, i, j, l - 1194.22 n	The following components meet this criterion: - IBM Rational Functional Tester
(c) At least one mode of operation and information retrieval that does not require user hearing shall be provided, or support for Assistive Technology used by people who are deaf or hard of hearing shall be provided.	Supports: The application is designed with an option to display a visual cue for audio alerts used, so that deaf or hard of hearing users can complete the task. Also, see the following for other supporting features: - 1194.22 b, m	The following components meet this criterion: - IBM Rational Functional Tester
(d) Where audio information is important for the use of the product, at least one mode of operation and information retrieval shall be provided in an enhanced auditory fashion, or support for assistive hearing devices shall be provided.	Supports: Supports: Software allows users to adjust volume preferences to accommodate individual needs. Functionality is provided to reset volume to the default level if desired.	The following components meet this criterion: - IBM Rational Functional Tester - Also, user preference settings for accessibility in the operating system are preserved. Audio not used
(e) At least one mode of operation and information retrieval that does not require user speech shall be provided, or support for Assistive Technology used by people with disabilities shall be provided.	Not applicable	
(f) At least one mode of operation and information retrieval that does not require fine motor control or simultaneous actions and that is operable with limited reach and strength shall be provided.	Supports: See the following for supporting features: - 1194.21 a, b - 1194.22 l, p	The following components meet this criterion: - IBM Rational Functional Tester

Section 1194.41 Information, Documentation, and Support - Detail

Criteria	Supporting Features	Remarks and Explanations
(a) Product support documentation provided to end-users shall be made available in alternate formats upon request, at no additional charge.	Supports: Product support documentation is provided in at least one accessible format.	The following components meet this criterion: - IBM Rational Functional Tester - Files are in HTML format which can be accessed by the screen reader. Topics are structured and organized as per the common Rational UA guidelines. We have the TOCs anchored, related topics are listed, have the shortcut tools to browse through the contents. Topics are structured and organized as per the common Rational UA guidelines. Alt text used for images. HTML format of the product tours text is included that is picked up by the screen reader tools. Table titles inserted for the tables. Scroll bars appear if the page length exceeds. They can also use the

Criteria	Supporting Features	Remarks and Explanations
		keyboards to scroll down. English language,
(b) End-users shall have access to a description of the accessibility and compatibility features of products in alternate formats or alternate methods upon request, at no additional charge.	Supports: Documentation includes a description of accessibility and compatibility features that make it easier for people with disabilities to use the product. Those descriptions are available in alternate formats upon request.	The following components meet this criterion: - IBM Rational Functional Tester - The topic is available in the Information Center.
(c) Support services for products shall accommodate the communication needs of end-users with disabilities.	Supports: In addition to standard IBM help desk and support Web sites, IBM has established a TTY telephone service for use by deaf or hard of hearing customers to access sales and support services.	

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Online Information Centers have been replaced by the IBM Knowledge Center - Hosted Edition service. To request the current accessibility status for the IBM Knowledge Center - Hosted Edition service, visit the IBM Product Accessibility information web page (https://www-03.ibm.com/research/accessibility/requests/accvpat.nsf/bidxjs?OpenForm) and select the entry for IBM Knowledge Center - Hosted Edition.

VPAT for IBM Rational Performance Tester 8.7.1

VPAT for IBM Rational Performance Tester 8.7.1		
VPAT comments:	IBM Rational Performance Tester product webpage: http://www-03.ibm.com/software/products/en/performance	
VPAT Summary		
Criteria	**Status**	**Remarks and Explanations**
1194.21 Software Applications and Operating Systems	Supports	Refer to Section 1194.21 in VPAT Details section below.
1194.22 Web-based Internet information and applications	Not Applicable	Not Applicable
1194.23 Telecommunications Products	Not Applicable	Not Applicable
1194.24 Video and Multi-Media Products	Not Applicable	Not Applicable
1194.25 Self-Contained, Closed Products	Not Applicable	Not Applicable
1194.26 Desktop and Portable Computers	Not Applicable	Not Applicable
1194.31 Functional Performance Criteria	Supports	Refer to Section 1194.31 in VPAT Details section below.
1194.41 Information, documentation, and support	Supports	Refer to Section 1194.41 in VPAT Details section below.
VPAT Details		
1194.21 Software Applications and Operating Systems		
Criteria	**Supporting Features**	**Remarks and Explanations**
(a) When software is designed to run on a system that has a keyboard, product	Supports:	• The following components meet this criterion:

functions shall be executable from a keyboard where the function itself or the result of performing a function can be discerned textually.	A keyboard can be used to achieve all tasks in the application, allowing blind and mobility-impaired users to access information without the use of the mouse.	○ IBM Rational Performance Tester 8.7.1: ▪ RPT 8.7.1 Software Accessibility Checklist - Keyboard equivalents are provided for all actions.
(b) Applications shall not disrupt or disable activated features of other products that are identified as accessibility features, where those features are developed and documented according to industry standards. Applications also shall not disrupt or disable activated features of any operating system that are identified as accessibility features where the application programming interface for those accessibility features has been documented by the manufacturer of the operating system and is available to the product developer.	Supports: Operating systems provide accessibility features that allow disabled users to customize their preferences. This application preserves those accessibility user preference settings. For example, if Sticky Keys option is selected by a mobility-impaired user, this option will continue to be activated when used with this application.	• The following components meet this criterion: ○ IBM Rational Performance Tester 8.7.1: ▪ RPT 8.7.1 Software Accessibility Checklist - Does not interfere with keyboard accessibility features provided by the operating system.
(c) A well-defined on-screen indication of the current focus shall be provided that moves among interactive interface elements as the input focus changes. The focus shall be programmatically exposed so that Assistive Technology can track focus and focus changes.	Supports: When using the application with a keyboard, users can tell where they are on the screen and the information is available to assistive technologies to communicate screen location to visually impaired users.	• The following components meet this criterion: ○ IBM Rational Performance Tester 8.7.1: ▪ RPT 8.7.1 Software Accessibility Checklist - A visual focus indicator that moves among interactive objects as the input focus changes and is programmatically

		exposed to assistive technology is provided.
(d) Sufficient information about a user interface element including the identity, operation and state of the element shall be available to Assistive Technology. When an image represents a program element, the information conveyed by the image must also be available in text.	Supports: This software application allows a screen reader to describe the user interface environment and controls to a blind user. For example, if you tab through a form and find a radio button, the user would be able to determine it is a radio button and the current selection status of the button.	• The following components meet this criterion: ○ IBM Rational Performance Tester 8.7.1: ▪ RPT 8.7.1 Software Accessibility Checklist - Semantic information is provided about user interface objects. Labels are associated with controls, objects, icons and images. The meaning of images is consistent throughout the application.
(e) When bitmap images are used to identify controls, status indicators, or other programmatic elements, the meaning assigned to those images shall be consistent throughout an application's performance.	Supports: The meaning assigned to images used in the application is consistent and unique, minimizing confusion of the context of use for those images.	• The following components meet this criterion: ○ IBM Rational Performance Tester 8.7.1: ▪ RPT 8.7.1 Software Accessibility Checklist - Labels are associated with controls, objects, icons and images. The meaning of images is consistent throughout the application.
(f) Textual information shall be provided through operating system functions for	Supports:	• The following components meet this criterion:

displaying text. The minimum information that shall be made available is text content, text input caret location, and text attributes.	Text information is accessible so assistive technologies can communicate content, attributes and caret location to blind users.	○ IBM Rational Performance Tester 8.7.1: ▪ RPT 8.7.1 Software Accessibility Checklist - Text is provided through standard system function calls or through an API (application programming interface) which supports interaction with assistive technology.
(g) Applications shall not override user selected contrast and color selections and other individual display attributes.	Supports: System settings are inherited by the application so that customized preferences will not need to be continually reset. For example, color contrast settings enhanced for a low vision user would be preserved by the application.	• The following components meet this criterion: ○ IBM Rational Performance Tester 8.7.1: ▪ RPT 8.7.1 Software Accessibility Checklist - Systems settings are supported for high contrast for all user interface controls and client area content. System settings are inherited for font, size, and color for all elements of the user interface.
(h) When animation is displayed, the information shall be displayable in at least one non-animated presentation mode at the option of the user.	Supports: Application provides an option to display animation in a non-animated mode, allowing users with vision impairments equal access to the same	• The following components meet this criterion: ○ IBM Rational Performance Tester 8.7.1:

	information and reliable interaction with assistive technology.	▪ RPT 8.7.1 Software Accessibility Checklist - An option to display animation in a non-animated presentation mode is provided.
(i) Color coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.	Supports: Color is used only as an enhancement, and an alternate means to convey information or indicate an action is available to users with visual impairments.	• The following components meet this criterion: ○ IBM Rational Performance Tester 8.7.1: ▪ RPT 8.7.1 Software Accessibility Checklist - Color is only used as an enhancement, not as the only way to convey information or indicate an action.
(j) When a product permits a user to adjust color and contrast settings, a variety of color selections capable of producing a range of contrast levels shall be provided.	Supports: When color customization is supported, a variety of color selections and a range of contrast improves accessibility for users with vision impairments.	• The following components meet this criterion: ○ IBM Rational Performance Tester 8.7.1: ▪ RPT 8.7.1 Software Accessibility Checklist - Color customization is supported and a variety of color selections that are capable of producing a range of contrast levels is provided.
(k) Software shall not use flashing or blinking text, objects, or other elements	Supports:	• The following components meet this criterion:

having a flash or blink frequency greater than 2 Hz and lower than 55 Hz.	The use of blinking text, objects or elements has been avoided, reducing risk of seizures for users with photosensitive epilepsy.	○ IBM Rational Performance Tester 8.7.1: ▪ RPT 8.7.1 Software Accessibility Checklist - Does not use flashing or blinking text, objects, or other elements having a flash or blink frequency greater than 2 Hz and lower than 55 Hz.
(l) When electronic forms are used, the form shall allow people using Assistive Technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.	Supports: The application design allows assistive technology access to information, field elements, and functionality required to complete and submit forms.	• The following components meet this criterion: ○ IBM Rational Performance Tester 8.7.1: ▪ RPT 8.7.1 Software Accessibility Checklist - Form fields allow assistive technology to access the information, field elements and functionality required for completion and submission of the form, including all directions and cues.
1194.31 Functional Performance Criteria		
Criteria	**Supporting Features**	**Remarks and Explanations**
(a) At least one mode of operation and information retrieval that does not require user vision shall be provided, or support for Assistive Technology used by people who	Supports: See the following for supporting features: - 1194.21 a, b, c, d, e, f, h, i, l	• The following components meet this criterion: ○ IBM Rational Performance Tester 8.7.1:

are blind or visually impaired shall be provided.	- 1194.22 all - 1194.23 k1, k4 - 1194.24 d - 1194.25 a, b, c, e, f, g - 1194.26 b, d	▪ RPT 8.7.1 Software Accessibility Checklist
(b) At least one mode of operation and information retrieval that does not require visual acuity greater than 20/70 shall be provided in audio and enlarged print output working together or independently, or support for Assistive Technology used by people what are visually impaired shall be provided.	Supports: See the following for supporting features: - 1194.21 c, g, i, j, l - 1194.22 n - 1194.25 h - 1194.26 d	• The following components meet this criterion: ○ IBM Rational Performance Tester 8.7.1: ▪ RPT 8.7.1 Software Accessibility Checklist
(c) At least one mode of operation and information retrieval that does not require user hearing shall be provided, or support for Assistive Technology used by people who are deaf or hard of hearing shall be provided.	Not Applicable	• The following components do not apply to this criterion: ○ IBM Rational Performance Tester 8.7.1: ▪ RPT 8.7.1 Software Accessibility Checklist
(d) Where audio information is important for the use of the product, at least one mode of operation and information retrieval shall be provided in an enhanced auditory fashion, or support for assistive hearing devices shall be provided.	Not Applicable	• The following components do not apply to this criterion: ○ IBM Rational Performance Tester 8.7.1: ▪ RPT 8.7.1 Software Accessibility Checklist
(e) At least one mode of operation and information retrieval that does not require user speech shall be provided, or support for Assistive Technology used by people with disabilities shall be provided.	Not Applicable	This is not a speech product.

(f) At least one mode of operation and information retrieval that does not require fine motor control or simultaneous actions and that is operable with limited reach and strength shall be provided.	Supports:
	See the following for supporting features:
	- 1194.21 a, b
	- 1194.22 l, p
	- 1194.23 k1, k2, k3
	- 1194.25 b, j1, j2, j3, j4
	- 1194.26 d
		• The following components meet this criterion:
		  ○ IBM Rational Performance Tester 8.7.1:
		    ▪ RPT 8.7.1 Software Accessibility Checklist

1194.41 Information, documentation, and support		
Criteria	**Supporting Features**	**Remarks and Explanations**

(a) Product support documentation provided to end-users shall be made available in alternate formats upon request, at no additional charge.	Supports:
	Product support documentation is provided in at least one accessible format.
		• The following components meet this criterion:
		  ○ IBM Rational Performance Tester 8.7.1:
		    ▪ RPT 8.7.1 Documentation accessibility checklist - All non-text content that is presented to the user has a text alternative that serves the equivalent purpose. Document information, structure, and relationships are defined and programmatically available. This checkpoint status should not be N/A. Select another status. Document elements are presented

		in a logical reading order. No forms. Table cells are identified and relationships between cells are provided and programmatically available. An accessible method is provided for navigating long documents. The primary language of the document is defined.
(b) End-users shall have access to a description of the accessibility and compatibility features of products in alternate formats or alternate methods upon request, at no additional charge.	Supports: Documentation includes a description of accessibility and compatibility features that make it easier for people with disabilities to use the product. Those descriptions are available in alternate formats upon request.	• The following components meet this criterion: ○ IBM Rational Performance Tester 8.7.1: ▪ RPT 8.7.1 Documentation accessibility checklist - Documentation is provided on all accessibility features, including keyboard access.
(c) Support services for products shall accommodate the communication needs of end-users with disabilities.	Supports: Operating systems provide accessibility features that allow disabled users to customize their preferences. This application preserves those accessibility user preference settings. For example, if Sticky Keys option is selected by a mobility-impaired user, this option will	

	continue to be activated when used with this application. In addition to standard IBM help desk and support Web sites, IBM has established a TTY telephone service for use by deaf or hard of hearing customers to access sales and support services.	

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VPAT for IBM Rational Quality Manager 6.0

VPAT for IBM Rational Quality Manager 6.0	
VPAT comments:	IBM Rational Quality Manager 6.0 product page: http://www-03.ibm.com/software/products/en/ratiqualmana This Rational Quality Manager 6.0 package includes: - IBM DB2 for Linux, Unix, and Windows 10.5 - IBM WebSphere Application Server 8.5.5

VPAT Summary		
Criteria	**Status**	**Remarks and Explanations**

1194.21 Software Applications and Operating Systems	Not Applicable	Not Applicable
1194.22 Web-based Internet information and applications	Supports with exceptions	Refer to Section 1194.22 in VPAT Details section below.
1194.23 Telecommunications Products	Not Applicable	Not Applicable
1194.24 Video and Multi-Media Products	Not Applicable	Not Applicable
1194.25 Self-Contained, Closed Products	Not Applicable	Not Applicable
1194.26 Desktop and Portable Computers	Not Applicable	Not Applicable
1194.31 Functional Performance Criteria	Supports with exceptions	Refer to Section 1194.31 in VPAT Details section below.
1194.41 Information, documentation, and support	Supports with exceptions	Refer to Section 1194.41 in VPAT Details section below.

VPAT Details		
1194.22 Web-based Internet information and applications		
Criteria	**Supporting Features**	**Remarks and Explanations**

(a) A text equivalent for every non-text element shall be provided (e.g., via "alt", "longdesc", or in element content).	Supports:
	The application design provides text equivalents for all images so that assistive technology can describe those images to blind users.
		• The following components meet this criterion:
		  ○ IBM Rational Quality Manager 6.0:
		    ▪ IBM Rational Quality Manager - All images that carry in critical use cases have alt text.

(b) Equivalent alternatives for any multimedia presentation shall be synchronized with the presentation.	Not Applicable	• The following components do not apply to this criterion: ○ IBM Rational Quality Manager 6.0: ▪ IBM Rational Quality Manager - Pre-recorded audio is not used in the product. Neither pre-recorded nor Video is used in the product. Live Multimedia is not used in the product.
(c) Web pages shall be designed so that all information conveyed with color is also available without color, for example from context or markup.	Supports: Color is used only as an enhancement, and an alternate means to convey information or indicate an action is available to users with visual impairments.	• The following components meet this criterion: ○ IBM Rational Quality Manager 6.0: ▪ IBM Rational Quality Manager - Color is used only as an enhancement and not as the sole means of conveying information to the user. Reports provided a data table for conveying information when use color as the visual mean
(d) Documents shall be organized so they are readable without requiring an associated style sheet.	Supports: Web page content is readable without the use of a pre-defined style sheet, allowing low vision users to enable their own style sheets that enhance their viewing preferences.	• The following components meet this criterion: ○ IBM Rational Quality Manager 6.0: ▪ IBM Rational Quality Manager - This application relies on

		CSS in order to render properly and be usable. However, the application provides equivalent facilitation for low-vision users by utilizing the user's system display settings, including high contrast mode. Users may also control the font sizes using the browser settings.
(e) Redundant text links shall be provided for each active region of a server-side image map.	Not Applicable	• The following components do not apply to this criterion: ○ IBM Rational Quality Manager 6.0: ▪ IBM Rational Quality Manager - Image maps are not used in the product:
(f) Client-side image maps shall be provided instead of server-side image maps except where the regions cannot be defined with an available geometric shape.	Not Applicable	• The following components do not apply to this criterion: ○ IBM Rational Quality Manager 6.0: ▪ IBM Rational Quality Manager - Image maps are not used in the product:
(g) Row and column headers shall be identified for data tables.	Supports: The application is designed to identify row and column headers for blind	• The following components meet this criterion:

	users so the location and context of the table cell are clear and can be communicated by a screen reader.	○ IBM Rational Quality Manager 6.0: ▪ IBM Rational Quality Manager - Tables that convey data use standard HTML table markup or the ARIA role attribute.
(h) Markup shall be used to associate data cells and header cells for data tables that have two or more logical levels of row or column headers.	Supports: Complex tables are designed with additional attributes for blind users so the location and context of the table cell are clear and can be communicated by a screen reader.	• The following components meet this criterion: ○ IBM Rational Quality Manager 6.0: ▪ IBM Rational Quality Manager - Tables that convey data use standard HTML table markup or the ARIA role attribute.
(i) Frames shall be titled with text that facilitates frame identification and navigation.	Supports: Meaningful text titles are used to describe the purpose of frames so blind users can easily navigate to the desired area.	• The following components meet this criterion: ○ IBM Rational Quality Manager 6.0: ▪ IBM Rational Quality Manager - iFrames are used (extensively) in the product (frames are not used). iFrames have titles and accessible content.

(j) Pages shall be designed to avoid causing the screen to flicker with a frequency greater than 2 Hz and lower than 55 Hz.	Supports: The use of blinking text, objects or elements has been avoided, reducing risk of seizures for users with photosensitive epilepsy.	• The following components meet this criterion: ○ IBM Rational Quality Manager 6.0: ▪ IBM Rational Quality Manager - Web pages do not contain anything that flashes more than three times in any one second period.
(k) A text-only page, with equivalent information or functionality, shall be provided to make a web site comply with the provisions of this part, when compliance cannot be accomplished in any other way. The content of the text-only page shall be updated whenever the primary page changes.	Not Applicable	• The following components do not apply to this criterion: ○ IBM Rational Quality Manager 6.0: ▪ IBM Rational Quality Manager - Text only pages in lieu of an accessible UI are not used (or needed).
(l) When pages utilize scripting languages to display content, or to create interface elements, the information provided by the script shall be identified with functional text that can be read by Assistive Technology.	Supports: Alternatives to scripting language are provided, allowing users access to the content via keyboard and assistive technology.	• The following components meet this criterion: ○ IBM Rational Quality Manager 6.0: ▪ IBM Rational Quality Manager - Scripts are keyboard accessible
(m) When a web page requires that an applet, plug-in or other application be present on the client system to interpret page content, the page must provide a link	Not Applicable	• The following components do not apply to this criterion: ○ IBM Rational Quality Manager 6.0:

to a plug-in or applet that complies with §1194.21(a) through (l).		▪ IBM Rational Quality Manager - Applets, plug-ins, and non-HTML content is not included in the product.
(n) When electronic forms are designed to be completed on-line, the form shall allow people using Assistive Technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.	Supports with exceptions	• The following components meet this criterion with exceptions: ○ IBM Rational Quality Manager 6.0: ▪ IBM Rational Quality Manager - Form elements in critical use cases are labeled using the title or aria-label attribute or by using a label element. Exceptions: BIRT reporting component doesn't comply with this criterion.
(o) A method shall be provided that permits users to skip repetitive navigation links.	Supports: Web pages are designed so that repetitive navigation links can be skipping over, and blind users can navigate to the main content of the page more easily.	• The following components meet this criterion: ○ IBM Rational Quality Manager 6.0: ▪ IBM Rational Quality Manager - A skip to main content link is available in all cases to skip over this common content.

(p) When a timed response is required, the user shall be alerted and given sufficient time to indicate more time is required.	Supports: When a timed response is required, an option to request more time to complete the action is provided to the user.	• The following components meet this criterion: ○ IBM Rational Quality Manager 6.0: ▪ IBM Rational Quality Manager - The only time-limits in the product are related to the display of hovers (notably rich hovers) which have a decay rate. User can disable decay if they can put focus into the hover.
1194.31 Functional Performance Criteria		
Criteria	**Supporting Features**	**Remarks and Explanations**
(a) At least one mode of operation and information retrieval that does not require user vision shall be provided, or support for Assistive Technology used by people who are blind or visually impaired shall be provided.	Supports with exceptions See the following for supporting features: - 1194.21 a, b, c, d, e, f, h, i, l - 1194.22 all - 1194.23 k1, k4 - 1194.24 d - 1194.25 a, b, c, e, f, g - 1194.26 b, d	• The following components meet this criterion with exceptions: ○ IBM Rational Quality Manager 6.0: ▪ IBM Rational Quality Manager
(b) At least one mode of operation and information retrieval that does not require visual acuity greater than 20/70 shall be provided in audio and enlarged print output working together or independently, or support for Assistive Technology used by	Supports with exceptions See the following for supporting features: - 1194.21 c, g, i, j, l - 1194.22 n - 1194.25 h - 1194.26 d	• The following components meet this criterion with exceptions: ○ IBM Rational Quality Manager 6.0: ▪ IBM Rational Quality Manager

people what are visually impaired shall be provided.		
(c) At least one mode of operation and information retrieval that does not require user hearing shall be provided, or support for Assistive Technology used by people who are deaf or hard of hearing shall be provided.	Supports: See the following for other supporting features: - 1194.22 b, m - 1194.23 k4 - 1194.24 c - 1194.25 e, f	• The following components meet this criterion: ○ IBM Rational Quality Manager 6.0: ▪ IBM Rational Quality Manager
(d) Where audio information is important for the use of the product, at least one mode of operation and information retrieval shall be provided in an enhanced auditory fashion, or support for assistive hearing devices shall be provided.	Not Applicable	
(e) At least one mode of operation and information retrieval that does not require user speech shall be provided, or support for Assistive Technology used by people with disabilities shall be provided.	Not Applicable	This is not a speech product.
(f) At least one mode of operation and information retrieval that does not require fine motor control or simultaneous actions and that is operable with limited reach and strength shall be provided.	Supports: See the following for supporting features: - 1194.21 a, b - 1194.22 l, p - 1194.23 k1, k2, k3 - 1194.25 b, j1, j2, j3, j4 - 1194.26 d	• The following components meet this criterion: ○ IBM Rational Quality Manager 6.0: ▪ IBM Rational Quality Manager

1194.41 Information, documentation, and support		
Criteria	**Supporting Features**	**Remarks and Explanations**
(a) Product support documentation provided to end-users shall be made available in alternate formats upon request, at no additional charge.	Supports with exceptions	• The following components meet this criterion with exceptions: ○ IBM Rational Quality Manager 6.0: ▪ RQM 6.0 documentation - All non-text content that is presented to the user has a text alternative that serves the equivalent purpose. However, accessibility testing using a screen reader was not performed during this product release cycle to validate compliance. Client-side image maps are used and alternative text is provided. Equivalent text links are provided when a server-side image map is used. However, accessibility testing using a screen reader was not performed during this product release cycle to validate compliance. Captions are provided for prerecorded audio content in synchronized

			media, except when the media is a media alternative for text and is clearly labeled as such. However, accessibility testing using a screen reader was not performed during this product release cycle to validate compliance. Scripts are keyboard accessible. However, accessibility testing using a screen reader was not performed during this product release cycle to validate compliance. Media (both with and without audio) provides detailed close-captioning that describes what is being shown. A link is provided to a directly accessible applet, plug-in or other application is provided. However, accessibility testing using a screen reader was not performed during this product release cycle to validate compliance. Live multimedia is not used in

		the documentation. There are no timed responses. Form element labels can be programmatically determined. However, accessibility testing using a screen reader was not performed during this product release cycle to validate compliance. There is no blinking (flashing) content. Methods are provided for skipping over navigation links to get to main content of page. However, accessibility testing using a screen reader was not performed during this product release cycle to validate compliance. Table cells and relationships between cells can be programmatically determined, where proper markup has not been provided. However, accessibility testing using a screen reader was not performed during this

		product release cycle to validate compliance. A title and an accessible frame source are provided for each frame. However, accessibility testing using a screen reader was not performed during this product release cycle to validate compliance. Web pages are readable without requiring style sheets and equivalent facilitation is not provided. However, accessibility testing using a screen reader was not performed during this product release cycle to validate compliance. Text-only pages are not needed to provide accessibility. Color is always used as a secondary characteristic when conveying information, e.g., links are indicated using underlining and color, headings are indicated

		using font size, weight and color.,
(b) End-users shall have access to a description of the accessibility and compatibility features of products in alternate formats or alternate methods upon request, at no additional charge.	Supports: Documentation includes a description of accessibility and compatibility features that make it easier for people with disabilities to use the product. Those descriptions are available in alternate formats upon request.	• The following components meet this criterion: ○ IBM Rational Quality Manager 6.0: ▪ RQM 6.0 documentation - The documentation includes both a general description of accessibility and detailed information such as keyboard shortcut lists.
(c) Support services for products shall accommodate the communication needs of end-users with disabilities.	Supports: Operating systems provide accessibility features that allow disabled users to customize their preferences. This application preserves those accessibility user preference settings. For example, if Sticky Keys option is selected by a mobility-impaired user, this option will continue to be activated when used with this application. In addition to standard IBM help desk and support Web sites, IBM has established a TTY telephone service for use by deaf or hard of hearing customers to access sales and support services.	

Other IBM products packaged with IBM Rational Quality Manager 6.0

The releases of other IBM products packaged with this product are listed in the table below. This product may include later releases of the listed bundled products. When you request a VPAT for any other IBM products packaged with this product you will receive the latest version of the published VPAT.

Product / Component name (web link to VPAT)	Status	Function provided by product
[IBM DB2 for Linux, Unix, and Windows 10.5]	Accessible	IBM DB2 for Linux, UNIX and Windows is a next generation data platform for transactional and analytical operations. It provides continuous availability of data to keep transactional workloads and analytics operating at maximum efficiency. For a detailed description of IBM DB2, visit the DB2 homepage: http://www.ibm.com/software/data/db2/linux-unix-windows/features.html
[IBM WebSphere Application Server 8.5.5]	Accessible	Provides an application serving environment for hosting web-based enterprise applications. http://www-03.ibm.com/software/products/en/was-overview/

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IBM provides this data for general information on an AS IS basis. All product and/or component names are current as of the time this VPAT is published. For formal representations on particular proposals, please contact an IBM Client Representative or call the IBM Federal Information Call Center at 1-800-333-6705 or TTY: 1-800-IBM-3383. Any third-party components or technologies not developed by or licensed by IBM that may be packaged with or engaged by the use of this product are not included in this Section 508 assessment.

VPAT for IBM Rational Test Workbench 8.5, 8.5.1, 8.6

06/22/2017 05:00:27 EDT
State of Arkansas

VPAT for IBM Rational Test Workbench 8.5, 8.5.1, 8.6

VPAT comments:	For a detailed description of the parent features and benefits, please refer to the following URL: http://www-03.ibm.com/software/products/us/en/rtw

VPAT Summary

Criteria	Status	Remarks and Explanations
Section 1194.21 Software Applications and Operating Systems	Supports with exceptions	Refer to Section 1194.21 in VPAT Details section below.
Section 1194.22 Web-based Internet information & applications	Supports with exceptions	Refer to Section 1194.22 in VPAT Details section below.
Section 1194.23 Telecommunications Products	Not applicable	Not applicable
Section 1194.24 Video and Multi-media Products	Not applicable	Not applicable
Section 1194.25 Self-Contained, Closed Products	Not applicable	Not applicable
Section 1194.26 Desktop and Portable Computers	Not applicable	Not applicable
Section 1194.31 Functional Performance Criteria	Supports with exceptions	Refer to Section 1194.31 in VPAT Details section below.
Section 1194.41 Information, Documentation, and Support	Supports with exceptions	Refer to Section 1194.41 in VPAT Details section below.

VPAT Details

Section 1194.21 Software Applications and Operating Systems - Detail

Criteria	Supporting Features	Remarks and Explanations
(a) When software is designed to run on a system that has a keyboard, product functions shall be executable from a keyboard where the function itself or the result of performing a function can be discerned textually.	Does not support	The following component does not meet this criterion: - IBM Rational Test Workbench 8.5: - Rational Integration Tester v8.5 (Bluewash2 of GH Tester) - An example of where keyboard navigation is not supported within the application is in navigation of the UI elements of the Results Gallery perspective. The treatable in the center of the perspective doesn't support keyboard driven navigation and the other elements of the UI (e.g. tabbed report panels) cannot be navigated to.
(b) Applications shall not disrupt or disable activated features of other products that are identified as accessibility features, where those features are developed and documented according to industry standards. Applications also shall not disrupt or disable activated features of any operating system that are identified as accessibility features where the application programming interface for those accessibility features has been documented by the manufacturer of the operating system and is available to the product developer.	Does not support	The following component does not meet this criterion: - IBM Rational Test Workbench: - Rational Integration Tester - Testing with FilterKeys enabled failed: Enabled FilterKeys, multiple copies of a letter are displayed on the screen when you press and hold a key, although much more slowly than with FilterKeys disabled.
(c) A well-defined on-screen indication of the current focus shall be provided that moves among interactive interface elements as the input focus changes. The focus shall be programmatically exposed so that Assistive Technology can track focus and focus changes.	Supports with exceptions	The following component meets this criterion with exceptions: - IBM Rational Test Workbench: - Rational Integration Tester - Generally focus indicators seem to have been embraced using standard JFC controls, not tested with a screen reader, but has not been fully tested.
(d) Sufficient information about a user interface element including the identity, operation and state of the element shall be available to Assistive Technology. When an image represents a program element, the information conveyed by the image must also be available in text.	Does not support	The following component does not meet this criterion: - IBM Rational Test Workbench: - Rational Integration Tester - Accessible Name and Descriptions are not provided for all images and icons. Labels are not associated with all user controls. Accessibility APIs are not used.

Criteria	Supporting Features	Remarks and Explanations
(e) When bitmap images are used to identify controls, status indicators, or other programmatic elements, the meaning assigned to those images shall be consistent throughout an application's performance.	Does not support	The following component does not meet this criterion: - IBM Rational Test Workbench: - Rational Integration Tester - Labels are not associated with all user controls. Accessibility APIs are not used.
(f) Textual information shall be provided through operating system functions for displaying text. The minimum information that shall be made available is text content, text input caret location, and text attributes.	Supports with exceptions	The following component meets this criterion with exceptions: - IBM Rational Test Workbench: - Rational Integration Tester - Initial investigations suggest text is provided in the application through standard Java Swing APIs and controls. Not tested in entirety or with a screen reader, but has not been fully tested.
(g) Applications shall not override user selected contrast and color selections and other individual display attributes.	Does not support	The following component does not meet this criterion: - IBM Rational Test Workbench: - Rational Integration Tester - Not all UI controls inherit system settings, particularly for colors. Not all UI controls inherit system settings, particularly for colors.
(h) When animation is displayed, the information shall be displayable in at least one non-animated presentation mode at the option of the user.	Supports with exceptions	The following component meets this criterion with exceptions: - IBM Rational Test Workbench: - Rational Integration Tester - The only animations within the application are for progress bar displaying dialogs which also carry a text description of processing state. Not tested with a screen reader, but has not been fully tested.
(i) Color coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.	Does not support	The following component does not meet this criterion: - IBM Rational Test Workbench: - Rational Integration Tester - In the Message Difference Window dialog of the application, a coloured background is used to identify difference types of difference in a message structure – supporting text is available but only after selecting an individual difference. A red border is sometimes used to indicate fields in the application with problems (e.g. Formatter in messaging action editor).
(j) When a product permits a user to adjust color and contrast settings, a variety of color selections capable of producing a range of contrast levels shall be provided.	Supports: When color customization is supported, a variety of color selections and a range of contrast improves accessibility for users with vision impairments.	The following component meets this criterion: - IBM Rational Test Workbench: - Rational Integration Tester - Instances of features that support color customization, a wide range of color's available in the palette.
(k) Software shall not use flashing or blinking text, objects, or other elements having a flash or blink frequency greater than 2 Hz and lower than 55 Hz.	Supports: The use of blinking text, objects or elements has been avoided, reducing risk of seizures for users with photosensitive epilepsy.	The following component meets this criterion: - IBM Rational Test Workbench: - Rational Integration Tester - No flashing or blinking text/objects within the application.
(l) When electronic forms are used, the form shall allow people using Assistive Technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.	Does not support	The following component does not meet this criterion: - IBM Rational Test Workbench: - Rational Integration Tester - Form does not allow people using assistive technology to access the information, field elements and functionality required for completion and submission of the form, including all directions and cues.

Section 1194.22 Web-based Internet information and applications - Detail

Criteria	Supporting Features	Remarks and Explanations
(a) A text equivalent for every non-text element shall	Does not support	The following component does not meet this

Criteria	Supporting Features	Remarks and Explanations
be provided (e.g., via "alt", "longdesc", or in element content).		criterion: - IBM Rational Test Workbench: - Rational Integration Tester - Most images have no alt-text.
(b) Equivalent alternatives for any multimedia presentation shall be synchronized with the presentation.	Not applicable	The following component does not apply to this criterion: - IBM Rational Test Workbench: - Rational Integration Tester - No audio or video.
(c) Web pages shall be designed so that all information conveyed with color is also available without color, for example from context or markup.	Supports: Color is used only as an enhancement, and an alternate means to convey information or indicate an action is available to users with visual impairments.	The following component meets this criterion: - IBM Rational Test Workbench: - Rational Integration Tester - Color and shape are used in icons to distinguish between actions.
(d) Documents shall be organized so they are readable without requiring an associated style sheet.	Does not support	The following component does not meet this criterion: - IBM Rational Test Workbench: - Rational Integration Tester - Page structure is incorrect without stylesheets.
(e) Redundant text links shall be provided for each active region of a server-side image map.	Not applicable	The following component does not apply to this criterion: - IBM Rational Test Workbench: - Rational Integration Tester - No image maps.
(f) Client-side image maps shall be provided instead of server-side image maps except where the regions cannot be defined with an available geometric shape.	Not applicable	The following component does not apply to this criterion: - IBM Rational Test Workbench: - Rational Integration Tester - No image maps.
(g) Row and column headers shall be identified for data tables.	Does not support	The following component does not meet this criterion: - IBM Rational Test Workbench: - Rational Integration Tester - Tables don't have summary text, tabular data not always shown using HTML tables.
(h) Markup shall be used to associate data cells and header cells for data tables that have two or more logical levels of row or column headers.	Does not support	The following component does not meet this criterion: - IBM Rational Test Workbench: - Rational Integration Tester - Tables don't have summary text, tabular data not always shown using HTML tables.
(i) Frames shall be titled with text that facilitates frame identification and navigation.	Does not support	The following component does not meet this criterion: - IBM Rational Test Workbench: - Rational Integration Tester - Frames are not titled.
(j) Pages shall be designed to avoid causing the screen to flicker with a frequency greater than 2 Hz and lower than 55 Hz.	Supports: The use of blinking text, objects or elements has been avoided, reducing risk of seizures for users with photosensitive epilepsy.	The following component meets this criterion: - IBM Rational Test Workbench: - Rational Integration Tester - No Flashing. Progress dialogs only appear once then disappear.
(k) A text-only page, with equivalent information or functionality, shall be provided to make a web site comply with the provisions of this part, when compliance cannot be accomplished in any other way. The content of the text-only page shall be updated whenever the primary page changes.	Does not support	The following component does not meet this criterion: - IBM Rational Test Workbench: - Rational Integration Tester - No text-only alternatives for non-accessible pages exist.
(l) When pages utilize scripting languages to display content, or to create interface elements, the information provided by the script shall be identified with functional text that can be read by Assistive Technology.	Does not support	The following component does not meet this criterion: - IBM Rational Test Workbench: - Rational Integration Tester - Javascript is not always keyboard accessible.
(m) When a web page requires that an applet, plug-in or other application be present on the client system to interpret page content, the page must	Not applicable	The following component does not apply to this criterion:

Criteria	Supporting Features	Remarks and Explanations
provide a link to a plug-in or applet that complies with §1194.21(a) through (l).		- IBM Rational Test Workbench: - Rational Integration Tester - No non-html content.
(n) When electronic forms are designed to be completed on-line, the form shall allow people using Assistive Technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.	Does not support	The following component does not meet this criterion: - IBM Rational Test Workbench: - Rational Integration Tester - Forms are not labeled correctly in all cases.
(o) A method shall be provided that permits users to skip repetitive navigation links.	Does not support	The following component does not meet this criterion: - IBM Rational Test Workbench: - Rational Integration Tester - No skipping method is available.
(p) When a timed response is required, the user shall be alerted and given sufficient time to indicate more time is required.	Supports: When a timed response is required, an option to request more time to complete the action is provided to the user.	The following component meets this criterion: - IBM Rational Test Workbench: - Rational Integration Tester - No time-limited response.

Section 1194.31 Functional Performance - Detail

Criteria	Supporting Features	Remarks and Explanations
(a) At least one mode of operation and information retrieval that does not require user vision shall be provided, or support for Assistive Technology used by people who are blind or visually impaired shall be provided.	Supports with exception: See the following for supporting features: - 1194.21 a, b, c, d, e, f, h, i, l - 1194.22 all	The following component meets this criterion with exceptions: -IBM Rational Test Workbench: - Rational Integration Tester - Rational Integration Tester
(b) At least one mode of operation and information retrieval that does not require visual acuity greater than 20/70 shall be provided in audio and enlarged print output working together or independently, or support for Assistive Technology used by people what are visually impaired shall be provided.	Supports with exception: See the following for supporting features: - 1194.21 c, g, i, j, l - 1194.22 n	The following component meets this criterion with exceptions: -IBM Rational Test Workbench: - Rational Integration Tester The following component does not meet this criterion: -IBM Rational Test Workbench: - Rational Integration Tester
(c) At least one mode of operation and information retrieval that does not require user hearing shall be provided, or support for Assistive Technology used by people who are deaf or hard of hearing shall be provided.	Not applicable	The following components do not apply to this criterion: -IBM Rational Test Workbench: - Rational Integration Tester - Rational Integration Tester
(d) Where audio information is important for the use of the product, at least one mode of operation and information retrieval shall be provided in an enhanced auditory fashion, or support for assistive hearing devices shall be provided.	Not applicable	The following components do not apply to this criterion: -IBM Rational Test Workbench: - Rational Integration Tester - Rational Integration Tester
(e) At least one mode of operation and information retrieval that does not require user speech shall be provided, or support for Assistive Technology used by people with disabilities shall be provided.	Not applicable	
(f) At least one mode of operation and information retrieval that does not require fine motor control or simultaneous actions and that is operable with limited reach and strength shall be provided.	Supports with exception: See the following for supporting features: - 1194.21 a, b - 1194.22 l, p	The following components meets this criterion with exceptions: -IBM Rational Test Workbench: - Rational Integration Tester The following component does not meet this criterion: -IBM Rational Test Workbench: - Rational Integration Tester

Section 1194.41 Information, Documentation, and Support - Detail

Criteria	Supporting Features	Remarks and Explanations
(a) Product support documentation provided to end-users shall be made available in alternate formats upon request, at no additional charge.	Supports with exceptions	The following component meets this criterion with exceptions: - IBM Rational Test Workbench: - Rational Integration Tester - Defines information and relationships. Information that is conveyed by color is also evident without color. The documentation reading order was not hard-coded but the information flows are correct and consistent. Identifies table cells and relationships between cells. No alternative text was provided for screen captures and graphics. Does not define form element labels. Doesn't define the default language.
(b) End-users shall have access to a description of the accessibility and compatibility features of products in alternate formats or alternate methods upon request, at no additional charge.	Does not support	The following component does not meet this criterion: IBM Rational Test Workbench: - Rational Integration Tester - No does not provide accessibility features documentation.
(c) Support services for products shall accommodate the communication needs of end-users with disabilities.	Supports: In addition to standard IBM help desk and support Web sites, IBM has established a TTY telephone service for use by deaf or hard of hearing customers to access sales and support services.	

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Online Information Centers have been replaced by the IBM Knowledge Center - Hosted Edition service. To request the current accessibility status for the IBM Knowledge Center - Hosted Edition service, visit the IBM Product Accessibility information web page (https://www-03.ibm.com/research/accessibility/requests/accvpat.nsf/bidxjs?OpenForm) and select the entry for IBM Knowledge Center - Hosted Edition.

VPAT for IBM Security Guardium 10.1

VPAT for IBM Security Guardium 10.1	
VPAT comments:	This VPAT covers the following products and PIDs 5725I11 - IBM Security Guardium Appliances 5725I12 - IBM Security Guardium Data Security and Compliance 5725V56 - IBM Security Guardium For Files For a detailed description of the parent features and benefits, please refer to the following URL: http://www.ibm.com/software/data/guardium/

VPAT Summary

Criteria	**Status**	**Remarks and Explanations**
1194.21 Software Applications and Operating Systems	Supports with exceptions	Refer to Section 1194.21 in VPAT Details section below.
1194.22 Web-based Internet information and applications	Supports with exceptions	Refer to Section 1194.22 in VPAT Details section below.
1194.23 Telecommunications Products	Not Applicable	Not Applicable
1194.24 Video and Multi-Media Products	Not Applicable	Not Applicable
1194.25 Self-Contained, Closed Products	Not Applicable	Not Applicable
1194.26 Desktop and Portable Computers	Not Applicable	Not Applicable
1194.31 Functional Performance Criteria	Supports with exceptions	Refer to Section 1194.31 in VPAT Details section below.

1194.41 Information, documentation, and support	Supports	Refer to Section 1194.41 in VPAT Details section below.
VPAT Details		
1194.21 Software Applications and Operating Systems		
Criteria	**Supporting Features**	**Remarks and Explanations**

(a) When software is designed to run on a system that has a keyboard, product functions shall be executable from a keyboard where the function itself or the result of performing a function can be discerned textually.	Supports with exceptions	• The following components meet this criterion:
		  ○ IBM Security Guardium 10.1: All functionality of the content is operable through a keyboard interface without requiring specific timings for individual keystrokes. This is not a requirement where the underlying function requires input that depends on the path of the user's movement and not just the endpoints. If focus can be moved to a component using a keyboard interface, then focus can be moved away from that component using only a keyboard interface, and, if it requires more than unmodified arrow or tab keys, the user is advised of the method for moving focus away.
		    ▪ Command Line Interface
		    ▪ Guardium S-TAP Installer
		• The following components meet this criterion with exceptions:
		  ○ IBM Security Guardium 10.1:

		▪ SQLGuard Diagnostics - All functionality of the content is operable through a keyboard interface without requiring specific timings for individual keystrokes. This is not a requirement where the underlying function requires input that depends on the path of the user's movement and not just the endpoints. Keyboard traps exist.
(b) Applications shall not disrupt or disable activated features of other products that are identified as accessibility features, where those features are developed and documented according to industry standards. Applications also shall not disrupt or disable activated features of any operating system that are identified as accessibility features where the application programming interface for those accessibility features has been documented by the manufacturer of the operating system and is available to the product developer.	Supports with exceptions	• The following components do not meet this criterion: ○ IBM Security Guardium 10.1: ▪ SQLGuard Diagnostics - Component disrupts some platform features that are defined in the platform documentation as accessibility features. • The following components meet this criterion: ○ IBM Security Guardium 10.1: Component does not disrupt platform features that are defined in the platform documentation as accessibility features. ▪ Command Line Interface

		▪ Guardium S-TAP Installer
(c) A well-defined on-screen indication of the current focus shall be provided that moves among interactive interface elements as the input focus changes. The focus shall be programmatically exposed so that Assistive Technology can track focus and focus changes.	Supports with exceptions	• The following components meet this criterion: ○ IBM Security Guardium 10.1: Any keyboard operable user interface has a mode of operation where the keyboard focus indicator is visible. Exposes information and mechanisms necessary to track and modify focus, text insertion point, and selection attributes of user interface components. ▪ Command Line Interface ▪ Guardium S-TAP Installer • The following components meet this criterion with exceptions: ○ IBM Security Guardium 10.1: ▪ SQLGuard Diagnostics - Does not always expose information and mechanisms necessary to track and modify focus, text insertion point, and selection attributes of user interface components. Any keyboard operable user interface has a mode of operation where the

		keyboard focus indicator is visible.

(d) Sufficient information about a user interface element including the identity, operation and state of the element shall be available to Assistive Technology. When an image represents a program element, the information conveyed by the image must also be available in text.	Supports with exceptions	• The following components do not apply to this criterion:
		  ○ IBM Security Guardium 10.1:
		    ▪ Command Line Interface - The user interface is implemented via commands only. There are no interactive objects.
		• The following components do not meet this criterion:
		  ○ IBM Security Guardium 10.1:
		    ▪ SQLGuard Diagnostics - Semantic information is not provided about all user interface objects.
		• The following components meet this criterion:
		  ○ IBM Security Guardium 10.1:
		    ▪ Guardium S-TAP Installer - Semantic information is provided about user interface objects.

(e) When bitmap images are used to identify controls, status indicators, or other programmatic elements, the meaning assigned to those images shall be consistent throughout an application's performance.	Supports with exceptions	• The following components do not apply to this criterion:
		  ○ IBM Security Guardium 10.1:
		    ▪ Command Line Interface - The user interface is implemented via commands only. There

		are no interactive objects.
		• The following components do not meet this criterion:
		  ○ IBM Security Guardium 10.1:
		    ▪ SQLGuard Diagnostics - Labels are not associated with all controls, objects, icons and images. The meaning of images is not consistent throughout the application.
		• The following components meet this criterion:
		  ○ IBM Security Guardium 10.1:
		    ▪ Guardium S-TAP Installer - Labels are associated with controls, objects, icons and images. The meaning of images is consistent throughout the application.

(f) Textual information shall be provided through operating system functions for displaying text. The minimum information that shall be made available is text content, text input caret location, and text attributes.	Supports:
	Text information is accessible so assistive technologies can communicate content, attributes and caret location to blind users.
		• The following components meet this criterion:
		  ○ IBM Security Guardium 10.1: Text contents, text attributes, and the boundary of text rendered to the screen are programmatically determinable.
		    ▪ Command Line Interface
		    ▪ SQLGuard Diagnostics

		▪ Guardium S-TAP Installer

(g) Applications shall not override user selected contrast and color selections and other individual display attributes.	Supports with exceptions	• The following components do not meet this criterion:
		  ○ IBM Security Guardium 10.1:
		    ▪ SQLGuard Diagnostics - Component does not always provide a mode of operation that allows user preferences for platform settings for color, contrast, font type, font size, and focus cursor.
		• The following components meet this criterion:
		  ○ IBM Security Guardium 10.1: Component provides a mode of operation that allows user preferences for platform settings for color, contrast, font type, font size, and focus cursor.
		    ▪ Command Line Interface
		    ▪ Guardium S-TAP Installer

(h) When animation is displayed, the information shall be displayable in at least one non-animated presentation mode at the option of the user.	Not Applicable	• The following components do not apply to this criterion:
		  ○ IBM Security Guardium 10.1: No animation.
		    ▪ Command Line Interface
		    ▪ SQLGuard Diagnostics

		▪ Guardium S-TAP Installer
(i) Color coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.	Supports: Color is used only as an enhancement, and an alternate means to convey information or indicate an action is available to users with visual impairments.	• The following components meet this criterion: ○ IBM Security Guardium 10.1: Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. ▪ Command Line Interface ▪ SQLGuard Diagnostics ▪ Guardium S-TAP Installer
(j) When a product permits a user to adjust color and contrast settings, a variety of color selections capable of producing a range of contrast levels shall be provided.	Not Applicable	• The following components do not apply to this criterion: ○ IBM Security Guardium 10.1: Color customization is not supported. ▪ Command Line Interface ▪ SQLGuard Diagnostics ▪ Guardium S-TAP Installer
(k) Software shall not use flashing or blinking text, objects, or other elements having a flash or blink frequency greater than 2 Hz and lower than 55 Hz.	Supports: The use of blinking text, objects or elements has been avoided, reducing risk of seizures for users with photosensitive epilepsy.	• The following components meet this criterion: ○ IBM Security Guardium 10.1: User interface does not contain anything that flashes more than three times in any one second period. ▪ Command Line Interface

		▪ SQLGuard Diagnostics ▪ Guardium S-TAP Installer

(l) When electronic forms are used, the form shall allow people using Assistive Technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.	Supports:
	The application design allows assistive technology access to information, field elements, and functionality required to complete and submit forms.
		• The following components do not apply to this criterion:
		  ○ IBM Security Guardium 10.1: No forms.
		    ▪ Command Line Interface
		    ▪ SQLGuard Diagnostics
		• The following components meet this criterion:
		  ○ IBM Security Guardium 10.1:
		    ▪ Guardium S-TAP Installer - Form fields allow assistive technology to access the information, field elements and functionality required for completion and submission of the form, including all directions and cues.

1194.22 Web-based Internet information and applications		
Criteria	**Supporting Features**	**Remarks and Explanations**

(a) A text equivalent for every non-text element shall be provided (e.g., via "alt", "longdesc", or in element content).	Does not support	• The following components do not meet this criterion:
		  ○ IBM Security Guardium 10.1:
		    ▪ Guardium Web Application - Graphical charts does not have

		tabular equivalents. The three charts in System View do not have accessible alternatives. Welcome screen does not have graphical equivalent
(b) Equivalent alternatives for any multimedia presentation shall be synchronized with the presentation.	Not Applicable	• The following components do not apply to this criterion: ○ IBM Security Guardium 10.1: ▪ Guardium Web Application - This application does not contain live multimedia content. This application does not contain prerecorded audio content. This application does not contain audio or video content.
(c) Web pages shall be designed so that all information conveyed with color is also available without color, for example from context or markup.	Does not support	• The following components do not meet this criterion: ○ IBM Security Guardium 10.1: ▪ Guardium Web Application - Status buttons convey connection information through the use of red and green color, but have no non-visual equivalent.

(d) Documents shall be organized so they are readable without requiring an associated style sheet.	Does not support	• The following components do not meet this criterion: ○ IBM Security Guardium 10.1: ▪ Guardium Web Application - Web pages cannot be read without cascading style sheets.
(e) Redundant text links shall be provided for each active region of a server-side image map.	Not Applicable	• The following components do not apply to this criterion: ○ IBM Security Guardium 10.1: ▪ Guardium Web Application - This application does not contain image maps.
(f) Client-side image maps shall be provided instead of server-side image maps except where the regions cannot be defined with an available geometric shape.	Not Applicable	• The following components do not apply to this criterion: ○ IBM Security Guardium 10.1: ▪ Guardium Web Application - This application does not contain image maps.
(g) Row and column headers shall be identified for data tables.	Supports: The application is designed to identify row and column headers for blind users so the location and context of the table cell are clear and can be communicated by a screen reader.	• The following components meet this criterion: ○ IBM Security Guardium 10.1: ▪ Guardium Web Application - Table cells and the relationship between them can be programmatically determined.

(h) Markup shall be used to associate data cells and header cells for data tables that have two or more logical levels of row or column headers.	Supports: Complex tables are designed with additional attributes for blind users so the location and context of the table cell are clear and can be communicated by a screen reader.	• The following components meet this criterion: ○ IBM Security Guardium 10.1: ▪ Guardium Web Application - Table cells and the relationship between them can be programmatically determined.
(i) Frames shall be titled with text that facilitates frame identification and navigation.	Supports: Meaningful text titles are used to describe the purpose of frames so blind users can easily navigate to the desired area.	• The following components meet this criterion: ○ IBM Security Guardium 10.1: ▪ Guardium Web Application - Each frame has a title and has accessible source.
(j) Pages shall be designed to avoid causing the screen to flicker with a frequency greater than 2 Hz and lower than 55 Hz.	Supports: The use of blinking text, objects or elements has been avoided, reducing risk of seizures for users with photosensitive epilepsy.	• The following components meet this criterion: ○ IBM Security Guardium 10.1: ▪ Guardium Web Application - This application does not contain flashing content.
(k) A text-only page, with equivalent information or functionality, shall be provided to make a web site comply with the provisions of this part, when compliance cannot be accomplished in any other way. The content of the text-only page shall be	Supports: When necessary, the application has been designed with text-only pages to communicate equivalent information to disabled users.	• The following components meet this criterion: ○ IBM Security Guardium 10.1: ▪ Guardium Web Application - A command line interface application provides

updated whenever the primary page changes.		alternative and equivalent functionality.
(l) When pages utilize scripting languages to display content, or to create interface elements, the information provided by the script shall be identified with functional text that can be read by Assistive Technology.	Supports: Alternatives to scripting language are provided, allowing users access to the content via keyboard and assistive technology.	• The following components meet this criterion: ○ IBM Security Guardium 10.1: ▪ Guardium Web Application - Scripts can be entered via keyboard and are accessible.
(m) When a web page requires that an applet, plug-in or other application be present on the client system to interpret page content, the page must provide a link to a plug-in or applet that complies with §1194.21(a) through (l).	Supports: An alternative to inaccessible applets or plug-ins is provided for efficient use by disabled users.	• The following components meet this criterion: ○ IBM Security Guardium 10.1: ▪ Guardium Web Application - All applets, plug-ins, and non-HTML content is accessible using a keyboard.
(n) When electronic forms are designed to be completed on-line, the form shall allow people using Assistive Technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.	Does not support	• The following components do not meet this criterion: ○ IBM Security Guardium 10.1: ▪ Guardium Web Application - Form fields do not have labels.
(o) A method shall be provided that permits users to skip repetitive navigation links.	Does not support	• The following components do not meet this criterion: ○ IBM Security Guardium 10.1: ▪ Guardium Web Application - No method is provided to skip over

		navigation links in order to get to the main content.
(p) When a timed response is required, the user shall be alerted and given sufficient time to indicate more time is required.	Not Applicable	• The following components do not apply to this criterion: ○ IBM Security Guardium 10.1: ▪ Guardium Web Application - There are no timed responses in this application.
1194.31 Functional Performance Criteria		
Criteria	**Supporting Features**	**Remarks and Explanations**
(a) At least one mode of operation and information retrieval that does not require user vision shall be provided, or support for Assistive Technology used by people who are blind or visually impaired shall be provided.	Supports with exceptions See the following for supporting features: - 1194.21 a, b, c, d, e, f, h, i, l - 1194.22 all - 1194.23 k1, k4 - 1194.24 d - 1194.25 a, b, c, e, f, g - 1194.26 b, d	• The following components meet this criterion: ○ IBM Security Guardium 10.1: ▪ Command Line Interface ▪ Guardium S-TAP Installer • The following components meet this criterion with exceptions: ○ IBM Security Guardium 10.1: ▪ SQLGuard Diagnostics ▪ Guardium Web Application
(b) At least one mode of operation and information retrieval that does not require visual acuity greater than 20/70 shall be provided in audio and enlarged print output working together or independently, or support for Assistive Technology used by	Supports with exceptions See the following for supporting features: - 1194.21 c, g, i, j, l - 1194.22 n	• The following components do not meet this criterion: ○ IBM Security Guardium 10.1: ▪ Guardium Web Application

people what are visually impaired shall be provided.	- 1194.25 h - 1194.26 d	• The following components meet this criterion: ○ IBM Security Guardium 10.1: ▪ Command Line Interface ▪ Guardium S-TAP Installer • The following components meet this criterion with exceptions: ○ IBM Security Guardium 10.1: ▪ SQLGuard Diagnostics
(c) At least one mode of operation and information retrieval that does not require user hearing shall be provided, or support for Assistive Technology used by people who are deaf or hard of hearing shall be provided.	Supports: See the following for other supporting features: - 1194.22 b, m - 1194.23 k4 - 1194.24 c - 1194.25 e, f	• The following components do not apply to this criterion: ○ IBM Security Guardium 10.1: ▪ Command Line Interface ▪ SQLGuard Diagnostics ▪ Guardium S-TAP Installer • The following components meet this criterion: ○ IBM Security Guardium 10.1: ▪ Guardium Web Application
(d) Where audio information is important for the use of the product, at least one mode of operation and information retrieval shall be provided in an enhanced auditory fashion, or support for assistive hearing devices shall be provided.	Not Applicable	• The following components do not apply to this criterion: ○ IBM Security Guardium 10.1: ▪ Command Line Interface ▪ SQLGuard Diagnostics ▪ Guardium S-TAP Installer ▪ Guardium Web Application

(e) At least one mode of operation and information retrieval that does not require user speech shall be provided, or support for Assistive Technology used by people with disabilities shall be provided.	Not Applicable	This is not a speech product.

(f) At least one mode of operation and information retrieval that does not require fine motor control or simultaneous actions and that is operable with limited reach and strength shall be provided.	Supports with exceptions
	See the following for supporting features:
	- 1194.21 a, b
	- 1194.22 l, p
	- 1194.23 k1, k2, k3
	- 1194.25 b, j1, j2, j3, j4
	- 1194.26 d
		• The following components meet this criterion:
		  ○ IBM Security Guardium 10.1:
		    ▪ Command Line Interface
		    ▪ Guardium S-TAP Installer
		    ▪ Guardium Web Application
		• The following components meet this criterion with exceptions:
		  ○ IBM Security Guardium 10.1:
		    ▪ SQLGuard Diagnostics

1194.41 Information, documentation, and support		
Criteria	**Supporting Features**	**Remarks and Explanations**

(a) Product support documentation provided to end-users shall be made available in alternate formats upon request, at no additional charge.	Supports:
	Product support documentation is provided in at least one accessible format.
		• The following components meet this criterion:
		  ○ IBM Security Guardium 10.1:
		    ▪ Online Help - All non-text content that is presented to the user has a text alternative that serves the equivalent purpose. Image maps are not used. Audio content is not

		used. Audio and video content is not used. Live multimedia content is not used. Forms are not used. Table cells and the relationship between them can be programmatically determined. Cascading style sheets are not required. Color is not used. Scripts are not used. Applets, plug-ins, and non-HTML content are not used. Timed responses are not used. Flashing content is not used. Methods are provided for skipping over navigation links. Each frame has a title and contains accessible source. Since it was determined accessibility cannot be accomplished in any other way, a text-only page with equivalent information or functionality is provided.
(b) End-users shall have access to a description of the accessibility and compatibility features of products in	Supports: Documentation includes a description of accessibility and compatibility features that make it easier for people	• The following components meet this criterion: ○ IBM Security Guardium 10.1:

alternate formats or alternate methods upon request, at no additional charge.	with disabilities to use the product. Those descriptions are available in alternate formats upon request.	▪ Online Help - A product accessibility features section is provided.
(c) Support services for products shall accommodate the communication needs of end-users with disabilities.	Supports: Operating systems provide accessibility features that allow disabled users to customize their preferences. This application preserves those accessibility user preference settings. For example, if Sticky Keys option is selected by a mobility-impaired user, this option will continue to be activated when used with this application. In addition to standard IBM help desk and support Web sites, IBM has established a TTY telephone service for use by deaf or hard of hearing customers to access sales and support services.	

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VPAT for IBM Tivoli Network Manager IP Edition 4.1.1

VPAT for IBM Tivoli Network Manager IP Edition 4.1.1	
VPAT comments:	http://www-01.ibm.com/support/knowledgecenter/SSSHRK/com.ibm.networkmanagerip.doc_4.1.1/itnm/ip/wip/common/welcome.html

VPAT Summary

Criteria	Status	Remarks and Explanations
1194.21 Software Applications and Operating Systems	Supports	Refer to Section 1194.21 in VPAT Details section below.
1194.22 Web-based Internet information and applications	Supports with exceptions	Refer to Section 1194.22 in VPAT Details section below.
1194.23 Telecommunications Products	Not Applicable	Not Applicable
1194.24 Video and Multi-Media Products	Not Applicable	Not Applicable
1194.25 Self-Contained, Closed Products	Not Applicable	Not Applicable
1194.26 Desktop and Portable Computers	Not Applicable	Not Applicable
1194.31 Functional Performance Criteria	Supports with exceptions	Refer to Section 1194.31 in VPAT Details section below.
1194.41 Information, documentation, and support	Supports with exceptions	Refer to Section 1194.41 in VPAT Details section below.

VPAT Details

1194.21 Software Applications and Operating Systems

Criteria	Supporting Features	Remarks and Explanations
(a) When software is designed to run on a system that has a keyboard, product	Supports:	• The following components meet this criterion:

functions shall be executable from a keyboard where the function itself or the result of performing a function can be discerned textually.	A keyboard can be used to achieve all tasks in the application, allowing blind and mobility-impaired users to access information without the use of the mouse.	○ IBM Tivoli Network Manager IP Edition 4.1.1: ▪ QuickStart Installer - Provides a CLI that is only operable with a keyboard.
(b) Applications shall not disrupt or disable activated features of other products that are identified as accessibility features, where those features are developed and documented according to industry standards. Applications also shall not disrupt or disable activated features of any operating system that are identified as accessibility features where the application programming interface for those accessibility features has been documented by the manufacturer of the operating system and is available to the product developer.	Supports: Operating systems provide accessibility features that allow disabled users to customize their preferences. This application preserves those accessibility user preference settings. For example, if Sticky Keys option is selected by a mobility-impaired user, this option will continue to be activated when used with this application.	• The following components meet this criterion: ○ IBM Tivoli Network Manager IP Edition 4.1.1: ▪ QuickStart Installer - Product does not interfere with OS built-in keyboard Accessibility features. These OS built-in keyboard accessibility features work properly with the console mode installer.
(c) A well-defined on-screen indication of the current focus shall be provided that moves among interactive interface elements as the input focus changes. The focus shall be programmatically exposed so that Assistive Technology can track focus and focus changes.	Not Applicable	• The following components do not apply to this criterion: ○ IBM Tivoli Network Manager IP Edition 4.1.1: ▪ QuickStart Installer - There is no focus in a console mode window.
(d) Sufficient information about a user interface element including the identity, operation and state of the element shall be available to Assistive Technology. When an image represents a program element, the	Not Applicable	• The following components do not apply to this criterion: ○ IBM Tivoli Network Manager IP Edition 4.1.1:

information conveyed by the image must also be available in text.		▪ QuickStart Installer - There are no icons or graphics in a console mode window There are no controls, objects, icons or images in a console mode window.
(e) When bitmap images are used to identify controls, status indicators, or other programmatic elements, the meaning assigned to those images shall be consistent throughout an application's performance.	Not Applicable	• The following components do not apply to this criterion: o IBM Tivoli Network Manager IP Edition 4.1.1: ▪ QuickStart Installer - There are no controls, objects, icons or images in a console mode window.
(f) Textual information shall be provided through operating system functions for displaying text. The minimum information that shall be made available is text content, text input caret location, and text attributes.	Supports: Text information is accessible so assistive technologies can communicate content, attributes and caret location to blind users.	• The following components meet this criterion: o IBM Tivoli Network Manager IP Edition 4.1.1: ▪ QuickStart Installer - Console mode window supports interaction with assistive technology. Output is displayed in the command prompt window using standard text output APIs.

(g) Applications shall not override user selected contrast and color selections and other individual display attributes.	Supports: System settings are inherited by the application so that customized preferences will not need to be continually reset. For example, color contrast settings enhanced for a low vision user would be preserved by the application.	• The following components meet this criterion: ○ IBM Tivoli Network Manager IP Edition 4.1.1: ▪ QuickStart Installer - High contrast settings are supported, as controlled by the operating system. Command window supports System settings for size, font and color for visible user interface controls
(h) When animation is displayed, the information shall be displayable in at least one non-animated presentation mode at the option of the user.	Not Applicable	• The following components do not apply to this criterion: ○ IBM Tivoli Network Manager IP Edition 4.1.1: ▪ QuickStart Installer - Animation is not used.
(i) Color coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.	Supports: Color is used only as an enhancement, and an alternate means to convey information or indicate an action is available to users with visual impairments.	• The following components meet this criterion: ○ IBM Tivoli Network Manager IP Edition 4.1.1: ▪ QuickStart Installer - All output is displayed in a single-color text. Color is not used to convey information.
(j) When a product permits a user to adjust color and contrast settings, a variety of	Not Applicable	• The following components do not apply to this criterion:

color selections capable of producing a range of contrast levels shall be provided.		○ IBM Tivoli Network Manager IP Edition 4.1.1: ▪ QuickStart Installer - Color customization is not used in console mode; only standard command window customization is provided by the operating system.
(k) Software shall not use flashing or blinking text, objects, or other elements having a flash or blink frequency greater than 2 Hz and lower than 55 Hz.	Supports: The use of blinking text, objects or elements has been avoided, reducing risk of seizures for users with photosensitive epilepsy.	• The following components meet this criterion: ○ IBM Tivoli Network Manager IP Edition 4.1.1: ▪ QuickStart Installer - No flashing or blinking text is used.
(l) When electronic forms are used, the form shall allow people using Assistive Technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.	Not Applicable	• The following components do not apply to this criterion: ○ IBM Tivoli Network Manager IP Edition 4.1.1: ▪ QuickStart Installer - No electronic forms are used.

1194.22 Web-based Internet information and applications		
Criteria	**Supporting Features**	**Remarks and Explanations**
(a) A text equivalent for every non-text element shall be provided	Supports with exceptions	• The following components do not meet this criterion: ○ IBM Tivoli Common Reporting 2.1.1: ▪ IBM Tivoli Common Reporting - There are problems with the Sort icon (The Sort icon

(e.g., via "alt", "longdesc", or in element content).		does not show up on the graphics list when 'insert+F7' is used in JAWS. ○ IBM Tivoli Network Manager IP Edition 4.1.1: ▪ IBM Tivoli Network Manager Web-based GUI component 4.1.1 - alt tags on images/status icons are present. Unimportant images: Code images that are redundant, unimportant, or used for visual effect so that they should be ignored by assistive technology: spacer imgs don't have the alt attribute set. All non-text content that is presented to the user has a text alternative that serves the equivalent purpose. =========================== Compliant and fully tested for low vision, but not tested with a screen reader. Defect Number: RTC 28823 • The following components meet this criterion: ○ IBM Tivoli Integrated Portal 2.2.0: compliant ▪ IBM Tivoli Integrated Portal
(b) Equivalent alternatives for any multimedia presentation shall be synchronized with the presentation.	Not Applicable	• The following components do not apply to this criterion: ○ IBM Tivoli Integrated Portal 2.2.0: Does not contain any multimedia content. ▪ IBM Tivoli Integrated Portal ○ IBM Tivoli Common Reporting 2.1.1: ▪ IBM Tivoli Common Reporting - No prerecorded audio content. No A/V No Live Multimedia ○ IBM Tivoli Network Manager IP Edition 4.1.1: ▪ IBM Tivoli Network Manager Web-based GUI component 4.1.1 - No time-based media.

(c) Web pages shall be designed so that all information conveyed with color is also available without color, for example from context or markup.	Supports with exceptions	• The following components do not meet this criterion:
		  ○ IBM Tivoli Network Manager IP Edition 4.1.1:
		    ▪ IBM Tivoli Network Manager Web-based GUI component 4.1.1 - * Status information on Network Polling and Topoviz maps are also conveyed by shape and text. * Topoviz, StructureBrowser and MibGrapher have tabular view. * In the new Path views app, the lines are colored, but the settings can be changed to also show an icon in status.properties (none/simple/detailed). * Required fields have an asterisk. * Input errors are shown by a pop up dialog, error field gains focus.
		• The following components meet this criterion:
		  ○ IBM Tivoli Integrated Portal 2.2.0: compliant
		    ▪ IBM Tivoli Integrated Portal
		  ○ IBM Tivoli Common Reporting 2.1.1:
		    ▪ IBM Tivoli Common Reporting - Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element

(d) Documents shall be organized so they are readable without requiring an associated style sheet.	Supports with exceptions	• The following components do not meet this criterion:
		  ○ IBM Tivoli Network Manager IP Edition 4.1.1:
		    ▪ IBM Tivoli Network Manager Web-based GUI component 4.1.1 - This application relies on CSS to render properly and be usable. However, the application provides equivalent facilitation for low-vision users by utilizing the user’s system display settings, including high contrast mode. Users may also control the font sizes using

		the browser settings. This hasn't been tested with RPT.
		• The following components meet this criterion:
		  ○ IBM Tivoli Integrated Portal 2.2.0: Documents within IBM Tivoli Integrated Portal are readable without requiring an associated style sheet.
		    ▪ IBM Tivoli Integrated Portal
		  ○ IBM Tivoli Common Reporting 2.1.1:
		    ▪ IBM Tivoli Common Reporting - Web Pages are readable without requiring style sheets

(e) Redundant text links shall be provided for each active region of a server-side image map.	Supports with exceptions	• The following components do not apply to this criterion:
		  ○ IBM Tivoli Common Reporting 2.1.1:
		    ▪ IBM Tivoli Common Reporting - No image maps used in TCR
		  ○ IBM Tivoli Network Manager IP Edition 4.1.1:
		    ▪ IBM Tivoli Network Manager Web-based GUI component 4.1.1 - No image maps
		• The following components meet this criterion with exceptions:
		  ○ IBM Tivoli Integrated Portal 2.2.0: Defect 253745: JAWS cannot read portlets thumbnail images
		    ▪ IBM Tivoli Integrated Portal

(f) Client-side image maps shall be provided instead of server-side image maps except where the regions cannot be defined with an available geometric shape.	Supports with exceptions	• The following components do not apply to this criterion:
		  ○ IBM Tivoli Common Reporting 2.1.1:
		    ▪ IBM Tivoli Common Reporting - No image maps used in TCR
		  ○ IBM Tivoli Network Manager IP Edition 4.1.1:
		    ▪ IBM Tivoli Network Manager Web-based GUI component 4.1.1 - No image maps
		• The following components meet this criterion with exceptions:
		  ○ IBM Tivoli Integrated Portal 2.2.0: Defect 253745: JAWS cannot read portlets thumbnail images

		▪ IBM Tivoli Integrated Portal
(g) Row and column headers shall be identified for data tables.	Supports with exceptions	• The following components do not meet this criterion: o IBM Tivoli Network Manager IP Edition 4.1.1: ▪ IBM Tivoli Network Manager Web-based GUI component 4.1.1 - Table cells and relationships between cells can be programmatically determined as many html tables have been replaced with Dojo grid: Disco Status GUI, Monitoring GUI, Structure Browser. However, there are known issues with Dojo grid: http://www.dojotoolkit.org/reference-guide/dojox/grid/DataGrid.html#id9 Several components still use legacy html tables and these are not compliant - Disco Configuration GUI, MIB Browser. Defect Number: RTC 28823 • The following components meet this criterion with exceptions: o IBM Tivoli Integrated Portal 2.2.0: Defects Opened: 253561 & 253722. JAWS cannot read the label name correctly ▪ IBM Tivoli Integrated Portal o IBM Tivoli Common Reporting 2.1.1: ▪ IBM Tivoli Common Reporting - One of the admin console graphs is identified as a table. This table does not have a row or column header, so the reading of the table via JAWS is inaccurate.
(h) Markup shall be used to associate data cells and header cells for data tables that have two	Supports with exceptions	• The following components do not meet this criterion: o IBM Tivoli Network Manager IP Edition 4.1.1: ▪ IBM Tivoli Network Manager Web-based GUI component 4.1.1 - Table cells and

or more logical levels of row or column headers.		relationships between cells can be programmatically determined as many html tables have been replaced with Dojo grid: Disco Status GUI, Monitoring GUI, Structure Browser. However, there are known issues with Dojo grid: http://www.dojotoolkit.org/reference-guide/dojox/grid/DataGrid.html#id9 Several components still use legacy html tables and these are not compliant - Disco Configuration GUI, MIB Browser. Defect Number: RTC 28823
		• The following components meet this criterion with exceptions:
		  ○ IBM Tivoli Integrated Portal 2.2.0: Defects Opened: 253561 & 253722. JAWS cannot read the label name correctly
		    ▪ IBM Tivoli Integrated Portal
		  ○ IBM Tivoli Common Reporting 2.1.1:
		    ▪ IBM Tivoli Common Reporting - One of the admin console graphs is identified as a table. This table does not have a row or column header, so the reading of the table via JAWS is inaccurate.

(i) Frames shall be titled with text that facilitates frame identification and navigation.	Supports with exceptions	• The following components do not meet this criterion:
		  ○ IBM Tivoli Network Manager IP Edition 4.1.1:
		    ▪ IBM Tivoli Network Manager Web-based GUI component 4.1.1 - TITLE attribute is missing for several FRAME elements. Defect Number: RTC 28823
		• The following components meet this criterion:
		  ○ IBM Tivoli Integrated Portal 2.2.0: compliant
		    ▪ IBM Tivoli Integrated Portal
		  ○ IBM Tivoli Common Reporting 2.1.1:

		▪ IBM Tivoli Common Reporting - A title and accessible frame source are provided for each frame
(j) Pages shall be designed to avoid causing the screen to flicker with a frequency greater than 2 Hz and lower than 55 Hz.	Supports: The use of blinking text, objects or elements has been avoided, reducing risk of seizures for users with photosensitive epilepsy.	• The following components do not apply to this criterion: o IBM Tivoli Common Reporting 2.1.1: ▪ IBM Tivoli Common Reporting - No Flashing Content in TCR • The following components meet this criterion: o IBM Tivoli Integrated Portal 2.2.0: compliant ▪ IBM Tivoli Integrated Portal o IBM Tivoli Network Manager IP Edition 4.1.1: ▪ IBM Tivoli Network Manager Web-based GUI component 4.1.1 - No flashing content.
(k) A text-only page, with equivalent information or functionality, shall be provided to make a web site comply with the provisions of this part, when compliance cannot be accomplished in any other way. The content of the text-only page shall be updated whenever the primary page changes.	Supports with exceptions	• The following components do not meet this criterion: o IBM Tivoli Network Manager IP Edition 4.1.1: ▪ IBM Tivoli Network Manager Web-based GUI component 4.1.1 - Non-accessible components don't have alternative text-only page, such as Html Trees. Defect Number: RTC 28823 • The following components meet this criterion: o IBM Tivoli Integrated Portal 2.2.0: text-only pages have been provided when compliance is not accomplished in any other way ▪ IBM Tivoli Integrated Portal o IBM Tivoli Common Reporting 2.1.1: ▪ IBM Tivoli Common Reporting - If accessibility cannot be accomplished in any other way, a text only page with equivalent information or functionality is provided.

(l) When pages utilize scripting languages to display content, or to create interface elements, the information provided by the script shall be identified with functional text that can be read by Assistive Technology.	Supports with exceptions	• The following components do not meet this criterion:
		  ○ IBM Tivoli Common Reporting 2.1.1:
		    ▪ IBM Tivoli Common Reporting - When a report is running, the reader does not read that, so the user is unaware of the current state and hence the new state that will be attained when the report is displayed
		  ○ IBM Tivoli Network Manager IP Edition 4.1.1:
		    ▪ IBM Tivoli Network Manager Web-based GUI component 4.1.1 - No accessible alternative provided for the several functions when scripts are disabled.
		• The following components meet this criterion with exceptions:
		  ○ IBM Tivoli Integrated Portal 2.2.0: In IBM Tivoli Integrated Portal 2.2 there is no alternate text for Portlets thumbnail image. This was resolved in IBM Tivoli Integrated Portal 2.2.0.3
		    ▪ IBM Tivoli Integrated Portal

(m) When a web page requires that an applet, plug-in or other application be present on the client system to interpret page content, the page must provide a link to a plug-in or applet that complies with §1194.21(a) through (l).	Does not support	• The following components do not apply to this criterion:
		  ○ IBM Tivoli Integrated Portal 2.2.0: no inaccessible applets or plug-ins are present
		    ▪ IBM Tivoli Integrated Portal
		• The following components do not meet this criterion:
		  ○ IBM Tivoli Common Reporting 2.1.1:
		    ▪ IBM Tivoli Common Reporting - The TAB does not read the various functions in the report viewer
		  ○ IBM Tivoli Network Manager IP Edition 4.1.1:
		    ▪ IBM Tivoli Network Manager Web-based GUI component 4.1.1 - No link is provided to a directly accessible applet, plug-in or other application.

(n) When electronic forms are designed to be completed on-line, the form shall allow people using Assistive Technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.	Supports with exceptions	• The following components do not apply to this criterion: ○ IBM Tivoli Integrated Portal 2.2.0: forms are not used ▪ IBM Tivoli Integrated Portal • The following components do not meet this criterion: ○ IBM Tivoli Network Manager IP Edition 4.1.1: ▪ IBM Tivoli Network Manager Web-based GUI component 4.1.1 - 'label for' attribute has been added to all form input elements. No WAI-ARIA techniques have been implemented for the WCAG 2.0 part of this requirement. Defect Number: RTC 28823 • The following components meet this criterion with exceptions: ○ IBM Tivoli Common Reporting 2.1.1: ▪ IBM Tivoli Common Reporting - The search form does not mention the expected input / output
(o) A method shall be provided that permits users to skip repetitive navigation links.	Supports with exceptions	• The following components do not apply to this criterion: ○ IBM Tivoli Network Manager IP Edition 4.1.1: ▪ IBM Tivoli Network Manager Web-based GUI component 4.1.1 - Keyboard users cannot easily navigate to the main content and have the screen reader begin reading from that point. There is no WAI-ARIA main role on several pages. However, our navigation is dependent on TIP framework, therefore this is N/A. • The following components meet this criterion: ○ IBM Tivoli Common Reporting 2.1.1: ▪ IBM Tivoli Common Reporting - It is possible to skip over navigation links to get to the main content.

		• The following components meet this criterion with exceptions: o IBM Tivoli Integrated Portal 2.2.0: Defect 254109; Required field should have aria-required='true' attribute ▪ IBM Tivoli Integrated Portal
(p) When a timed response is required, the user shall be alerted and given sufficient time to indicate more time is required.	Supports with exceptions	• The following components do not meet this criterion: o IBM Tivoli Common Reporting 2.1.1: ▪ IBM Tivoli Common Reporting - The pop-up window that is used to enter credentials after a certain period of inactivity is not read by the screen reader. o IBM Tivoli Network Manager IP Edition 4.1.1: ▪ IBM Tivoli Network Manager Web-based GUI component 4.1.1 - User can set session and LTPA timeout s at TIP level. Other timeout values are configurable, such as connection to db, and database refresh but generally speaking the time limits for form filling are constrained by container's timeouts ================================ There are no mechanisms to enable user to pause/slow down auto-updating text • The following components meet this criterion: o IBM Tivoli Integrated Portal 2.2.0: When a timed response is required, users are alerted and given sufficient time to complete the action or to indicate more time is required ▪ IBM Tivoli Integrated Portal

1194.31 Functional Performance Criteria		
Criteria	**Supporting Features**	**Remarks and Explanations**

(a) At least one mode of operation and information retrieval that does not require user vision shall be provided, or support for Assistive Technology used by people who are blind or visually impaired shall be provided.	Supports with exceptions
	See the following for supporting features:
	- 1194.21 a, b, c, d, e, f, h, i, l
	- 1194.22 all
	- 1194.23 k1, k4
	- 1194.24 d
	- 1194.25 a, b, c, e, f, g
	- 1194.26 b, d
		• The following components meet this criterion:
		  ○ IBM Tivoli Network Manager IP Edition 4.1.1:
		    ▪ QuickStart Installer
		• The following components meet this criterion with exceptions:
		  ○ IBM Tivoli Integrated Portal 2.2.0:
		    ▪ IBM Tivoli Integrated Portal
		  ○ IBM Tivoli Common Reporting 2.1.1:
		    ▪ IBM Tivoli Common Reporting
		  ○ IBM Tivoli Network Manager IP Edition 4.1.1:
		    ▪ IBM Tivoli Network Manager Web-based GUI component 4.1.1

(b) At least one mode of operation and information retrieval that does not require visual acuity greater than 20/70 shall be provided in audio and enlarged print output working together or independently, or support for Assistive Technology used by people what are visually impaired shall be provided.	Supports with exceptions
	See the following for supporting features:
	- 1194.21 c, g, i, j, l
	- 1194.22 n
	- 1194.25 h
	- 1194.26 d
		• The following components do not apply to this criterion:
		  ○ IBM Tivoli Integrated Portal 2.2.0:
		    ▪ IBM Tivoli Integrated Portal
		• The following components do not meet this criterion:
		  ○ IBM Tivoli Network Manager IP Edition 4.1.1:
		    ▪ IBM Tivoli Network Manager Web-based GUI component 4.1.1

		• The following components meet this criterion:
		  ○ IBM Tivoli Network Manager IP Edition 4.1.1:
		    ▪ QuickStart Installer
		• The following components meet this criterion with exceptions:
		  ○ IBM Tivoli Common Reporting 2.1.1:
		    ▪ IBM Tivoli Common Reporting

(c) At least one mode of operation and information retrieval that does not require user hearing shall be provided, or support for Assistive Technology used by people who are deaf or hard of hearing shall be provided.	Supports with exceptions
	See the following for other supporting features:
	- 1194.22 b, m
	- 1194.23 k4
	- 1194.24 c
	- 1194.25 e, f
		• The following components do not apply to this criterion:
		  ○ IBM Tivoli Network Manager IP Edition 4.1.1:
		    ▪ IBM Tivoli Network Manager Web-based GUI component 4.1.1
		    ▪ QuickStart Installer
		• The following components do not meet this criterion:
		  ○ IBM Tivoli Common Reporting 2.1.1:
		    ▪ IBM Tivoli Common Reporting
		  ○ IBM Tivoli Network Manager IP Edition 4.1.1:
		    ▪ IBM Tivoli Network Manager Web-based GUI component 4.1.1
		• The following components meet this criterion:
		  ○ IBM Tivoli Integrated Portal 2.2.0:

		▪ IBM Tivoli Integrated Portal
(d) Where audio information is important for the use of the product, at least one mode of operation and information retrieval shall be provided in an enhanced auditory fashion, or support for assistive hearing devices shall be provided.	Not Applicable	• The following components do not apply to this criterion: o IBM Tivoli Integrated Portal 2.2.0: ▪ IBM Tivoli Integrated Portal o IBM Tivoli Common Reporting 2.1.1: ▪ IBM Tivoli Common Reporting o IBM Tivoli Network Manager IP Edition 4.1.1: ▪ IBM Tivoli Network Manager Web-based GUI component 4.1.1 ▪ QuickStart Installer
(e) At least one mode of operation and information retrieval that does not require user speech shall be provided, or support for Assistive Technology used by people with disabilities shall be provided.	Not Applicable	This is not a speech product.
(f) At least one mode of operation and information retrieval that does not require fine motor control or simultaneous actions and that is operable with limited reach and strength shall be provided.	Supports with exceptions See the following for supporting features: - 1194.21 a, b - 1194.22 l, p - 1194.23 k1, k2, k3 - 1194.25 b, j1, j2, j3, j4 - 1194.26 d	• The following components do not meet this criterion: o IBM Tivoli Common Reporting 2.1.1: ▪ IBM Tivoli Common Reporting o IBM Tivoli Network Manager IP Edition 4.1.1:

		▪ IBM Tivoli Network Manager Web-based GUI component 4.1.1 • The following components meet this criterion: ○ IBM Tivoli Network Manager IP Edition 4.1.1: ▪ QuickStart Installer • The following components meet this criterion with exceptions: ○ IBM Tivoli Integrated Portal 2.2.0: ▪ IBM Tivoli Integrated Portal
1194.41 Information, documentation, and support		
Criteria	**Supporting Features**	**Remarks and Explanations**
(a) Product support documentation provided to end-users shall be made available in alternate formats upon request, at no additional charge.	Supports with exceptions	• The following components meet this criterion with exceptions: ○ IBM Tivoli Network Manager IP Edition 4.1.1: ▪ IBM Tivoli Network Manager Documentation 4.1.1 - Not tested. Documentation is provided in both HTML and PDF format. All images are provided with alternative text. Not tested. Not tested. Color is not used as the only method of displaying information in the documentation.

		Sufficient contrast is provided for text in the documents. Not tested. The documents are displayed in HTML in the Tivoli Information Center which does not support this feature. The PDF format does support this feature. However, the reading order of the PDF format of the documents has not been tested. No flashing text or images are used. Not tested. There is a table of contents-style navigation system built into Eclipse, which is used by the Tivoli Information Center. Not tested. The documentation is translated and provided in the Tivoli Information Center, which should provide this feature.
(b) End-users shall have access to a description of the accessibility and compatibility features of products in alternate formats or alternate methods upon request, at no additional charge.	Does not support	• The following components do not meet this criterion: ○ IBM Tivoli Network Manager IP Edition 4.1.1: ▪ IBM Tivoli Network Manager Documentation 4.1.1 - Not tested.

		Accessibility features are documented.
(c) Support services for products shall accommodate the communication needs of end-users with disabilities.	Supports: Operating systems provide accessibility features that allow disabled users to customize their preferences. This application preserves those accessibility user preference settings. For example, if Sticky Keys option is selected by a mobility-impaired user, this option will continue to be activated when used with this application. In addition to standard IBM help desk and support Web sites, IBM has established a TTY telephone service for use by deaf or hard of hearing customers to access sales and support services.	

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VPAT for IBM WebSphere Application Server Network Deployment 9.0

VPAT for IBM WebSphere Application Server Network Deployment 9.0	
VPAT comments:	IBM® WebSphere® Application Server Network Deployment provides an advanced, flexible runtime environment for large-scale and mission-critical application deployments

	for open environments. It offers near-continuous availability with advanced performance and management capabilities for mission-critical applications. WebSphere Application Server Network Deployment V9.0 continues to offer the leading, open-standards-based application foundation for traditional workloads and also modern applications that tend to be delivered as services. It enables accelerated delivery of innovative applications with unmatched operational efficiency, reliability, administration, security, and control. WebSphere Application Server Network Deployment also provides a run time for IBM z Systems™ and z/OS® and enables prioritized workload management, advanced transactional integrity, horizontal and vertical scalability and data and workload co-location. For more information, visit the product website: http://www-03.ibm.com/software/products/en/appserv-was The product's IBM Knowledge Center documentation is hosted in the IBM Knowledge Center - Hosted Edition service. To request the current accessibility status for the IBM Knowledge Center - Hosted Edition service, visit the IBM Product Accessibility information web page (https://www-03.ibm.com/research/accessibility/requests/accvpat.nsf/bidxjs?OpenForm) and select the entry for IBM Knowledge Center - Hosted Edition.

VPAT Summary

Criteria	Status	Remarks and Explanations
1194.21 Software Applications and Operating Systems	Supports	Refer to Section 1194.21 in VPAT Details section below.
1194.22 Web-based Internet information and applications	Supports	Refer to Section 1194.22 in VPAT Details section below.
1194.23 Telecommunications Products	Not Applicable	Not Applicable

1194.24 Video and Multi-Media Products	Not Applicable	Not Applicable
1194.25 Self-Contained, Closed Products	Not Applicable	Not Applicable
1194.26 Desktop and Portable Computers	Not Applicable	Not Applicable
1194.31 Functional Performance Criteria	Supports	Refer to Section 1194.31 in VPAT Details section below.
1194.41 Information, documentation, and support	Supports	Refer to Section 1194.41 in VPAT Details section below.

VPAT Details

1194.21 Software Applications and Operating Systems

Criteria	Supporting Features	Remarks and Explanations
(a) When software is designed to run on a system that has a keyboard, product functions shall be executable from a keyboard where the function itself or the result of performing a function can be discerned textually.	Supports: A keyboard can be used to achieve all tasks in the application, allowing blind and mobility-impaired users to access information without the use of the mouse.	• The following components meet this criterion: ○ IBM HTTP Server version 9.0: ▪ Command Line Tools - Provides a command-line interface that is operable with a keyboard only. ○ IBM Installation Manager and IBM Packaging Utility 1.8.x: ▪ Installation Manager and Packaging Utility - Silent, Console, and Command-line Modes - This application runs as a command line interface, which is only operable with a keyboard.

		▪ Installation Manager and Packaging Utility - Wizard Mode - Keyboard equivalents are provided for all actions. ○ IBM HTTP Server for z/OS version 9.0: ▪ Command Line Tools - Provides a command-line interface that is operable with a keyboard only. ○ IBM WebSphere Application Server 9.0: Keyboard equivalents are provided for all actions. ▪ Installation Manager Customized Panels ▪ WebSphere Customization Toolbox ▪ Command Line Tools, Utilities, and Scripts ○ IBM WebSphere Application Server Liberty 16.0.0.x: ▪ Command Line Tools, Utilities, and Scripts - Keyboard equivalents are provided for all actions.
(b) Applications shall not disrupt or disable activated features of other products that are identified as accessibility features, where those features are developed and documented according to industry	Supports: Operating systems provide accessibility features that allow disabled users to customize their preferences. This application	• The following components meet this criterion: ○ IBM Installation Manager and IBM Packaging Utility 1.8.x:

standards. Applications also shall not disrupt or disable activated features of any operating system that are identified as accessibility features where the application programming interface for those accessibility features has been documented by the manufacturer of the operating system and is available to the product developer.	preserves those accessibility user preference settings. For example, if Sticky Keys option is selected by a mobility-impaired user, this option will continue to be activated when used with this application.	▪ Installation Manager and Packaging Utility - Silent, Console, and Command-line Modes - This application does not interfere with keyboard accessibility features provided by operating system. ▪ Installation Manager and Packaging Utility - Wizard Mode - This application does not interfere with keyboard accessibility features built into the operating system. ○ IBM HTTP Server version 9.0: ▪ Command Line Tools - Does not interfere with keyboard accessibility features provided by the operating system. ○ IBM HTTP Server for z/OS version 9.0: ▪ Command Line Tools - Does not interfere with keyboard accessibility features provided by the operating system. ○ IBM WebSphere Application Server 9.0: Does not interfere with keyboard accessibility features provided by the operating system.

		▪ Installation Manager Customized Panels ▪ WebSphere Customization Toolbox ▪ Command Line Tools, Utilities, and Scripts ○ IBM WebSphere Application Server Liberty 16.0.0.x: ▪ Command Line Tools, Utilities, and Scripts - Does not interfere with keyboard accessibility features provided by the operating system.
(c) A well-defined on-screen indication of the current focus shall be provided that moves among interactive interface elements as the input focus changes. The focus shall be programmatically exposed so that Assistive Technology can track focus and focus changes.	Supports: When using the application with a keyboard, users can tell where they are on the screen and the information is available to assistive technologies to communicate screen location to visually impaired users.	• The following components do not apply to this criterion: ○ IBM Installation Manager and IBM Packaging Utility 1.8.x: ▪ Installation Manager and Packaging Utility - Silent, Console, and Command-line Modes - This application is implemented via commands only. There are no interactive objects. ○ IBM HTTP Server version 9.0: ▪ Command Line Tools - This checkpoint does not apply to command-line interface applications. The user interface is implemented via

		commands only. There are no interactive objects. o IBM HTTP Server for z/OS version 9.0: ▪ Command Line Tools - This checkpoint does not apply to command-line interface applications. The user interface is implemented via commands only. There are no interactive objects. o IBM WebSphere Application Server 9.0: ▪ Command Line Tools, Utilities, and Scripts - The user interface is implemented via commands only. There are no interactive objects. o IBM WebSphere Application Server Liberty 16.0.0.x: ▪ Command Line Tools, Utilities, and Scripts - The user interface is implemented via commands only. There are no interactive objects. • The following components meet this criterion:

		○ IBM Installation Manager and IBM Packaging Utility 1.8.x: ▪ Installation Manager and Packaging Utility - Wizard Mode - A visual focus indicator is provided and is programmatically exposed to assistive technology. ○ IBM WebSphere Application Server 9.0: A visual focus indicator is provided that moves among interactive objects as the input focus changes and is programmatically exposed to assistive technology. ▪ Installation Manager Customized Panels ▪ WebSphere Customization Toolbox
(d) Sufficient information about a user interface element including the identity, operation and state of the element shall be available to Assistive Technology. When an image represents a program element, the information conveyed by the image must also be available in text.	Supports: This software application allows a screen reader to describe the user interface environment and controls to a blind user. For example, if you tab through a form and find a radio button, the user would be able to determine it is a radio button and the current selection status of the button.	• The following components do not apply to this criterion: ○ IBM HTTP Server version 9.0: ▪ Command Line Tools - This checkpoint does not apply to command-line interface applications. The command line interface has no user interface objects. This checkpoint does not apply to command-line interface applications.

		The command line interface has no controls, objects, icons, or images. ○ IBM Installation Manager and IBM Packaging Utility 1.8.x: ▪ Installation Manager and Packaging Utility - Silent, Console, and Command-line Modes - This application has no user interface objects. This application has no controls, objects, icons, or images. ○ IBM HTTP Server for z/OS version 9.0: ▪ Command Line Tools - This checkpoint does not apply to command-line interface applications. The command line interface has no user interface objects. This checkpoint does not apply to command-line interface applications. The command line interface has no controls, objects, icons, or images. ○ IBM WebSphere Application Server 9.0: ▪ Command Line Tools, Utilities, and Scripts -

		The command line interface has no controls, objects, icons, or images. The command line interface has no user interface objects. ○ IBM WebSphere Application Server Liberty 16.0.0.x: ▪ Command Line Tools, Utilities, and Scripts - The command line interface has no user interface objects. The command line interface has no controls, objects, icons, or images. • The following components meet this criterion: ○ IBM Installation Manager and IBM Packaging Utility 1.8.x: ▪ Installation Manager and Packaging Utility - Wizard Mode - Semantic information is provided for all user interface objects. Also, alternative text is available for images. Labels are associated with all controls, objects, icons, and images. ○ IBM WebSphere Application Server 9.0: Semantic information is provided about

		user interface objects. Labels are associated with controls, objects, icons and images. The meaning of images is consistent throughout the application. ▪ Installation Manager Customized Panels ▪ WebSphere Customization Toolbox
(e) When bitmap images are used to identify controls, status indicators, or other programmatic elements, the meaning assigned to those images shall be consistent throughout an application's performance.	Supports: The meaning assigned to images used in the application is consistent and unique, minimizing confusion of the context of use for those images.	• The following components do not apply to this criterion: ○ IBM HTTP Server version 9.0: ▪ Command Line Tools - This checkpoint does not apply to command-line interface applications. The command line interface has no controls, objects, icons, or images. ○ IBM Installation Manager and IBM Packaging Utility 1.8.x: ▪ Installation Manager and Packaging Utility - Silent, Console, and Command-line Modes - This application has no controls, objects, icons, or images. ○ IBM HTTP Server for z/OS version 9.0: ▪ Command Line Tools - This checkpoint does not apply to command-line

		interface applications. The command line interface has no controls, objects, icons, or images. ○ IBM WebSphere Application Server 9.0: ▪ Command Line Tools, Utilities, and Scripts - The command line interface has no controls, objects, icons, or images. ○ IBM WebSphere Application Server Liberty 16.0.0.x: ▪ Command Line Tools, Utilities, and Scripts - The command line interface has no controls, objects, icons, or images. • The following components meet this criterion: ○ IBM Installation Manager and IBM Packaging Utility 1.8.x: ▪ Installation Manager and Packaging Utility - Wizard Mode - Labels are associated with all controls, objects, icons, and images. ○ IBM WebSphere Application Server 9.0: Labels are associated with controls, objects, icons and images. The

		meaning of images is consistent throughout the application. ▪ Installation Manager Customized Panels ▪ WebSphere Customization Toolbox
(f) Textual information shall be provided through operating system functions for displaying text. The minimum information that shall be made available is text content, text input caret location, and text attributes.	Supports: Text information is accessible so assistive technologies can communicate content, attributes and caret location to blind users.	• The following components meet this criterion: o IBM HTTP Server version 9.0: ▪ Command Line Tools - Text is provided through standard system function calls or through API which supports interaction with assistive technology. o IBM Installation Manager and IBM Packaging Utility 1.8.x: ▪ Installation Manager and Packaging Utility - Silent, Console, and Command-line Modes - Output is displayed in the command prompt window using standard text output APIs (application programming interface) as well as written to a log text file. ▪ Installation Manager and Packaging Utility - Wizard Mode - Text is provided through

		standard system function calls or through an API (application programming interface) which supports interaction with assistive technology. ○ IBM HTTP Server for z/OS version 9.0: ▪ Command Line Tools - Text is provided through standard system function calls or through API which supports interaction with assistive technology. ○ IBM WebSphere Application Server 9.0: Text is provided through standard system function calls or through an API (application programming interface) which supports interaction with assistive technology. ▪ Installation Manager Customized Panels ▪ WebSphere Customization Toolbox ▪ Command Line Tools, Utilities, and Scripts ○ IBM WebSphere Application Server Liberty 16.0.0.x: ▪ Command Line Tools, Utilities, and Scripts - Text is provided through

		standard system function calls or through an API (application programming interface) which supports interaction with assistive technology.
(g) Applications shall not override user selected contrast and color selections and other individual display attributes.	Supports: System settings are inherited by the application so that customized preferences will not need to be continually reset. For example, color contrast settings enhanced for a low vision user would be preserved by the application.	• The following components meet this criterion: ○ IBM HTTP Server version 9.0: ▪ Command Line Tools - High contrast settings are supported, as controlled by the operating system. Font, size, and color settings are supported, as controlled by the operating system. ○ IBM Installation Manager and IBM Packaging Utility 1.8.x: Font, size, and color settings are supported, as controlled by the operating system. ▪ Installation Manager and Packaging Utility - Silent, Console, and Command-line Modes - Contrast settings are supported, as controlled by the operating system. ▪ Installation Manager and Packaging Utility -

		Wizard Mode - High contrast settings are supported, as controlled by the operating system. ○ IBM HTTP Server for z/OS version 9.0: ▪ Command Line Tools - High contrast settings are supported, as controlled by the operating system. Font, size, and color settings are supported, as controlled by the operating system. ○ IBM WebSphere Application Server 9.0: Systems settings are supported for high contrast for all user interface controls and client area content. System settings are inherited for font, size, and color for all elements of the user interface. ▪ Installation Manager Customized Panels ▪ WebSphere Customization Toolbox ▪ Command Line Tools, Utilities, and Scripts ○ IBM WebSphere Application Server Liberty 16.0.0.x: ▪ Command Line Tools, Utilities, and Scripts - Systems settings are

		supported for high contrast for all user interface controls and client area content. System settings are inherited for font, size, and color for all elements of the user interface.
(h) When animation is displayed, the information shall be displayable in at least one non-animated presentation mode at the option of the user.	Supports: Application provides an option to display animation in a non-animated mode, allowing users with vision impairments equal access to the same information and reliable interaction with assistive technology.	• The following components do not apply to this criterion: ○ IBM Installation Manager and IBM Packaging Utility 1.8.x: ▪ Installation Manager and Packaging Utility - Silent, Console, and Command-line Modes - This application does not support animation. ▪ Installation Manager and Packaging Utility - Wizard Mode - No animation is used in this application. ○ IBM HTTP Server version 9.0: ▪ Command Line Tools - This checkpoint does not apply to command-line interface. Command line interfaces do not support animation. ○ IBM HTTP Server for z/OS version 9.0:

		▪ Command Line Tools - This checkpoint does not apply to command-line interface. Command line interfaces do not support animation. ○ IBM WebSphere Application Server 9.0: ▪ Installation Manager Customized Panels - No animation. ▪ Command Line Tools, Utilities, and Scripts - Command line interfaces do not support animation. ○ IBM WebSphere Application Server Liberty 16.0.0.x: ▪ Command Line Tools, Utilities, and Scripts - Command line interfaces do not support animation. • The following components meet this criterion: ○ IBM WebSphere Application Server 9.0: ▪ WebSphere Customization Toolbox - An option is provided to display animation in a non-animated presentation mode.

(i) Color coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.	Supports:
	Color is used only as an enhancement, and an alternate means to convey information or indicate an action is available to users with visual impairments.
		• The following components do not apply to this criterion: All output is displayed in a single-color text. Color is not used to convey information.
		  ○ IBM HTTP Server version 9.0:
		    ▪ Command Line Tools
		  ○ IBM Installation Manager and IBM Packaging Utility 1.8.x:
		    ▪ Installation Manager and Packaging Utility - Silent, Console, and Command-line Modes
		  ○ IBM HTTP Server for z/OS version 9.0:
		    ▪ Command Line Tools
		• The following components meet this criterion:
		  ○ IBM Installation Manager and IBM Packaging Utility 1.8.x:
		    ▪ Installation Manager and Packaging Utility - Wizard Mode - Color is not used as a sole means to convey information.
		  ○ IBM WebSphere Application Server 9.0: Color is only used as an enhancement, not as the only way to convey information or indicate an action.
		    ▪ Installation Manager Customized Panels
		    ▪ WebSphere Customization Toolbox

		▪ Command Line Tools, Utilities, and Scripts ○ IBM WebSphere Application Server Liberty 16.0.0.x: ▪ Command Line Tools, Utilities, and Scripts - Color is only used as an enhancement, not as the only way to convey information or indicate an action.
(j) When a product permits a user to adjust color and contrast settings, a variety of color selections capable of producing a range of contrast levels shall be provided.	Not Applicable	• The following components do not apply to this criterion: ○ IBM HTTP Server version 9.0: ▪ Command Line Tools - Color customization is not provided, but rather is controlled by the operating system. ○ IBM Installation Manager and IBM Packaging Utility 1.8.x: ▪ Installation Manager and Packaging Utility - Silent, Console, and Command-line Modes - Color customization is not provided. ▪ Installation Manager and Packaging Utility - Wizard Mode - Color customization is not provided in this application.

		○ IBM HTTP Server for z/OS version 9.0: ▪ Command Line Tools - Color customization is not provided, but rather is controlled by the operating system. ○ IBM WebSphere Application Server 9.0: Color customization is not supported. ▪ Installation Manager Customized Panels ▪ WebSphere Customization Toolbox ▪ Command Line Tools, Utilities, and Scripts ○ IBM WebSphere Application Server Liberty 16.0.0.x: ▪ Command Line Tools, Utilities, and Scripts - Color customization is not provided except that which is provided by the operating system for the console window settings.
(k) Software shall not use flashing or blinking text, objects, or other elements having a flash or blink frequency greater than 2 Hz and lower than 55 Hz.	Supports: The use of blinking text, objects or elements has been avoided, reducing risk of seizures for users with photosensitive epilepsy.	• The following components meet this criterion: ○ IBM HTTP Server version 9.0: ▪ Command Line Tools - No flashing or blinking objects presented to the command-line interface.

		○ IBM Installation Manager and IBM Packaging Utility 1.8.x: ▪ Installation Manager and Packaging Utility - Silent, Console, and Command-line Modes - No flashing or blinking text is used. ▪ Installation Manager and Packaging Utility - Wizard Mode - No flashing or blinking text or objects are used in this application. ○ IBM HTTP Server for z/OS version 9.0: ▪ Command Line Tools - No flashing or blinking objects presented to the command-line interface. ○ IBM WebSphere Application Server 9.0: Does not use flashing or blinking text, objects, or other elements having a flash or blink frequency greater than 2 Hz and lower than 55 Hz. ▪ Installation Manager Customized Panels ▪ WebSphere Customization Toolbox ▪ Command Line Tools, Utilities, and Scripts ○ IBM WebSphere Application Server Liberty 16.0.0.x:

		▪ Command Line Tools, Utilities, and Scripts - Does not use flashing or blinking text, objects, or other elements having a flash or blink frequency greater than 2 Hz and lower than 55 Hz.
(l) When electronic forms are used, the form shall allow people using Assistive Technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.	Supports: The application design allows assistive technology access to information, field elements, and functionality required to complete and submit forms.	• The following components do not apply to this criterion: o IBM HTTP Server version 9.0: ▪ Command Line Tools - This checkpoint does not apply to command-line interface applications. The command line interface has no forms. o IBM HTTP Server for z/OS version 9.0: ▪ Command Line Tools - This checkpoint does not apply to command-line interface applications. The command line interface has no forms. o IBM WebSphere Application Server 9.0: ▪ Command Line Tools, Utilities, and Scripts - The command line interface has no forms. o IBM WebSphere Application Server Liberty 16.0.0.x:

		▪ Command Line Tools, Utilities, and Scripts - The command line interface has no forms. • The following components meet this criterion: ○ IBM Installation Manager and IBM Packaging Utility 1.8.x: ▪ Installation Manager and Packaging Utility - Silent, Console, and Command-line Modes - The silent install mode uses a response file that contains the settings used during installation. The response file can be edited using a text editor. ▪ Installation Manager and Packaging Utility - Wizard Mode - This application allows people using assistive technology to access the information, field elements and functionality, including all directions and cues, required for completion of all tasks. ○ IBM WebSphere Application Server 9.0: Form fields allow assistive technology to access the information, field elements

		and functionality required for completion and submission of the form, including all directions and cues. ▪ Installation Manager Customized Panels ▪ WebSphere Customization Toolbox
1194.22 Web-based Internet information and applications		
Criteria	**Supporting Features**	**Remarks and Explanations**
(a) A text equivalent for every non-text element shall be provided (e.g., via "alt", "longdesc", or in element content).	Supports: The application design provides text equivalents for all images so that assistive technology can describe those images to blind users.	• The following components meet this criterion: All non-text content that is presented to the user has a text alternative that serves the equivalent purpose. o IBM WebSphere Application Server 9.0: ▪ Launchpad ▪ Administration Console o IBM WebSphere Application Server Liberty 16.0.0.x: ▪ Admin Center
(b) Equivalent alternatives for any multimedia presentation shall be synchronized with the presentation.	Not Applicable	• The following components do not apply to this criterion: No prerecorded audio. No time-based media or prerecorded video. No live multimedia. o IBM WebSphere Application Server 9.0: ▪ Launchpad ▪ Administration Console

		○ IBM WebSphere Application Server Liberty 16.0.0.x: ▪ Admin Center
(c) Web pages shall be designed so that all information conveyed with color is also available without color, for example from context or markup.	Supports: Color is used only as an enhancement, and an alternate means to convey information or indicate an action is available to users with visual impairments.	• The following components meet this criterion: Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. ○ IBM WebSphere Application Server 9.0: ▪ Launchpad ▪ Administration Console ○ IBM WebSphere Application Server Liberty 16.0.0.x: ▪ Admin Center
(d) Documents shall be organized so they are readable without requiring an associated style sheet.	Supports: Web page content is readable without the use of a pre-defined style sheet, allowing low vision users to enable their own style sheets that enhance their viewing preferences.	• The following components meet this criterion: Web pages are readable without requiring style sheets. ○ IBM WebSphere Application Server 9.0: ▪ Launchpad ▪ Administration Console ○ IBM WebSphere Application Server Liberty 16.0.0.x: ▪ Admin Center
(e) Redundant text links shall be provided for each active region of a server-side image map.	Not Applicable	• The following components do not apply to this criterion: No image maps. ○ IBM WebSphere Application Server 9.0: ▪ Launchpad

		▪ Administration Console o IBM WebSphere Application Server Liberty 16.0.0.x: ▪ Admin Center
(f) Client-side image maps shall be provided instead of server-side image maps except where the regions cannot be defined with an available geometric shape.	Not Applicable	• The following components do not apply to this criterion: No image maps. o IBM WebSphere Application Server 9.0: ▪ Launchpad ▪ Administration Console o IBM WebSphere Application Server Liberty 16.0.0.x: ▪ Admin Center
(g) Row and column headers shall be identified for data tables.	Supports: The application is designed to identify row and column headers for blind users so the location and context of the table cell are clear and can be communicated by a screen reader.	• The following components meet this criterion: Table cells and relationships between cells can be programmatically determined. o IBM WebSphere Application Server 9.0: ▪ Launchpad ▪ Administration Console o IBM WebSphere Application Server Liberty 16.0.0.x: ▪ Admin Center
(h) Markup shall be used to associate data cells and header cells for data tables that have two or more logical levels of row or column headers.	Supports: Complex tables are designed with additional attributes for blind users so the location and context of the table cell are clear and can be communicated by a screen reader.	• The following components meet this criterion: Table cells and relationships between cells can be programmatically determined. o IBM WebSphere Application Server 9.0: ▪ Launchpad

		▪ Administration Console o IBM WebSphere Application Server Liberty 16.0.0.x: ▪ Admin Center
(i) Frames shall be titled with text that facilitates frame identification and navigation.	Supports: Meaningful text titles are used to describe the purpose of frames so blind users can easily navigate to the desired area.	• The following components meet this criterion: A title and an accessible frame source are provided for each frame. o IBM WebSphere Application Server 9.0: ▪ Launchpad ▪ Administration Console o IBM WebSphere Application Server Liberty 16.0.0.x: ▪ Admin Center
(j) Pages shall be designed to avoid causing the screen to flicker with a frequency greater than 2 Hz and lower than 55 Hz.	Supports: The use of blinking text, objects or elements has been avoided, reducing risk of seizures for users with photosensitive epilepsy.	• The following components meet this criterion: Web pages do not contain anything that flashes more than three times in any one second period. o IBM WebSphere Application Server 9.0: ▪ Launchpad ▪ Administration Console o IBM WebSphere Application Server Liberty 16.0.0.x: ▪ Admin Center
(k) A text-only page, with equivalent information or functionality, shall be provided to make a web site comply with the provisions of this part, when compliance cannot be accomplished in any other way.	Not Applicable	• The following components do not apply to this criterion: Already accessible. Text-only page not required. o IBM WebSphere Application Server 9.0:

The content of the text-only page shall be updated whenever the primary page changes.		▪ Launchpad ▪ Administration Console o IBM WebSphere Application Server Liberty 16.0.0.x: ▪ Admin Center
(l) When pages utilize scripting languages to display content, or to create interface elements, the information provided by the script shall be identified with functional text that can be read by Assistive Technology.	Supports: Alternatives to scripting language are provided, allowing users access to the content via keyboard and assistive technology.	• The following components meet this criterion: Scripts are keyboard accessible. If the content affected by scripting is not accessible, an alternative is provided. o IBM WebSphere Application Server 9.0: ▪ Launchpad ▪ Administration Console o IBM WebSphere Application Server Liberty 16.0.0.x: ▪ Admin Center
(m) When a web page requires that an applet, plug-in or other application be present on the client system to interpret page content, the page must provide a link to a plug-in or applet that complies with §1194.21(a) through (l).	Not Applicable	• The following components do not apply to this criterion: No applets, plug-ins, or non-HTML content. o IBM WebSphere Application Server 9.0: ▪ Launchpad ▪ Administration Console o IBM WebSphere Application Server Liberty 16.0.0.x: ▪ Admin Center
(n) When electronic forms are designed to be completed on-line, the form shall allow people using Assistive Technology to access the information, field elements, and	Supports: The application design allows assistive technology access to information, field	• The following components do not apply to this criterion: o IBM WebSphere Application Server 9.0:

functionality required for completion and submission of the form, including all directions and cues.	elements, and functionality required to complete and submit forms.	▪ Launchpad - No forms. • The following components meet this criterion: Form element labels can be programmatically determined. Note: This product uses WAI-ARIA to comply with this checkpoint. WAI-ARIA has been supported since Firefox 3.6 and JAWS 12. o IBM WebSphere Application Server 9.0: ▪ Administration Console o IBM WebSphere Application Server Liberty 16.0.0.x: ▪ Admin Center
(o) A method shall be provided that permits users to skip repetitive navigation links.	Supports: Web pages are designed so that repetitive navigation links can be skipping over, and blind users can navigate to the main content of the page more easily.	• The following components meet this criterion: Methods are provided for skipping over navigation links to get to the main content of the page. Note: This product uses WAI-ARIA to comply with this checkpoint. WAI-ARIA has been supported since Firefox 3.6 and JAWS 12. o IBM WebSphere Application Server 9.0: ▪ Launchpad ▪ Administration Console o IBM WebSphere Application Server Liberty 16.0.0.x: ▪ Admin Center
(p) When a timed response is required, the user shall be alerted and given sufficient time to indicate more time is required.	Not Applicable	• The following components do not apply to this criterion: No time limits. o IBM WebSphere Application Server 9.0:

		▪ Launchpad ▪ Administration Console ○ IBM WebSphere Application Server Liberty 16.0.0.x: ▪ Admin Center
1194.31 Functional Performance Criteria		
Criteria	**Supporting Features**	**Remarks and Explanations**
(a) At least one mode of operation and information retrieval that does not require user vision shall be provided, or support for Assistive Technology used by people who are blind or visually impaired shall be provided.	Supports: See the following for supporting features: - 1194.21 a, b, c, d, e, f, h, i, l - 1194.22 all - 1194.23 k1, k4 - 1194.24 d - 1194.25 a, b, c, e, f, g - 1194.26 b, d	• The following components meet this criterion: ○ IBM HTTP Server version 9.0: ▪ Command Line Tools ○ IBM Installation Manager and IBM Packaging Utility 1.8.x: ▪ Installation Manager and Packaging Utility - Silent, Console, and Command-line Modes ▪ Installation Manager and Packaging Utility - Wizard Mode ○ IBM HTTP Server for z/OS version 9.0: ▪ Command Line Tools ○ IBM WebSphere Application Server 9.0: ▪ Installation Manager Customized Panels ▪ WebSphere Customization Toolbox ▪ Command Line Tools, Utilities, and Scripts ▪ Launchpad ▪ Administration Console

		○ IBM WebSphere Application Server Liberty 16.0.0.x: ▪ Command Line Tools, Utilities, and Scripts ▪ Admin Center
(b) At least one mode of operation and information retrieval that does not require visual acuity greater than 20/70 shall be provided in audio and enlarged print output working together or independently, or support for Assistive Technology used by people what are visually impaired shall be provided.	Supports: See the following for supporting features: - 1194.21 c, g, i, j, l - 1194.22 n - 1194.25 h - 1194.26 d	• The following components do not apply to this criterion: ○ IBM WebSphere Application Server 9.0: ▪ Launchpad • The following components meet this criterion: ○ IBM Installation Manager and IBM Packaging Utility 1.8.x: ▪ Installation Manager and Packaging Utility - Silent, Console, and Command-line Modes ▪ Installation Manager and Packaging Utility - Wizard Mode ○ IBM HTTP Server version 9.0: ▪ Command Line Tools ○ IBM HTTP Server for z/OS version 9.0: ▪ Command Line Tools ○ IBM WebSphere Application Server 9.0: ▪ Installation Manager Customized Panels ▪ WebSphere Customization Toolbox ▪ Command Line Tools, Utilities, and Scripts

		▪ Administration Console ○ IBM WebSphere Application Server Liberty 16.0.0.x: ▪ Command Line Tools, Utilities, and Scripts ▪ Admin Center
(c) At least one mode of operation and information retrieval that does not require user hearing shall be provided, or support for Assistive Technology used by people who are deaf or hard of hearing shall be provided.	Not Applicable	• The following components do not apply to this criterion: ○ IBM HTTP Server version 9.0: ▪ Command Line Tools ○ IBM Installation Manager and IBM Packaging Utility 1.8.x: ▪ Installation Manager and Packaging Utility - Silent, Console, and Command-line Modes ▪ Installation Manager and Packaging Utility - Wizard Mode ○ IBM HTTP Server for z/OS version 9.0: ▪ Command Line Tools ○ IBM WebSphere Application Server 9.0: ▪ Installation Manager Customized Panels ▪ WebSphere Customization Toolbox ▪ Command Line Tools, Utilities, and Scripts ▪ Launchpad ▪ Administration Console ○ IBM WebSphere Application Server Liberty 16.0.0.x:

		▪ Command Line Tools, Utilities, and Scripts ▪ Admin Center
(d) Where audio information is important for the use of the product, at least one mode of operation and information retrieval shall be provided in an enhanced auditory fashion, or support for assistive hearing devices shall be provided.	Not Applicable	• The following components do not apply to this criterion: ○ IBM Installation Manager and IBM Packaging Utility 1.8.x: ▪ Installation Manager and Packaging Utility - Silent, Console, and Command-line Modes ▪ Installation Manager and Packaging Utility - Wizard Mode ○ IBM HTTP Server version 9.0: ▪ Command Line Tools ○ IBM HTTP Server for z/OS version 9.0: ▪ Command Line Tools ○ IBM WebSphere Application Server 9.0: ▪ Installation Manager Customized Panels ▪ WebSphere Customization Toolbox ▪ Command Line Tools, Utilities, and Scripts ▪ Launchpad ▪ Administration Console ○ IBM WebSphere Application Server Liberty 16.0.0.x: ▪ Command Line Tools, Utilities, and Scripts

		▪ Admin Center
(e) At least one mode of operation and information retrieval that does not require user speech shall be provided, or support for Assistive Technology used by people with disabilities shall be provided.	Not Applicable	This is not a speech product.
(f) At least one mode of operation and information retrieval that does not require fine motor control or simultaneous actions and that is operable with limited reach and strength shall be provided.	Supports: See the following for supporting features: - 1194.21 a, b - 1194.22 l, p - 1194.23 k1, k2, k3 - 1194.25 b, j1, j2, j3, j4 - 1194.26 d	• The following components meet this criterion: o IBM HTTP Server version 9.0: ▪ Command Line Tools o IBM Installation Manager and IBM Packaging Utility 1.8.x: ▪ Installation Manager and Packaging Utility - Silent, Console, and Command-line Modes ▪ Installation Manager and Packaging Utility - Wizard Mode o IBM HTTP Server for z/OS version 9.0: ▪ Command Line Tools o IBM WebSphere Application Server 9.0: ▪ Installation Manager Customized Panels ▪ WebSphere Customization Toolbox ▪ Command Line Tools, Utilities, and Scripts ▪ Launchpad ▪ Administration Console

		○ IBM WebSphere Application Server Liberty 16.0.0.x: ▪ Command Line Tools, Utilities, and Scripts ▪ Admin Center
1194.41 Information, documentation, and support		
Criteria	**Supporting Features**	**Remarks and Explanations**
(a) Product support documentation provided to end-users shall be made available in alternate formats upon request, at no additional charge.	Supports: Product support documentation is provided in at least one accessible format.	• The following components meet this criterion: ○ IBM HTTP Server version 9.0: ▪ Release Notes, ReadMe, Guides - For some graphics in the PDFs, alternative text is not read aloud. However, graphics in the html versions of the content are compliant. Cannot skip from header to header in the PDFs, but can in the html versions. Graphics with color are understandable and explained without the need for color. Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. Content can be

		displayed in high contrast and large font mode, and visual focus is not lost in these modes. When the sequence in which content is presented affects its meaning, a correct reading sequence can be programmatically determined. Meaningful sequence is maintained, e.g., steps in procedures, ordered lists, ability to read tables in an ordered fashion. There are no forms to submit. Table cells and relationships between cells can be programmatically determined. Some tables in PDF cannot be read coherently. HTML versions of the tables are accessible and have table/cell relationships. There is no flashing content. Mechanisms are available to bypass blocks of content that are repeated on multiple Web units. Cannot

		navigate long documents in PDFs because the user cannot skip from header to header when using JAWS. The user can do so in the accessible html version. The default human language of HTML web pages can be determined programmatically. Cannot determine the language of the page in the PDF. HTML versions of PDF documents are provided as alternative formats for accessibility compliance. ▪ HTML Documentation, and Knowledge Center content - All non-text content that is presented to users has text alternatives that serve equivalent purpose. There are no image maps. The only multimedia (in Knowledge Center) is redundant with written instructions. There is no live media. There are no form elements. Table cells and relationships

		between cells can be programmatically determined. Some tables were rearranged to better work with screen readers as they were complex. Web pages are readable without requiring style sheets. Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. Graphics passed manual inspection and do not rely on color only. Some are only black and white. Scripts are keyboard accessible. If the content affected by scripting is not accessible, an alternative is provided. Each topic that has IBM suggests also has an index link that takes the user to all the IBM suggests links. There are no applets or plug-in content. There are no timed responses. Web

		pages do not contain anything that flashes more than three times in any one second period, or the flash is below the general flash and red flash thresholds. Methods are provided for skipping over navigation links to get to main content of page. Frames are not used. Pages are delivered in the product Help System and the online IBM Knowledge Center instead. All accessibility requirements are satisfied so there are no text-only pages included for the purpose of providing functional or informational equivalent content. ○ IBM Installation Manager and IBM Packaging Utility 1.8.x: ▪ Installation Manager and Packaging Utility Documentation - Knowledge Center - All graphics have alternate text associated with them. Graphs and charts are not used. Image

			maps are not used. Audio content is not used. Some video content is used to supplement and encapsulate topics that are otherwise fully described using textual content. Audio content is not used. Live multimedia content is not used. Forms are not used. Table cells and the relationship between them can be programmatically determined. Cascading style sheets are not required. Color is used but never as a sole means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. Scripts are not used. Applets, plug-ins, and non-HTML content are not used. Timed responses are not used. Flashing content is not used. Methods are provided for skipping over navigation links to get to the main

		content. Each frame has a title and contains accessible source. Content is fully accessible so a text-only version is not needed. ○ IBM HTTP Server for z/OS version 9.0: ▪ Release Notes, ReadMe, Guides - For some graphics in the PDFs, alternative text is not read aloud. However, graphics in the html versions of the content are compliant. Cannot skip from header to header in the PDFs, but can in the html versions. Graphics with color are understandable and explained without the need for color. Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. Content can be displayed in high contrast and large font mode, and visual focus is not lost in these

		modes. When the sequence in which content is presented affects its meaning, a correct reading sequence can be programmatically determined. Meaningful sequence is maintained, e.g., steps in procedures, ordered lists, ability to read tables in an ordered fashion. There are no forms to submit. Table cells and relationships between cells can be programmatically determined. Some tables in PDF cannot be read coherently. HTML versions of the tables are accessible and have table/cell relationships. There is no flashing content. Mechanisms are available to bypass blocks of content that are repeated on multiple Web units. Cannot navigate long documents in PDFs because the user cannot skip from header to

		header when using JAWS. The user can do so in the accessible html version. The default human language of HTML web pages can be determined programmatically. Cannot determine the language of the page in the PDF. HTML versions of PDF documents are provided as alternative formats for accessibility compliance. ▪ HTML Documentation, and Knowledge Center content - All non-text content that is presented to users has text alternatives that serve equivalent purpose. There are no image maps. The only multimedia (in Knowledge Center) is redundant with written instructions. There is no live media. There are no form elements. Table cells and relationships between cells can be programmatically determined. Some tables were rearranged

		to better work with screen readers as they were complex. Web pages are readable without requiring style sheets. Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. Graphics passed manual inspection and do not rely on color only. Some are only black and white. Scripts are keyboard accessible. If the content affected by scripting is not accessible, an alternative is provided. Each topic that has IBM suggests also has an index link that takes the user to all the IBM suggests links. There are no applets or plug-in content. There are no timed responses. Web pages do not contain anything that flashes more than three times in any one second period,

		or the flash is below the general flash and red flash thresholds. Methods are provided for skipping over navigation links to get to main content of page. Frames are not used. Pages are delivered in the product Help System and the online IBM Knowledge Center instead. All accessibility requirements are satisfied so there are no text-only pages included for the purpose of providing functional or informational equivalent content. ○ IBM WebSphere Application Server 9.0: No forms. ▪ Release Notes, Readmes, and Guides - Table cells are identified and relationships between cells are provided and programmatically available. Some tables in PDF might not be read coherently. HTML versions of the tables are accessible and have

			table/cell relationships. All non-text content that is presented to the user has a text alternative that serves the equivalent purpose. For some graphics in the PDFs, alternative text is not read aloud. However, graphics in the html versions of the content are compliant. An accessible method is provided for navigating long documents. Cannot navigate long documents in PDFs because the user might not be able to skip from header to header when using JAWS. The user can do so in the accessible html version. Document does not include text or images that flash more than 2 times in a one second period. The primary language of the document is defined. Might not be able to determine the language of the page in the PDF.

			HTML versions of PDF documents are provided as alternative formats for accessibility compliance. Document elements are presented in a logical reading order. Document information, structure, and relationships are defined and programmatically available. Might not be able to skip from header to header in the PDFs, but can in the html versions. Information that is conveyed by color is also evident without color including sufficient contrast between text and the page background. ▪ Knowledge Center content, and HTML Documentation and Guides - No time limits. Table cells and relationships between cells can be programmatically determined. Captions are provided for prerecorded audio content in synchronized

			media, except when the media is a media alternative for text and is clearly labeled as such. No live multimedia. Scripts are keyboard accessible. If the content affected by scripting is not accessible, an alternative is provided. All non-text content that is presented to the user has a text alternative that serves the equivalent purpose. No image maps. Already accessible. Text-only page not required. Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. Methods are provided for skipping over navigation links to get to the main content of the page. Note: This product uses WAI-ARIA to comply with this checkpoint. WAI-ARIA has been supported

		since Firefox 3.6 and JAWS 12. Web pages do not contain anything that flashes more than three times in any one second period. Web pages are readable without requiring style sheets. An alternative for time-based media or audio description of the prerecorded video content is provided for synchronized media, except when the media is a media alternative for text and is clearly labeled as such. Frames are not used. No applets, plug-ins, or non-HTML content. ▪ Javadocs - No time limits. Table cells and relationships between cells can be programmatically determined. A title and an accessible frame source are provided for each frame. No prerecorded audio. No live multimedia. Scripts are keyboard accessible. If the content affected by scripting is not

			accessible, an alternative is provided. All non-text content that is presented to the user has a text alternative that serves the equivalent purpose. No time-based media or prerecorded video. No image maps. Already accessible. Text-only page not required. Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. Methods are provided for skipping over navigation links to get to the main content of the page. Note: This product uses WAI-ARIA to comply with this checkpoint. WAI-ARIA has been supported since Firefox 3.6 and JAWS 12. Web pages do not contain anything that flashes more than three times in any one second period. Web pages are readable

		without requiring style sheets. No applets, plug-ins, or non-HTML content. ○ IBM WebSphere Application Server Liberty 16.0.0.x: No forms. ▪ Readmes, Licenses, and configuration files - All documents are text only. Document does not include text or images that flash more than 2 times in a one second period. Document elements are presented in a logical reading order. All non-text content that is presented to the user has a text alternative that serves the equivalent purpose. All documents are text only. Document information, structure, and relationships are defined and programmatically available. All documents are text only. The primary language of the document is defined. Information that is conveyed by color is also evident without

		color including sufficient contrast between text and the page background. An accessible method is provided for navigating long documents. All documents are text only. No documents have an excessive length. ▪ HTML Documents and Guides, Javadocs, and Online Documentation - Table cells and relationships between cells can be programmatically determined. No time limits. Captions are provided for prerecorded audio content in synchronized media, except when the media is a media alternative for text and is clearly labeled as such. No frames. No live multimedia. Scripts are keyboard accessible. If the content affected by scripting is not accessible, an alternative is provided. All non-text content that is presented

		to the user has a text alternative that serves the equivalent purpose. No image maps. Already accessible. Text-only page not required. Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. Methods are provided for skipping over navigation links to get to the main content of the page. Note: This product uses WAI-ARIA to comply with this checkpoint. WAI-ARIA has been supported since Firefox 3.6 and JAWS 12. Web pages do not contain anything that flashes more than three times in any one second period. Web pages are readable without requiring style sheets. An alternative for time-based media or audio description of the prerecorded video content is provided for

		synchronized media, except when the media is a media alternative for text and is clearly labeled as such. No applets, plug-ins, or non-HTML content.
(b) End-users shall have access to a description of the accessibility and compatibility features of products in alternate formats or alternate methods upon request, at no additional charge.	Supports: Documentation includes a description of accessibility and compatibility features that make it easier for people with disabilities to use the product. Those descriptions are available in alternate formats upon request.	• The following components meet this criterion: ○ IBM HTTP Server version 9.0: Documentation of all the accessibility features, including keyboard access, is provided. ▪ Release Notes, ReadMe, Guides ▪ HTML Documentation, and Knowledge Center content ○ IBM Installation Manager and IBM Packaging Utility 1.8.x: ▪ Installation Manager and Packaging Utility Documentation - Knowledge Center - A product accessibility features section is provided. ○ IBM HTTP Server for z/OS version 9.0: Documentation of all the accessibility features, including keyboard access, is provided. ▪ Release Notes, ReadMe, Guides

		▪ HTML Documentation, and Knowledge Center content ○ IBM WebSphere Application Server 9.0: Documentation is provided on all accessibility features including keyboard access. ▪ Release Notes, Readmes, and Guides ▪ Knowledge Center content, and HTML Documentation and Guides ▪ Javadocs ○ IBM WebSphere Application Server Liberty 16.0.0.x: ▪ Readmes, Licenses, and configuration files - The plain text documents contain no unique accessibility features, no unique keyboard accessibility features, no accelerator keys or mnemonics, and needs no instructions for completing tasks that are unique for using the keyboard. ▪ HTML Documents and Guides, Javadocs, and Online Documentation - Documentation is provided on all

		accessibility features including keyboard access.
(c) Support services for products shall accommodate the communication needs of end-users with disabilities.	Supports: Operating systems provide accessibility features that allow disabled users to customize their preferences. This application preserves those accessibility user preference settings. For example, if Sticky Keys option is selected by a mobility-impaired user, this option will continue to be activated when used with this application. In addition to standard IBM help desk and support Web sites, IBM has established a TTY telephone service for use by deaf or hard of hearing customers to access sales and support services.	
Other IBM products packaged with IBM WebSphere Application Server Network Deployment 9.0		

The releases of other IBM products packaged with this product are listed in the table below. The Product / Component names are current as of the time this VPAT is published. This product may include later releases of the listed bundled products. When you request a VPAT for any other IBM products packaged with this product you will receive the latest version of the published VPAT.

Product / Component name (web link to VPAT)	**Status**	**Function provided by product**

IBM API Connect	Partially Accessible	This package provides VPAT report for IBM API connect offering and associate documentation.
IBM Security Access Manager 9.0.1.0	Accessible	IBM Security Access Manager enables businesses to more securely adopt web, mobile, and cloud technologies and simplifies user access management for employees and consumers.
IBM Security Directory Suite V8.0	Partially Accessible	IBM Security Directory Suite provides a Virtualize platform for your enterprise security initiatives. It provides easy install /configure and web based interface.
IBM DB2 for Linux, Unix, and Windows 10.5	Accessible	
IBM Security Directory Server 6.4	Accessible	IBM® Security Directory Server provides a platform for your enterprise security initiatives. This enterprise identity management software uses the Lightweight Directory Access Protocol (LDAP). IBM Security Directory Server provides a trusted identity data infrastructure for authentication.
Firefox for AIX 3.6	Partially Accessible	

Disclaimer:

IBM provides this data for general information on an AS IS basis. For formal representations on particular proposals, please contact an IBM Client Representative or call the IBM Federal Information Call Center at 1-800-333-6705 or TTY: 1-800-IBM-3383. Any third-party components or technologies not developed by or licensed by IBM that may be packaged with or engaged by the use of this product are not included in this Section 508 assessment.

4.2 Mandatory Forms Due Prior to Contract Work Beginning

The table below lists the forms which will be required after the Contract is awarded but prior to any work beginning.

FORM ID	FORM NAME	COMMENTS
	Vendor Registration with DFA	In order to receive payment under any contract award, Vendor must register with DFA online at https://www.ark.org/vendor/index.html
	Illegal Immigrants Certification	See Section 2.7.9 of the RFP. The Vendor must certify online at www.arkansas.gov/dfa/procurement
	Registration with Arkansas Secretary of State	

4.2.1 Vendor's Commitment to Submit Forms Requirements

Please provide a signature stipulating the Vendor's commits to submit all required Forms listed in Section 4.2.

Print Name/Signature of Authorized Personnel	Date

5.0 Clarifications

The Vendor may provide in the Table clarifications to requirements or terms in this RFP or may state "No Clarifications Noted." If no Proposal Clarifications Summary Form is included, the Vendor is indicating that it has no clarifications to any item in this RFP document. If clarifications are not noted in the RFP but raised during contract negotiations, OSP and DHS reserve the right to cancel the negotiation. OSP and DHS reserve the right to reject any Proposals, including those with clarifications, prior to and at any time during negotiations.

1. Unless specifically disallowed on any specification herein, the Vendor may make clarifications to any point within Section 3 of the main RFP or Template 6, 8, 10, and 12, including a specification denoted as mandatory, as long as the following are true:
    a. The specification is not a matter of State law;
    b. The Proposal still meets the intent of the RFP;
    c. A Proposal Clarification Summary Form is included with Vendor's Proposal; and

   d. The clarification is clearly explained, along with any alternative or substitution the Vendor proposes to address the intent of the specification on the Proposal Clarification Summary Form. Clarifications shall not be allowed for any other section or template corresponding to this RFP.

2. The Vendor has no obligation to provide items to which a clarification has been made. OSP and DHS have no obligation to accept any clarifications. During the proposal evaluation and/or contract negotiation process, the Vendor and OSP and DHS will discuss each clarification and take one (1) of the following actions:
   a. The Vendor will withdraw the clarification and meet the specification in the manner prescribed;
   b. OSP and DHS will determine that the clarification neither poses significant risk to the Engagement nor undermines the intent of the RFP and will accept the clarification;
   c. OSP, DHS, and the Vendor will agree on compromise language dealing with the clarification and will insert same into the Contract; or,
   d. None of the above actions is possible, and OSP and DHS either disqualifies the Vendor's Proposal or withdraws the award and proceeds to the next ranked Vendor.
3. Should OSP, DHS, and the Vendor reach a successful agreement, OSP and DHS will sign adjacent to each clarification which is being accepted or submit a formal written response to the Proposal Clarification Summary responding to each of the Vendor's clarifications. The Proposal Clarifications Summary, with those clarifications approved by OSP and DHS, will become a part of any Contract on acquisitions made under this RFP.
4. A clarification will be accepted or rejected at the sole discretion of OSP and DHS.
5. OSP and DHS desire to award this RFP to a Vendor with whom there is a high probability of establishing a mutually agreeable Contract. As such, Vendors whose Proposals reflect a substantial number of material clarifications to this RFP may place themselves at a comparative disadvantage in the evaluation process or risk disqualification of their proposals.

Instructions: In the following table, list and clearly explain any clarifications for all RFP Sections, Supplements and Exhibits. Add rows as appropriate. Do not change any of the completed cells. Any changes to the completed cells could lead to the disqualification of the Proposal.

Table 1. Proposal Clarification Summary Form

RFP REFERENCE	VENDOR PROPOSAL REFERENCE	BRIEF EXPLANATION OF CLARIFICATION
(Reference specific point to which clarification is made)	*(Page, section, items in Vendor's Proposal where clarification is explained)*	*(Short description of clarification being made)*

RFP REFERENCE	VENDOR PROPOSAL REFERENCE	BRIEF EXPLANATION OF CLARIFICATION
1. T-15 Terms and Conditions Page 2 section 2.2 second bullet	IBM proposes the following clarification: delete the second bullet in its entirety. IBM's obligations to indemnify the State are contained in section 2.3	Clarity of indemnification obligations
2. T-15 Terms and Conditions Page 3 section 2.3 second bullet	IBM proposes the following clarifications to section 2.3: ▪ Change the second sentence to read as follows: The vendor's liability for damages to the State shall be limited to the annual payments to the vendor pursuant to the Contract or $5,000,000, whichever is higher. ▪ IBM proposes to delete the following phrase in this section: to claims covered by other specific provisions of the Contract calling for damages; or to court costs or attorney's fees awarded by a court in addition to damages after litigation based on the Contract.	Clarity of the vendor's liability. The damages cap should not include amounts that relate to the vendor's prior satisfactory performance to the State
3. T-15 Terms and Conditions Page 4 section 2.6 Confidentiality	IBM clarification: IBM agrees with this section. IBM proposes that the parties mutually agree to more specific provisions with regard to the treatment of confidential information.	Clarity of obligations with regard to confidential information.
4. T-15 Terms and Conditions Page 4 section 2.7 Contract Interpretation	IBM clarification: IBM proposes to delete the following sentence: However, if mutual agreement cannot be reached, the determination of the State shall be final and controlling	IBM believes that there should be an escalation process mutually agreed between the parties.

RFP REFERENCE	VENDOR PROPOSAL REFERENCE	BRIEF EXPLANATION OF CLARIFICATION
5. T-15 Terms and Conditions Page 4 section 2.8 Cancellation	IBM proposes to add the following clarification to the first bullet: ▪ Upon cancellation of the contract by the State, the State shall agree to pay only sums due for goods and services received and accepted up to cancellation of the contract.	The vendor should be compensated for goods and services provided to the State up to the date of cancellation.
6. T-15 Terms and Conditions Page 5 Guaranty	IBM clarification: This provision may be applicable to standard commercial products and services. In the event IBM provides standard commercial goods or services, such products will be provided subject to their standard commercial terms including any warranties.	Standard commercial practices should apply to such products and services.
7. T-15 Terms and Conditions Page 6 Default	IBM clarification: This provision may be applicable to standard commercial products and services. In the event IBM provides standard commercial goods or services, such products will be provided subject to their standard commercial terms including its specifications	Standard commercial practices should apply to such products and services.
8. T-15 Terms and Conditions Page 7 Patents or Copyrights	IBM clarification: IBM proposes to add the following to this section: If a third party asserts a claim against the State that an IBM Product or service acquired under this Agreement infringes a patent or copyright, IBM will defend the State against that claim and pay amounts finally awarded by a court against the State or included in a settlement approved by IBM, provided that the State promptly (i) notifies IBM in writing of the claim, (ii) supplies information requested by IBM,	Clarity of IBM obligations to indemnify the State

RFP REFERENCE	VENDOR PROPOSAL REFERENCE	BRIEF EXPLANATION OF CLARIFICATION
	and (iii) allows IBM to control, and reasonably cooperates in, the defense and settlement, including mitigation efforts. IBM has no responsibility for claims based, in whole or part, on Non-IBM Products, items not provided by IBM, or any violation of law or third party rights caused by the State's content, materials, designs, specifications, or use of a non-current version or release of an IBM Product when an infringement claim could have been avoided by using a current version or release.	
9. T-15 Terms and Conditions Page 7 Assignment	IBM proposes to add the following clarification language to this section: ▪ Assignment by IBM in conjunction with the sale of the portion of IBM's business that includes the product or service is not restricted.	Changes in the marketplace may result in restructuring of a part of IBM's portfolio of products or services.
10. T-15 Terms and Conditions Page 8 Software and Ownership Rights Assignment	IBM proposes to add the following clarification language to this section: ▪ The State's rights in this section exclude works of authorship delivered to the State, but not created, under the contract, and any modifications or enhancements of such works made under the contract (Existing Works). Some Existing Works are subject to a separate license agreement (Existing Licensed Works). A Program is an example of an Existing Licensed Work and is subject to the Program terms. IBM grants to the State an irrevocable (subject	Clarification of ownership of pre-existing works and materials of IBM or OEM materials

RFP REFERENCE	VENDOR PROPOSAL REFERENCE	BRIEF EXPLANATION OF CLARIFICATION
	to Client's payment obligations), nonexclusive, worldwide license to use, execute, reproduce, display, perform and prepare derivatives of Existing Works that are not Existing Licensed Works. IBM retains an irrevocable, nonexclusive, worldwide, paid-up license to use, execute, reproduce, display, perform, sublicense, distribute, and prepare derivative works of Works and Documents.	
11. T-15 Terms and Conditions	IBM proposes the following clarification to be added to this Terms and Conditions section. IBM warrants that it provides the Services using commercially reasonable care and skill in accordance with the agreement, including any completion criteria, and that deliverables will comply with the contract at the time of delivery. The warranty for a Service ends when the Service ends. These warranties are the exclusive warranties from IBM and replace all other warranties, including the implied warranties or conditions of satisfactory quality, merchantability, non-infringement, and fitness for a particular purpose. IBM warranties will not apply if there has been misuse, modification, damage not caused by IBM, failure to comply with instructions provided by IBM, or if otherwise stated in the contract. Products are sold under this Agreement as-is, without warranties of any	Clarity of IBM obligations in providing the services

RFP REFERENCE	VENDOR PROPOSAL REFERENCE	BRIEF EXPLANATION OF CLARIFICATION
	kind. Third parties may provide their own warranties to the State.	
12. T-15 Terms and Conditions	Payment of liquidated damages shall be made when due solely to the fault of IBM.	Clarity of IBM obligations in payment of liquidated damages.
13. T-15 Terms and Conditions	The State's acceptance of payment of liquidated damages due to the fault of IBM shall be the sole and exclusive remedy for any such fault.	Clarity of IBM obligations in payment of liquidated damages.
14. T-15 Terms and Conditions	IBM reserves the right to negotiate the contents of its proposal to the State, including the terms and conditions, subject to mutual agreement between the parties.	Clarity of IBM expectation to engage in negotiations with the State.

Template T-16

RFP Response Checklist

Response Template RFP #: SP-17-0012

Template T-16

RFP Response Checklist

RFP #: SP-17-0012

Table of Contents

List of Tables

1.0 Vendor Response Checklist

The Vendor should complete the following Tables to verify that all the RFP response requirements have been completed as instructed. The Vendor should provide specific references to Proposal locations (e.g., section and page numbers) for each Template included. During the evaluation process, OSP will perform an initial review of the Proposals to confirm these are included. If the items identified in this checklist are not included, the Proposal may be disqualified.

Instructions: Complete the following Table. Do not change any of the completed cells. Any changes to the completed cells could lead to the disqualification of the Proposal.

Table 1. Vendor General Requirements

PROPOSAL RESPONSE ITEM	COMPLETED AND PROVIDED AS INSTRUCTED?	
Vendor's Proposal's stamped date meets date and time specified in the RFP	YES ☒	NO ☐
Proposal is sealed	YES ☒	NO ☐
Technical Proposal and Cost Proposal are sealed in separate envelopes or boxes within the "Sealed Bid." Each Proposal is clearly marked "Technical Proposal" or "Cost Proposal"	YES ☒	NO ☐
Proposal includes redacted copy.	YES ☒	NO ☐
Minimum Mandatory Requirements – The Vendor has documented proof that it meets the minimum mandatory requirements outlined in the RFP and in Template T-1.	YES ☒	NO ☐

Table 2. Vendor Package 1 Checklist

SECTION / TEMPLATE	PROPOSAL RESPONSE ITEM	COMPLETED AND PROVIDED AS INSTRUCTED?		REFERENCE TO PROPOSAL RESPONSE SECTION
T-1	Cover Letter and Executive Summary	YES ☒	NO ☐	Vol 1 T-1
T-2	Vendor Experience	YES ☒	NO ☐	Vol 1 T-2
T-3	Vendor References	YES ☒	NO ☐	Vol 1 T-3
T-4	Vendor Project Organization and Staffing	YES ☒	NO ☐	Vol 1 T-4
T-5	Staff Experience	YES ☒	NO ☐	Vol 1 T-5
T-6	Functional Requirements Traceability Matrix	YES ☒	NO ☐	Vol 1 T-6

SECTION / TEMPLATE	PROPOSAL RESPONSE ITEM	COMPLETED AND PROVIDED AS INSTRUCTED?		REFERENCE TO PROPOSAL RESPONSE SECTION
T-7	Functional Requirements Approach	YES ☒	NO ☐	Vol 1 T-7
T-8	Technical Requirements Traceability Matrix	YES ☒	NO ☐	Vol 1 T-8
T-9	Technical Requirements Approach	YES ☒	NO ☐	Vol 1 T-9
T-10	Implementation Requirements Traceability Matrix	YES ☒	NO ☐	Vol 2 T-10
T-11	Implementation Requirements Approach	YES ☒	NO ☐	Vol 2 T-11
T-12	Maintenance and Operations Requirements Traceability Matrix	YES ☒	NO ☐	Vol 2 T-12
T-13	Maintenance and Operations Requirements Approach	YES ☒	NO ☐	Vol 2 T-13
T-14	Work Plan	YES ☒	NO ☐	Vol 2 T-14
T-15	Terms & Conditions of this RFP and Any Resulting Contract	YES ☒	NO ☐	Vol 2 T-15
T-15	Proposed Subcontractor's Form	YES ☒	NO ☐	Vol 3 T-15 4.1
T-15	Disclosure Form	YES ☒	NO ☐	Vol 3 T-15 4.1
T-15	EEO Policy	YES ☒	NO ☐	Vol 3 T-15 4.1
T-15	VPAT	YES ☒	NO ☐	Vol 3 T-15 4.1
T-16	RFP Response Checklist	YES ☒	NO ☐	Vol 3 T-16
O-1	Letter of Intent	YES ☒	NO ☐	Vol 3 O-1
O-2	Written Questions	YES ☒	NO ☐	Vol 3 O-2

Table 3. Vendor Package 2 Checklist

SECTION / TEMPLATE	PROPOSAL RESPONSE ITEM	COMPLETED AND PROVIDED AS INSTRUCTED?		REFERENCE TO PROPOSAL RESPONSE SECTION
C-1	Cost Workbook	YES ☒	NO ☐	C-1

2.0 Vendor Attachments

The Vendor should identify all attachments that are part of the Technical or Cost Proposals. The Vendor should provide specific references to Proposal locations (e.g., section and page numbers) for each attachment included. All attachments should be included in both soft and hard Proposal copies.

Instructions: Complete the following Table with any attachments to the Technical or Cost Proposals. Add rows as necessary. Do not change any of the completed cells. Any changes to the completed cells could lead to the disqualification of the Proposal.

Table 4. Vendor Attachment Checklist

ATTACHMENT ID	ATTACHMENT NAME	ATTACHMENT PROVIDED?		REFERENCE TO PROPOSAL RESPONSE SECTION
		YES ☐	NO ☐	
		YES ☐	NO ☐	
		YES ☐	NO ☐	
		YES ☐	NO ☐	
		YES ☐	NO ☐	
		YES ☐	NO ☐	
		YES ☐	NO ☐	
		YES ☐	NO ☐	
		YES ☐	NO ☐	
		YES ☐	NO ☐	

State of Arkansas Department of Human Services

Integrated Eligibility and Benefit Management Engagement (IE-BM) RFP

RFP #: SP-17-0012

Written Questions (1st Round of Q&A)

Question ID	RFP Reference (page number, section number, paragraph)	Specific RFP Language	Question	Response to Vendor
1	Generic	General Scope	Can the State confirm whether language translation of citizen portal page of Arkansas DHS in scope for the Vendors who are bidding for this proposal? Or will the translated language be provided to the Vendor?	Language transition is within the scope of this RFP (see functional requirements), however it is not required immediately.
2	Generic	Existing tools and licenses	Does the State have any existing tool and its licenses for Requirements Management, Project Management, Test Management, Document version control management which can be leveraged for this project. Or do you expect the vendor to add it in their solution and costing.	Currently DHS uses SharePoint as the Project Management Repository and Excel for management of the Requirements Traceability Matrix. DHS does not use a tool for test management. The vendor can decide whether to leverage the existing solutions or provide a different toolset.
3	Generic	Existing tools and licenses	Can the State confirm whether they intend to continue using the Cognos software as the DWH solution for the proposed AR-IEBM. If so then, please let us know of any licenses that can be used for the implementation.	Cognos and Business Objects are the preferred, however vendors are encourage to bid the best value solution. The license agreements have been added to the Procurement Library.
4	Generic	Existing user base and Performance baseline	Can the State provide details on number of end users who will be responsible for entering data and managing cases in the upgraded system?	Approximately 3000 active users will be responsible for entering data and managing cases in the upgraded system.
5	Generic	DR Capacity	Is the State looking for Active/Passive site or Active-active. What is DR capacity DHS wanted to build (100% or 50%)	State requires an Active-Passive setup with 50% capacity. Section 3.5.2.3 has been updated to reflect this requirement.
6	Generic	Training and OCM	Does State currently hold a Learning Management System (LMS) software license to track training registration and/or host web-based training?	The Division of County Operations does have a LMS. The registration and tracking process is currently an Access Database.
7	Generic	M&O	In order to determine appropriate support levels for M&O, can DHS provide the current M&O budget or utilization of hours for their exiting systems?	The current SOW for Application Maintenance and Operations for EEF has been added to the procurement library.
8	Generic	M&O	In order to help determine initial M&O support levels, could DHS provide bidders with any statistics and trends (last 12 months) on the open and close rate of defects (including severity) on either a weekly or monthly basis associated with the M&O Production environment	All of the deployment requests from 2016 have been added to the Procurement Library.
9	RFP Page 6, Paragraph 2, Section 1.1	Curam	Can the State confirm the version number of Curam used to implement the HCR module?	DHS is currently running Curam version 6.1.0.1 and is planning to upgrade to V7 at the end of Q2, 2017.
10	RFP Page 20, Section 2.4.2, 2nd Bullet point	Multiple Responses	Requirement T-15 indicates that "Proposed subcontractor form" should be submitted as part of mandatory documents. Can the State please clarify the correct location of the file?	Form has been added to the Procurement Library.
11	RFP Page 30, Section 2.7.17, First paragraph	Disclosure under Arkansas Law	Requirement T-15 indicates that "Disclosure form" should be submitted as part of mandatory documents. Can the State please clarify the correct location of the file?	Form has been added to the Procurement Library.
12	RFP Page 36, Paragraph 1	Client Data Management	Can the State confirm whether the legacy system is the sole repository for storing client data? If no, what other locations the client data is stored?	Curam contains approximately 80% of the client data. ANSWER, the non-MAGI eligibility system has the remaining 20%. Section 3.3.1 has been updated with this information.

Question ID	RFP Reference (page number, section number, paragraph)	Specific RFP Language	Question	Response to Vendor
13	RFP Page 58, Figure 15, T4.1	IE-BM Solution – Summary of Current Component Architecture with State of Arkansas Preferences	Requirement T4.1 indicates that proposed Integration layer existing is RedHat JBOSS Fuse ESB and preferred would be Informatica. Can you please clarify if this preference is for ETL layer or ESB layer ?	AR has a preference for a Hybrid Integration Platform that combines traditional on premise ESB capabilities and the emerging iPaaS (Integration Platform as a Service). DHS has no preference for ESB and Informatica Cloud is the preference for iPaaS. The Vendor is free to suggest suitable ESB and Integration technologies that can meet the requirements specified in the RTM along with appropriate rationale and justification.
14	RFP Page 105, Section 3.7.3.9	Group 9 Deliverables – Steady State (Warranty Period)	Please clarify, what will be the duration of warranty period? As per RFP the warranty is for 2 years and as per T10 Implementation requirements, it is 12 months. **From RFP** 3.7.3.9 Group 9 Deliverables – Steady State (Warranty Period) DHS expects functionality to be warrantied for 2 years after the entire system has been migrated to production and has been accepted by DHS (Deliverable I.8.2). **From T10_Implementation_RTM** 19.3 Provide warranty support for 12 months after all of the System functionality has been rolled out to all users, from the date of each release.	Section 3.7.3.9 has been updated to read "The Vendor must warranty the System for 12 months after all of the System functionality has been rolled out to all users, from the date of each release."
15	T6 Functional RTM	Proposed Phase - Generic question	T6 – Functional RTM has only two implementation phase to be entered (in the drop down value under "Proposed Phase" column). If there are additional phases suggested as part of our response can we add new values like Phase 3, Phase 4 etc.?	The drop downs under "Proposed Phase" in Template T-6 and T-8 have been updated to include Phase 1, Phase 2, Phase 3, Phase 4 and Additional Phases.
16	T6 Functional RTM response - FR1 General - FR1.14	Telephonic Signature	FR1.14 mentioned a requirement to capture 'Telephonic Signature'. We would like to know if the state already has the required hardware and software to meet this requirement. Or do they expect vendor to provide the hardware and software for the same	The State has the required software but is willing to investigate a new solution. See documents included in the procurement library for additional details.
17	RFP Page 12, Section 1.5.2, 3rd Paragraph	M&O	We understand that DIS takes care of Infrastructure activities. Will they take care of setting up any new environments with the required software and hardware?	See section 3.6.7.2 for responsibilities. DIS will provide and maintain all the required infrastructure for all environments as agreed to between the State and the Vendor as part of the final contract. Section 3.6.7.2, 3.4 and 3.3.4 have been updated.
18	RFP Page 57, Figure 15	M&O	What's the ticketing tool used for logging and tracking Service Management tickets/changes?	DHS uses JIR V7.2.6 for defect and bug management and SharePoint forms.
19	RFP Page 57, Figure 15	M&O	What kinds of tools are used for monitoring server and applications?	Wiley is used for Application Monitoring. Nagios and Ganglia are used for Infrastructure Monitoring. These have been updated in Figure 15, Tab T-0 of Template T-8, and 2.8.7 of Template T-9 to reflect these preferences.
20	RFP Page 106, Section 3.8	M&O	Can you please provide us the volume of Incident/Problem history reported in each application with the severity level? Also provide the Incidents/Problems backlogs and the Changes planned.	An extract from the current incident management system (JIRA) has been added to the procurement library.
21	RFP Page 106, Section 3.8	M&O	What are the current release roadmap and the deployment strategy? How many planned and unplanned deployments historically?	The State's roadmap has been added to the procurement library.
22	RFP Page 106, Section 3.8	M&O	Can you please share the SLR Performance Report of EEF system?	This document is not available.
23	RFP Page 106, Section 3.8	M&O	Please highlight the existing liquidated damage clauses for SLR.	This document is not available.

Question ID	RFP Reference (page number, section number, paragraph)	Specific RFP Language	Question	Response to Vendor
24	RFP Page 21, Section 2.7.12	Technology Access	Requirement T-15 indicates that "Voluntary Product Accessibility Template (VPAT)" should be submitted as part of mandatory documents. Can the State please clarify the correct location of the file.	Form has been added to the Procurement Library.
25	RFP, Page 58, Component Architecture	Software License	Can the State provide details on availability of enterprise licenses that can be used by the vendor in implementing the future state AR-IEBM, CA - Identity and Access Management Guardium, Nagios, Ganglia Informatica Redhat JBoss Fuse ESB Curam Icome Support Module Curam Universal Access Module Curam Provider Module Tableau IBM Cognos DocuShare	The software licenses from the end of February has been added to the procurement library.
26	RFP, Page 58, Component Architecture	MDM	Does the State have IBM Infosphere Initiate available and its licenses?	The software licenses from the end of February has been added to the procurement library.
27	T8 Technical RTM - G6 Regulatory & Security - G6.29	Security	Does client already has a Vulnerability Management program in place? If yes, please provide the details of the vulnerability assessment tools that can be leveraged?	Vulnerability management is performed by DIS who provides weekly NESSUS scans. All actions are logged in Service Manager.
28	T8 Technical RTM - G2 Audit & Compliance - G2.3	Security	Are there any specific SIEM solutions with which IAM or other audit event sources are expected to be integrated with? If so, please provide details of integration requirements.	DHS is in the process of incorporating Splunk into the audit process for the EEF Infrastructure.
29	T9 Technical Requirements - Page 29, Section 3.5.1	Security	Please provide details of the CA IAM Solution components currently implemented (including version details). Please elaborate on how the current CA environments can be leveraged in development and testing phases?	The CA IAM Solution is proprietary to Arkansas Department of Information Systems (DIS). DIS manages and administers several services for DHS regarding EEF architecture including this solution. Once a vendor is under contract with the state this information can be shared.
30	RFP Page 91; Section 3.7.2.3	Security	Could you please provide a brief description on the infrastructure security architecture and solutions used for network security assurance e.g. Secure gateway, SIEM, NIPS, HIPS, endpoint security, database security etc. Does the State expect vendor SME's to support the implementation/enhancement of the Infrastructure security solutions that is currently in production?	A brief description of the infrastructure security is not available to the vendor community at this time. DIS will provide the infrastructure secruity (assuming the optional Hosted Private Cloud service is not purchased). The State does not expect vendor SMEs to support the implementation/enhancement of the Infrastructure solution. The State does expect the Vendor to collaborate with DIS while developing the System Security Plan. Deliverable I.2.3, Table 10, andTable 13 have been updated to clarify the responsibilities.
31	T8 Technical RTM - G6	Security	Are there existing System Security Plan and other Agency specific deliverables available which can be updated to reflect the new architecture or is it expected new agency specific deliverables be produced.	Depending on the Vendor's proposed solution, the vendor will be expected to produce the appropriate System Security Plan or update the existing Security Plan. The existing Plans will be made available to the successful bidder after award.

Question ID	RFP Reference (page number, section number, paragraph)	Specific RFP Language	Question	Response to Vendor
32	T8 Technical RTM - Regulatory and Security	Security	Does the State need vendors to own the security audit process (such as SSA, IRS, Third party audits). Or does the State just need vendor support during these audits. This information is required to assess the size of the vendor team involved in audits.	State will have ownership of all audits and will manage the process. The Vendor is expected to support the State during the audit process.
33	T8 Technical RTM - IAM - T6.1.7	Security	Does the CA IAM infrastructure currently exist? If so, is it adequate to meet the new need or will it have to be enhanced? If enhanced, in what fashion?	The CA IAM infrastructure currently exists and will likely need to be enhanced to support the IE-BM solution.
34	T9 Technical Requirements - Page 13 - Section 3.2.3	Enterprise Content Management	Technical requirements document states DHS “mandates” Xerox Docushare as their enterprise solution for ECM technologies where as page 58 of RFP_V4 pdf T3.3 states no preference for this tool. This is contradictory. Could you please clarify this?	From a technology perspective, DHS prefers Xerox DocuShare due to existing investments and internal resource capabilities. However, as stated in the RFP section 3.5.2.3, the Vendor is encouraged to provide alternate technologies with appropriate justification to provide the best value solution based on Total Cost of Ownership (TCO). Figure 15 and Tab T-0 of Template T-8 have been updated.
35	TP056 AR EEF System Design Document, page 12	The Hardware Architectural Diagram is located in a separate document titled AR_Architecture_Diagram_consolidated.	Can you please provide the AR_Architecture_Diagram_consolidated? It is assumed that within this diagram, contents of the existing HW specifications can be found.	The EEF Architecture document has been added to the Procurement Library.
36	TP056 AR EEF System Design Document, page 22, Section 8 SOFTWARE ARCHITECTURE, Table 20	The following software components, shown in Figure 4,(Figure 4: EEF System Diagram) map to specific system capabilities:	Can you please provide the relevant "existing software components and operating systems" version and support / fix packs & / or service level numbers?	The EEF Architecture document has been added to the Procurement Library. The specific software versions are: - IBM Curam v6.1.0.1 v7 - IBM WebSphere v8.0.0.7 v8.5.5.11 - IBM DB2 v10.5.0.6 - Red Hat JBoss Fuse v6.0.0 v6.3.0 - Cognos v10.2.11.10 - AIX v7.1 (7100-03-05-1524) And the infrastructure versions are: - IBM Power 770 9117-MMD and Power System S824 8286-42A servers. - LPARs are based on an AIX 7.1 (7100-03-05-1524) template benchmarked to v1.1.0 of CIS' IBM AIX 7.1.
37	T8_Technical_RTM.xlsx, Tab 5.1, Requirement T5.1.8, and / or RFP, page 61.	Requirement T5.1.8, The DBMS component will use and take advantage of the capacity planning model for database configuration.	Can you please provide any current existing capacity models as pertaining towards data volumetrics; e.g. size (static vs. transactional data, rates of growth xyz% per annum, what is the rate of data change (daily vs monthly), how up to date does the data have to be, what form(s) of data (text, image, structured), data access (majority is read only), service characteristics, partitioning, sharing, and management requirements?	These are not available.

Question ID	RFP Reference (page number, section number, paragraph)	Specific RFP Language	Question	Response to Vendor
38	T3 - Vendor Reference, Section 1.1 Subcontractor References	If the Proposal includes the use of subcontractor(s), include at least three (3) references (for each subcontractor proposed) from scopes of work equivalent to the scope of work proposed of the subcontractor in the Proposal	The minimum Qualifications from the RFP states "The Vendor's team (both Prime and Subcontractor) must have proven experience implementing and maintaining State human services systems similar to the IE-BM Solution, as defined in the RFP, with at least three (3) implementations similar in size, complexity and scope in the past five (5) years (Vendor responses to Template T-3 will be used to confirm this)" Does the prime each subcontractor need to have 3 references from State human services implementation or is the minimum qualification mentioned above about having a combined minimum of 3 references implementing and maintaining State human services systems?	As stated in Section 1.2.1, the Prime Vendor and each Subcontractor must provide at least three (3) references that are State Human Services systems implementations. Additionally, the Prime Vendor must provide at least three (3) references showing experience in engagements that are similar in size, complexity, and scope to this procurement. All references must be within the past five (5) years as stated in Section 1.2.1. The references submitted in Template T-3 must include the experience required to meet the minimum mandatory requirements.
39			Would it be possible to request a copy of the Advance Planning Document (APD) that was submitted to CMS. Thanks	The APD is not a public document and cannot be provided.
40	Page 7, Section 1.2.1, Paragraph 1	Mandatory Qualifications	Is there an expectation for one vendor to build the entire system in a big bang concept rather than a modular concept, or do you expect several vendors to build different modules?	The Prime Vendor will be responsible for the entire system. As explained in Section 3.7.1 the State's preference is to roll out the functionality gradually, in modules rather than a "big bang."
41			Is this the System Integrator RFP?	This RFP includes the System Integrator role.
42			What role Computer Aid Inc played in this contract?	This information is not relevant to providing a response to this RFP.
43			May I know who is the current provider/s of this service to the State and what is the value of the contract?	This information is not relevant to providing a response to this RFP.
44	Page 40, Section 3.3.1.2, 4th Bullet	Issues with "prospects" where about 40,000 client benefit applications need clearing. Efforts underway to process the applications through multiple rollouts.	Understanding that the vendor will need to assess the status of this remediation, is there an estimated timeframe for the clearing of these 40,000 applications?	This backlog has been cleared; Section 3.3.1.2 has been removed and 3.3.6.2 has been updated.
45	Page 49, Section 3.5.1, Paragraph 2	The Life of the Case Methodology™ was used to develop the process flows.	So that bidders have a complete understanding of The Life of the Case Methodology, please provide additional information on this methodology.	Additional details are provided in the Business Process Analysis Report in the Procurement Library.
46	Page 45, Section 3.3.4.1, Page 58, Figure 15	In section 3.3.4.1 Data Center and Hosting, on page 45 the RFP states "The State prefers to keep most of the Data Center and hosting functions "in-house"." In Figure 15. IE-BM Solution Architecture – Component Architecture Summary and Preferences on page 58 Item T7.4 indicates that utilizing the state's data center/hosting infrastructure is "mandatory"	In light of the possibility that a vendor hosted solution might provide cost savings and a best value solution to the State, could the state please clarify if use of the state's data center is a mandatory requirement or a preference?	DHS prefers the solution be hosted by the State of Arkansas data center, however, the state has added an optional vendor hosted solution to assess whether this may be best value. Additionally, DHS vendors may propose solutions that meet non-core requirements through cloud hosted solutions though they must provide adequate justification.

Question ID	RFP Reference (page number, section number, paragraph)	Specific RFP Language	Question	Response to Vendor
47	Page 63, Section 3.6.1.1, Paragraph 1	The complexity and challenges of developing and implementing the IE-BM System justifies the services of a third oversight vendor. Oversight activities for this Project will be performed by an independent vendor that will be selected by DHS.	Understanding that there are expected to be other DHS projects / initiatives in flight in addition to the one in the scope of this RFP (Section 3.3.6, Pages 46 and 47), will the IV&V (oversight) vendor also be responsible for coordination of the work in scope of this RFP with other concurrent projects? If not, what is the States' vision for this coordination, particularly with respect to schedule and/or functionality conflicts?	The IV&V Vendor will be focused on the IE-BM project. This will include assessing the coordination with other IT activities. The IV&V vendor will not be managing the coordination. The Vendor will need to coordinate these activities with assistance from the State of AR PMO.
48	Page 70, Section 3.6.3.2.1, Table 11	Security Expert Role (last item in Table)	Expected Qualifications states both "Note - does not need to be dedicated to the account – This is a dedicated resource." Please clarify this statement.	The RFP has been updated to read "Note - does not need to be dedicated to the account - This is not a dedicated resource."
49	Page 106, Section 3.8.1, Paragraph 2	The system should be available to external users 24X7X365 and the system should be available to internal users from 7am to 11pm 5 days a week.	Will the State consider matching the current core legacy systems allowance for one hour of scheduled downtime per week (Page 40, Section 3.3.2.1, Paragraph 1).	The Consumer Facing portal must be available at all times except for scheduled downtime. See SLA O7-1 for additional clarifying details.
50	Proposal Section T-6, "Instructions" Tab, Cell C13 "Solution Method"	Third Party Product - The State Requirement will be met by commercially available third-party software asset and is included in this proposal. *Note: In the Vendor Response column, indicate the name of the proposed third-party software vendor and proposed components and indicate its compliance to State's technology or architecture standards.*	There is no specific "Vendor Response" column. As the "Requirement Met," "Solution Method" and "Proposed Phase" cells have fixed drop-down response choices, may we assume that the information requested is to be included in the "Suggested Clarifying Comments" cell?	The instructions have been updated to read "Suggested Clarifying Comments column"
51	Proposal Section T-6, "Instructions" Tab, Cell C13 "Solution Method"	Third Party Product - The State Requirement will be met by commercially available third-party software asset and is included in this proposal. *Note: In the Vendor Response column, indicate the name of the proposed third-party software vendor and proposed components and indicate its compliance to State's technology or architecture standards.*	Please clarify the operational definition of "Third Party Product." Specifically, would it include COTS products which are owned by the bidder?	Yes, Third Party Products include COTS packages owned by the Vendor. The Template has been updated to add clarification.
52	Proposal Section T-6, "FR1" Tab, FR1.15	The System will have rules-based access control at the data field level and display information based on the following: a. User role and program affiliation b. Consent provided by a Client c. Any other regulatory or policy-based restrictions	Should "rules-based" be "role-based" instead? Please clarify.	It is rules-based.
53	Proposal Section T-8, "T3.3 ECM" Tab, Item T3.3.59 (Row 73)	The ECM/Document Management component will support multiple versions of the same site using the same WCM instance and repository	Could the State provide more detail around this requirement?	This requirement should be interpreted as a preference to have an ECM Solution component with built-in WCM (Web Content Management) feature as a part of the overall proposed Solution Architecture.

Question ID	RFP Reference (page number, section number, paragraph)	Specific RFP Language	Question	Response to Vendor
54	Proposal Section T-8, "T5.2 BI Platform" Tab, Item T5.2.1 (Row 9)	The BI Component will provide the ability to impose graduated access to reports based on user role and agency requirements/permissions to better analyze program data.	May we assume that the State has already defined the base user roles? If so, what are the user defined roles? Please provide the role definition.	The current role definitions throughout EEF include: **Inquiry** Only Inquiry access only/unable to update any data **Limited Inquiry** Limited inquiry access only/unable to update any data **Supervisor** Ability to update case data, authorize benefits, and monitor and track casework data **Worker** Ability to update case data and authorize benefits **System Coordinator** Ability to update case data, authorize benefits, and provide system support **New Worker** Ability to update case data. Cannot authorize benefits. **Service worker** Case management only (TANF) **DWS System Coordinator** Ability to update case data, authorize benefits, and provide system support for TANF only. However the vendor should expect the roles supported will change with the IE-BM Project.
55	Page 35, Section 3.3, Figure 5	Figure 5 DHS Current Technology Landscape	What is the current technology or mechanism used to communicate between the mainframe components and non-mainframe components?	Currently DHS communicates between the mainframe and non-mainframe components through SFTP.
56	Page 37, Section 3.3.1.1, 1st paragraph and Page 38, Section 3.3.1.1, Table 6	The EEF System has been implemented using multiple Commercial Off-The-Shelf (COTS) application components and infrastructure technologies including Cúram HCR modules (MAGI Medicaid), Cúram Express Rules Engine (CER), DB2, Cognos for Reporting, Informatica for ETL, IBM WebSphere, Redhat JBoss Fuse ESB, and Xerox Docushare.	Which COTS components are shared by other non-EEF systems? Or are all the COTS components listed in the paragraph and table used only by EEF?	The only software shared with non-EEF solutions are Xerox DocuShare and SSO.
57	Page 38, Section 3.3.1.1, Figure 7	Figure 7 – EEF Current State Technical Architecture Overview (Layered View)	Regarding the channels listed in Figure 7, does the “Paper App” channel include a mailroom for incoming paper mail?	Yes, paper applications can be submitted to any county office or a central processing center. See the Business Process Analysis Report for further details.
58	Page 38, Section 3.3.1.1, Figure 7	Figure 7 – EEF Current State Technical Architecture Overview (Layered View)	For the “Paper App” channel, does your current capability include scanning the paper to image and recognizing the content of the image using OCR, ICR, or OMR? If so, please describe.	Currently the paper applications are scanned, indexed and uploaded but there is no OCR. See the Business Process Analysis Report for further details on the desired process.
59	Page 39, Section 3.3.1.1, Table 6	Informatica – Data Staging, Data Quality, Data Conversion and ETL.	Does your current Data Staging, Data Quality, and Data Conversion capability include Address standardization using CASS or address validation using NCOA?	DHS' current solution does not include address standardization.
60	Page 39, Section 3.3.1.1, Table 6	Cognos – BI, Reporting	For the reports built using Cognos, do they employ simple SQL queries, or are some also based on advanced analytic functions? If so, please describe.	Cognos Framework Manager is used to manipulate the data for reporting.

Question ID	RFP Reference (page number, section number, paragraph)	Specific RFP Language	Question	Response to Vendor
61	Page 31, Section 3.1.2, Last paragraph and Page 37, Section 3.3.1.1, 1st paragraph	The EEF System has been implemented using multiple Commercial Off-The-Shelf (COTS) application components and infrastructure technologies including Cúram HCR modules (MAGI Medicaid), Cúram Express Rules Engine (CER), DB2, Cognos for Reporting, Informatica for ETL, IBM WebSphere, Redhat JBoss Fuse ESB, and Xerox Docushare. and Note: The State is interested in a best value Proposal. This may result of leveraging some or all of the EEF solution (including DHS' implementation of IBM Cúram) or proposing a Solution that replaces the EEF solution in its entirety.	What is the total number of rules currently in the Curam Express Rules Engine?	Currently there are 514 rules in the rule engine.
62	Page 43 section 3.3.2.2	The core Client/Server systems primarily use .Net framework (C#, VB.Net, VB6, SQL Server backend etc.) with some sprinkling of PowerBuilder and other Microsoft platform based tools to serve a wide array of users across various departments. The primary use of some of these Client/Server applications is to provide end user intermediary interfaces with legacy mainframe applications.	Please provide any cost information associated with the ANSWER system and any other applicable legacy systems including M&O.	The M&O cost for one year from the current vendor is $9.2 Million. The ANSWER application will be transitioned to IE-BM at an appropriate time by new IE-BM vendor. The IE-BM vendor will not perform M&O of ANSWER system in its current form.
63	Page 10 Template T-9 3.1.1 Portal	"For portal technologies, DHS currently uses Cúram Citizen Portal (part of Cúram SPMP) for the current EEF MAGI Medicaid deployment. DHS has "No Preference" to leverage this technology product as part of the solution design."	Please clarify preferred or no preference related to the T-8 document whereas T0 Technology Solution Stack tab states the Curam Citizen Portal - Part of Curam SPMP Package is "Preferred";	DHS does not have a preference. Figure 15 and Tab T-0 of Template T-8 and T-9 have been updated.
64	Page 12 Template T-9 3.2.3 Enterprise Content Management and Document Management	"The current EEF implementation uses Xerox DocuShare. DHS "mandates" Xerox Docushare as their enterprise solution for ECM technologies.	Please clarify mandates or no preference related The T-8 document whereas T0. Technology Solution Stack tab states "No Preference"; Please confirm	From a technology perspective, DHS prefers Xerox Docushare due to existing investments and internal resource capabilities. However, as stated in the RFP section 3.5.2.3, the Vendor is encouraged to provide alternate technologies with appropriate justification to provide the best value solution based on Total Cost of Ownership (TCO). Figure 15 and Tab T-0 of Template T-8 and T-9 have been updated.

Question ID	RFP Reference (page number, section number, paragraph)	Specific RFP Language	Question	Response to Vendor
65	Page 15 Template T-9 3.4.1 Database Management Systems	"The Vendor should ensure that the responses to this section are in alignment with the requirements set forth in Template T-8 – Technical Requirements Traceability Matrix, Section T4.3 and T5.1."	Can you confirm what the DBMS (Database Management System) requirements are and where they reside, if they are not in Template T-8, Section 4.3 and 5.1.	They are in Template T-8, Tab 5.1 and Tab 4.3 (MDM requirements may also have implications for the RDBMS). Template T-9 was updated to reflect Tab 5.1 and 4.3.
66	Page 16 Template T-9 3.4.2 Business Intelligence and Reporting Infrastructure	"The current EEF implementation uses Cognos. DHS "Preferred" technology for BI and reporting includes Cognos. DHS has "No Preference" to leverage this technology product as part of the solution design"	Please clarify no preference or preferred related to the T-8 document whereas T0. Technology Solution Stack tab states "Cognos or Business objects (Preferred)"; Please confirm	From a technology perspective DHS prefers Cognos or Business Objects BI due to existing investments and internal resource capabilities. However, as stated in the RFP section 3.5.2.3, the Vendor is encouraged to provide alternate technologies with appropriate justification to provide the best value solution based on Total Cost of Ownership (TCO). Figure 15 and Tab T-0 of Template T-8 and T-9 have been updated.
67	Template T-8 Technical RTM T2.1 CMF	Tab 2.1 CMF: "Case Management Functionality (Please refer to Functional RTM for Detailed Requirements)"	Please provide any Case management functions not found in the T-6 Functional RTM document.	All Case Management related requirements are in T-6 Functional RTM document.
68	Page 13 Section 1.5.3 - Department of Human Services (DHS)	Department of Human Services (DHS) — DHS is the largest Arkansas state agency, with more than 7,500 employees working to ensure citizens are healthy, safe and enjoy a high quality of life.	Please clarify the number of state workers who will require access to the system.	Please see response to question 4.
69	3.3.1.1 EEF Platform – Technology Architecture	The EEF System has been implemented using multiple Commercial Off-The-Shelf (COTS) application components and infrastructure technologies including Cúram HCR modules (MAGI Medicaid), Cúram Express Rules Engine (CER), DB2, Cognos for Reporting, Informatica for ETL, IBM WebSphere, Redhat JBoss Fuse ESB, and Xerox Docushare	Please clarify how Docushare is used as a CRM system.	DocuShare is used as an integrated solution which consumes payloads from the Curam application to create and store notices used to communicate MAGI eligibility information to Arkansans. In addition it is used as a repository to store all evidence used to determine eligibility once scanned into DocuShare.

Question ID	RFP Reference (page number, section number, paragraph)	Specific RFP Language	Question	Response to Vendor
70	3.5.1.3.1 Core Mainframe Systems	Food Stamps System (FACTS) is a mainframe system that is comprised of 10 sub-systems serving approximately 106,000 clients. The system processes applications for Food Stamps from the ANSWER system, issues monthly benefits, and provides reporting. Determines Food Stamp eligibility Manages 100,000+ current Food Stamp cases Provides and updates data for EBT Provides reports to satisfy Federal & State requirements	How many cases are processed in a month – Provide program by program break out.	Please refer to the County Office Operations Report (COOR) in the Procurement Library.
71	Page 53-3.5.1.3.1 Core Mainframe Systems	With the implementation of IE-BM System (this RFP), DHS assumes that the following systems will be completely retired without duplication of data and functionality (note: Duplication of data or functionality will lead to data integrity issues and additional effort needed to reconcile data in addition to causing confusion on functionality).	Please provide the current mainframe utilization (MIPS).	IBM Mainframe has 255 MIPS used by multiple applications. Utilization by different applications is not known. DIS is going to cut the MIPS by half by next year.
72	Page 46 3.3.4.1 Data Center and Hosting	DHS has a small Data Center of networked, rack mounted servers using WINDOWS environment on premises in DHS' downtown Little Rock office complex	What is the current data storage capacity used?	The mandatory scope of this project does not include managing the storage (it will be managed by DIS). Regarding the new optional hosting service, disk storage amount changes month to month and the most recent total amount for EEF was approximately 62 TB.
73	Page 10 1.5.1 Department of Human Services Overview	Divisions that are coordinated from Central Offices in Little Rock (Pulaski County). The department is the largest payer of Medicare services in Arkansas with more than $5.1 billion in State and Federal Medicaid dollars being paid to approximately 12,000 providers across the State in fiscal year 2014. Specific services are provided by programs in one or more of these nine (9) programmatic Divisions and eight (8) shared services Offices:	In multiple areas of the RFP, the State providers. Can the state clarify that provider management is not in scope.	MMIS provider management is not in scope, however, it is likely the system will need to contain some service provider information (e.g. Community Action Agencies) to address the functional requirements.

Question ID	RFP Reference (page number, section number, paragraph)	Specific RFP Language	Question	Response to Vendor
74	Page 51 -LIHEAP	The IE-BM Solution will include identifying Clients during the Screening process in need of the Low Income Home Energy Assistance Program benefits. Clients will be referred on to the DHS LIHEAP subcontractors to complete the eligibility determination and enrollment process. Case management for LIHEAP is not in-scope for IE-BM.	Please describe the data needs of the case management system for those programs identified as out of scope for this RFP?	Section 3.5.1.1 was updated to read "... Clients during the pre-screening process in need of the Low Income Home Energy Assistance Program benefits. Clients will be provided a list of Community Action Agencies who they could contact to complete the eligibility determination and enrollment process." Primarily the data captured by the IE-BM application will be integrated with the other programs' (e.g. WIC, TANF) systems.
75	Page 51/53/54	FR12 - Appointment and Caseload Management Requirements	Please provide clarification on case management needs as FR12 on page 53 seems to contradict case management needs on Page 51	The caseload management requirements captured in FR12 are related to processing cases through the eligibility determination process. Section 3.5.1 discusses case management from a functional perspective (e.g. TANF, E&T). Section 3.5.2 discusses case management from a technical perspective. The vendor can decide whether to use a case management COTS solution to address the functional needs captured in Template T-6.
76	Page 80 3.7.2 Implementation Scope of Work Overview	The following sections define the implementation tasks (not necessarily in sequential order) that the Vendor shall perform and the warranty services that are required to implement the IE-BM System (defined in Section 3.5 and Templates T-6 — Functional RTM and T-8 — Technical RTM).	Please clarify the required length of the warranty period.	Please see answer to question 14.
77	N/A	N/A	What is the expected requirement for electronic signature (i.e., E-sign, digital signature, and/or remote proofing)?	See the "Lync SFB Audio Voice Recording and Phone Script documents" included in the procurement library.
78	Page 54 IE-BM System Architecture	The goal of DHS leadership is to identify and establish Enterprise Business and Technical Standards, as well as a Shared Enterprise Platform which includes the establishment of IT standards and a common Enterprise Platform of discrete discoverable SOA components	Please clarify the DHS architectural standards.	Architectural standards and preferences have been provided in RFP Template T8 as well as the GSD document, available as part of the procurement library. Also review current technology architecture standards documents in the Procurement Library.
79	SP-17-0036 Independent Assessment and Transformation Support.pdf Page 14, 2.1 Introduction, Section A. 6 and 7.	6. Training for State and Vendor staff on the Assessment Instruments, Developmental Screen, and Tier Determination processes, including utilization of the IT Platform, and 7. Transformation support, including continuous education and training for affected stakeholders, especially certain Arkansas Medicaid Providers and DHS staff before, during, and after implementation.	How many State and Vendor staff will need to be trained and how many will there be in each role within the solution?	The State of Arkansas will not respond to questions related to bids that are under evaluation.

Question ID	RFP Reference (page number, section number, paragraph)	Specific RFP Language	Question	Response to Vendor
80	SP-17-0036 Independent Assessment and Transformation Support.pdf Page 14, 2.1 Introduction, Section A. 6 and 7.	6. Training for State and Vendor staff on the Assessment Instruments, Developmental Screen, and Tier Determination processes, including utilization of the IT Platform, and 7. Transformation support, including continuous education and training for affected stakeholders, especially certain Arkansas Medicaid Providers and DHS staff before, during, and after implementation.	How many Arkansas Medicaid Providers and DHS staff will need to be training and how many will there be in each role within the solution?	The State of Arkansas will not respond to questions related to bids that are under evaluation.
81	SP-17-0036 Independent Assessment and Transformation Support.pdf Page 14, 2.1 Introduction, Section A. 6 and 7.	6. Training for State and Vendor staff on the Assessment Instruments, Developmental Screen, and Tier Determination processes, including utilization of the IT Platform, and 7. Transformation support, including continuous education and training for affected stakeholders, especially certain Arkansas Medicaid Providers and DHS staff before, during, and after implementation.	How many training facilities are available to conduct in-person training are what is the capacity of each?	The State of Arkansas will not respond to questions related to bids that are under evaluation.
82	SP-17-0036 Independent Assessment and Transformation Support.pdf Page 14, 2.1 Introduction, Section A. 6 and 7.	6. Training for State and Vendor staff on the Assessment Instruments, Developmental Screen, and Tier Determination processes, including utilization of the IT Platform, and 7. Transformation support, including continuous education and training for affected stakeholders, especially certain Arkansas Medicaid Providers and DHS staff before, during, and after implementation.	For regional in-person training, how many locations are available, where and what are their capacity?	The State of Arkansas will not respond to questions related to bids that are under evaluation.
83	SP-17-0036 Independent Assessment and Transformation Support.pdf Page 32, 3.2 Assessor Requirements, Section A	3.2 ASSESSOR REQUIREMENTS A. The Vendor shall provide the qualified staff necessary to conduct the State's Independent Assessments and Tier Determinations for DAAS, DBHS and DDS populations as specified in this RFP.	Please clarify number of assessors as well as location.	The State of Arkansas will not respond to questions related to bids that are under evaluation.

Question ID	RFP Reference (page number, section number, paragraph)	Specific RFP Language	Question	Response to Vendor
84	SP-17-0036 Independent Assessment and Transformation Support.pdf Page 33, 3.2 Assessor Requirements, Section E. 1.	E. Additional Requirements for Clinical Staff 1. The Vendor shall hire or contract with Arkansas licensed clinicians to provide clinical consultation and supervision of assessors.	Please clarify how many clinical Staff as well as training locations needed.	The State of Arkansas will not respond to questions related to bids that are under evaluation.
85	SP-17-0036 Independent Assessment and Transformation Support.pdf Page 40, 3.3 Information Technology Platform, Section M Technology Training, Paragraph 1d	M. Technology Training 1. The Vendor shall provide in-person and web-based training to teach State staff how to access, navigate, and use the IT Platform that supports the assessments, screenings, and Tier Determinations. The training approach shall include, at a minimum, the following tasks: a. Developing (in cooperation with the State) and executing a Knowledge Transfer and Training Plan that describes the approach for bringing managers, users at all levels of access, and technical personnel to an appropriate level of understanding of the platform. b. Providing training to State users that shall include system features, business processes, reporting, and system navigation. c. Developing course curriculum for use by trainers. d. **Conducting detailed train-the-trainer workshops that shall prepare state trainers for training others.**	Following the train-the-trainer workshops, will state trainers conduct the initial training during implementation? Please clarify the role during the life of the contract.	The State of Arkansas will not respond to questions related to bids that are under evaluation.

Question ID	RFP Reference (page number, section number, paragraph)	Specific RFP Language	Question	Response to Vendor
86	SP-17-0036 Independent Assessment and Transformation Support.pdf Page 41, 3.4 Transformation Support, Training and Related Staff, Section E, Paragraph 1c	E. The following assessment of education needs must be provided by the Vendor: 1. Provider Needs Assessment a. The Vendor shall conduct an initial assessment of each Division's staff and their respective provider community's needs. b. This assessment, in collaboration with DHS, shall identify and help anticipate the areas where the provider community will need the most support and training as DHS transitions to the new assessment processes, Tier Determinations, and other systemic changes affecting the provider community. This initial assessment and collaboration with DHS shall be the basis for content and curriculum for training materials. c. **The initial assessment of the Divisions' provider communities' needs shall take place in person with DHS designated providers which are located throughout the State of Arkansas. The initial assessment of the Divisions' provider communities shall be accomplished in collaboration with DHS within a 30-day period after the Contract start**	In order to accurately scope this requirement, how many providers and locations will require the assessment ?	The State of Arkansas will not respond to questions related to bids that are under evaluation.

Question ID	RFP Reference (page number, section number, paragraph)	Specific RFP Language	Question	Response to Vendor
87	SP-17-0036 Independent Assessment and Transformation Support.pdf Page 41, 3.4 Transformation Support, Training and Related Staff, Section E, Paragraph 1c	E. The following assessment of education needs must be provided by the Vendor: 1. Provider Needs Assessment a. The Vendor shall conduct an initial assessment of each Division's staff and their respective provider community's needs. b. This assessment, in collaboration with DHS, shall identify and help anticipate the areas where the provider community will need the most support and training as DHS transitions to the new assessment processes, Tier Determinations, and other systemic changes affecting the provider community. This initial assessment and collaboration with DHS shall be the basis for content and curriculum for training materials. c. **The initial assessment of the Divisions' provider communities' needs shall take place in person with DHS designated providers which are located throughout the State of Arkansas. The initial assessment of the Divisions' provider communities shall be accomplished in collaboration with DHS within a 30-day period after the Contract start**	How many in-person regional trainings, on-site coaching sessions and webinars are expected?	The State of Arkansas will not respond to questions related to bids that are under evaluation.
88	SP-17-0036 Independent Assessment and Transformation Support.pdf Page 43, 3.4 Transformation Support, Training and Related Staff, Section F. 1. e. Training manuals iii.	e. Training manuals i. The Vendor shall create training manuals in collaboration with and approved by each of the Divisions. ii. The Vendor shall distribute the training manuals to the provider community thirty (30) days in advance of the Go Live Date. iii. **The Vendor shall distribute training manuals during in-person regional trainings as well as during on-site coaching sessions.**	How many locations are available for in-person regional training and what is the location and capacity of each?	The State of Arkansas will not respond to questions related to bids that are under evaluation.

Question ID	RFP Reference (page number, section number, paragraph)	Specific RFP Language	Question	Response to Vendor
89	SP-17-0036 Independent Assessment and Transformation Support.pdf Page 44, 3.4 Transformation Support, Training and Related Staff, Section F. 1. f. Live webinars I and ii.	f. Live webinars i. The Vendor shall perform live webinars that walk through the provider training manual. The live webinars shall be accessed through a link on the provider website and must allow providers to ask questions during the webinar. ii. **The Vendor shall perform live webinars at a State-specified frequency.**	Please confirm that WebEx-based training is acceptable for conducting the webinars as well as how many sessions are expected.	The State of Arkansas will not respond to questions related to bids that are under evaluation.
90	T8_Technical_RTM, Tab G6, G6.1	The System will, at a minimum, provide a mechanism to comply with security requirements and safeguard requirements of the following Federal agencies / entities: NIST 800-53 r4, MARS-E and DOD 8500.2	Attempting to determine the applicability of DOD 8500.2, which has been superseded by 8500.1, would the State provide additional clarification about the applicability of this instruction to the solution, such as must the chosen vendor prepare for a DOD security assessment/audit?	There are no compliance requirements for DoD 8500. The EEF solution is governed by MARS-E and IRS 1075.
91	T8_Technical_RTM, Tab G6, G6.1	The System will, at a minimum, provide a mechanism to comply with security requirements and safeguard requirements of the following Federal agencies / entities: NIST 800-53 r4, MARS-E and DOD 8500.2	Do DOD requirements supersede MARS-E or NIST 800-53?	There are no compliance requirements for DoD 8500. The EEF solution is governed by MARS-E and IRS 1075.
92	IE-BM RFP 3.3.5 Current IT Operations Support		What are the current SLAs for the help desk?	Currently there are no SLAs for the Help Desk.
93	3.8 IE-BM Engagement - Maintenance and Operations Scope of Work		What is the historical count of Incidents, problems & Service requests per month by Severity levels for the current EEF system?	Please see answer to question 20.
94	3.8 IE-BM Engagement - Maintenance and Operations Scope of Work		How many resources are currently dedicated to provide Technical and Help Desk Support?	Current vendor has assigned 12 resources to provide Curam technical support. This number can vary every month and will change with the new contract.
95	3.8 IE-BM Engagement - Maintenance and Operations Scope of Work		How many resources in terms of both State staff and vendor staff are currently dedicated to Maintenance and Operations for the existing EEF system. Please provide the organization structure.	Currently there are the following State staff assigned to the M&O: Department of Information Systems (DIS) - 8 people Application Maintenance and Support (AMS) - 15 people Application Operations and Production Support (AOPS) - 14 The eSystems Org Structure is included in the Procurement Library. It is important to note the scope of the vendor's responsibility in supporting the solution will change with this RFP.

Question ID	RFP Reference (page number, section number, paragraph)	Specific RFP Language	Question	Response to Vendor
96	3.8 IE-BM Engagement - Maintenance and Operations Scope of Work		What Service Management tool(s) does your Maintenance and Operations team utilize?	EEF currently does not use a Service Management tool.
97	3.8 IE-BM Engagement - Maintenance and Operations Scope of Work		What are the Key Performance Indicators that are being tracked currently for the EEF application?	The KPIs are under development.
98	3.8 IE-BM Engagement - Maintenance and Operations Scope of Work		Can you provide average concurrent users of each EEF system?	The concurrent users average between 400 and 450 users daily
99	IE-BM System Overview		What current monitoring systems are in place?	Please see answer to question 19.
100	IE-BM System Overview		How many times have the availability targets been missed in the past year?	Currently there are no availability targets.
101	IE-BM System Overview		Is your data center staffed 24x7 by system technical staff?	Yes.
102	IE-BM System Overview		Can you expand upon the services that DIS requires?	DIS does not require services from the IE-BM vendor. They will provision and maintain infrastructure environments and do require the IE-BM specify their needs.
103	IE-BM RFP 3.5.1.3 IE-BM System - Systems to be Retired		Does the state anticipate the retirement of systems occur in the M&O phase or DDI phase?	The State's only preference is they are retired as quickly as possible. As outlined in deliverable I.1.5 this is considered part of the DDI project.
104	T12_M_and_O_RTM O6-8		Please provide a list of known production issues.	An extract from the current incident management system (JIRA) has been added to the procurement library.
105	IE-BM System Overview		Please define your release schedule.	The current EEF vendor is on a quarterly release schedule. The release schedule for the project will be defined by the vendor. Current release schedule has been added to the Procurement. Library.
106	T6 - FR2.24 - Functional Requirements	The System will allow Arkansas State staff to easily update the list of State and non-State Programs	Please clarify the requirement. Is the question "How easy is it to add additional programs and rules, or just add to a catalog of programs that are supported.	Requirement FR2.24 has been updated to read "The System will allow Arkansas staff to easily update/add/modify the rules applied to and Programs included in the pre-screening application."
107	Page 45 3.3.3 para 2	"The new IE-BM application will either replace or enhance the current data feeds from EEF and provide data feed to DHS Data Warehouse as needed."	What data feeds are managed by Arkansas vs external partner?	Data feeds are managed by a combination of State and the ISS vendor.
108	Page 39 3.3.1.2 First bulleted sentence	There are still outstanding issues to stabilize the current HCR implementation for MAGI Medicaid.	Please clarify what outstanding issues remain?	Please see answer to question 104.

Question ID	RFP Reference (page number, section number, paragraph)	Specific RFP Language	Question	Response to Vendor
109	Page 40 3.3.1.2 11th bullet	"FFM Account Transfer data quality issues — Issues around consuming FFM (healthcare.gov) apps/payload into HCR, where FFM applications coming though the FDSH (Federal Data Services Hub) are incomplete or inaccurate"	How is the State defining completion?	Section 3.3.1.2 has been removed.
110	Page 39 3.3.1.1 Table 6	Table 6	Is Cognos implemented as a web service or the stand alone application?	Cognos is implemented as a web service.
111	Page 101 3.7.3.6 3rd para; 2nd bullet	"String/Link Testing — Ensure multiple “units” work in conjunction with each other without issue"	String / Link testing – how does this differ from SIT Testing?	See definitions in the RFP. - String/Link Testing — Ensure multiple “units” work in conjunction with each other without issue - Integration Testing — Ensure the Solution supports end-to-end business processes Vendors are encouraged to follow best practices and identify defects early in the process and may propose an alternate approach with justification.
112	Page 39 3.3.1.2 First bulleted sentence	significant customizations have been deployed to meet MAGI Medicaid requirements.	Are the business functions associated with the referenced customizations called out in the requirements?	The business functions associated with the referenced customizations are not called out in the requirements in the RFP. See the procurement library for the business process modeling document (BPMDs) which capture the current customizations.
113	Page 40 3.3.2.1	Service Levels O-1 through O9-3 (Application Availability and Performance)	Could you please clarify where 0-1 through 09-3 are found in the RFP?	Implementation service levels are captured on Template 10 Tab I10 and Template 12 Tab O7. Section 3.6.3 of the RFP has been updated to read "Service Levels O7-1 through O7-10". This reference has been added to Section 3.6.3 and Section 3.10 for clarity.
114	T6_Functional_RTM	-FR1.28 The System will provide menus that are understandable, and easy to navigate, by non-technical users - FR1.32 The System will provide the ability to incorporate a non-restrictive environment for experienced users to directly access a screen or to move from one screen to another without reverting to the menu structure	Will the selected vendor need to remediate navigation issues in Curam that don’t meet requirements FR1.28 and FR1.32?	Remediating navigational issues in the current solution is not in scope for the DDI Implementation. Minor "bug" fixes to the current system will be handled through the M&O processes; major navigational enhancements to the current system will be handled through the change management process.

Question ID	RFP Reference (page number, section number, paragraph)	Specific RFP Language	Question	Response to Vendor
115	T6_Functional_RTM	o FR1.43 The System will provide the user easy access to self-service help files or multi-media procedure documentation o FR1.44 The System will provide an online help system, available from any screen and any screen field, that provides a description of and the processing performed by a screen or window, data entry format and restrictions, explanation of error messages and other information helpful to the user	Will the selected vendor need to create documentation for the Curam system where it does not currently exist?	DHS has help files and they have been added to the procurement library.
116	Cost Worksheet, Tab 2 Labor Rates, Table 4. Application Maintenance and Operations Enhancement Hourly Rates	In the Table 4. Application Maintenance and Operations Enhancements and Hourly Rate, the Project Manager doesn't seem to be included in the Composite Rate percentage total.	Can you verify that under Tab 2 costing workbook that the Project Manager should not be included in Composite Rate percentage total in the Table 4 Maintenance and Operations Enhancements and hourly rate.	The cost workbook has been updated to include the Project Manager.
117	Cost Worksheet,Tab 4 M&O Provider Services	Tab 4 M&O Provider Services, Cell C16 through J16 doesn't seem to add the green cells	Tab 4 M&O Provider Services, Cell C16 through J16 doesn't seem to add the green cells. Could you please verify the formula is correct?	The equations have been updated in the cost workbook.
118	Cost Worksheet, Tab 2 Labor Rates, Column C	Cost Worksheet, Tab 2 Labor Rates, Column C	Can you provide clarity around composite weight year over year? Currently there is only one column.	The expectation is the break down will not vary significantly between the years. As such, the same composite % will be used for the life of the M&O contract.
119	p.22, Table 3, T-3 Vendor Requirements	"DHS has a strong preference for references that demonstrate where the Prime and subcontractors have worked together in the past."	We respectfully recommend that language favoring pre-existing partner relationships be struck from the final RFP document. We believe it narrows the playing field and prevents DHS from obtaining the best possible value from potential teaming possibilities.	The RFP has been updated to read "a preference" rather than a "strong preference" as the references will provide an opportunity to assess the working relationship. If these references cannot be provided Arkansas recommends the Vendor provides additional details in their proposal that will decrease the concern that issues between the vendors will not impact the project.
120	p.124, Paragraph 1, Section 5.2 Availability of Funds	"If funding is delayed or reduced…"	Please confirm, DHS has yet to receive Federal funding to support the IE-BM contract.	DHS has received Federal funding to support the IE-BM contract.
121	p.124, Paragraph 1, Section 5.2 Availability of Funds	"If funding is delayed or reduced…"	Please provide the estimated budget for the IE-BM contract, submitted to CMS for approval.	No. The budget is not available.
122	p.124, Paragraph 1, Section 5.2 Availability of Funds	"If funding is delayed or reduced…"	What is the total estimated budget for the IE-BM contract?	The budget is not available.
123	Page 121, Bullet 3, Section 4.3	The Vendor (Prime) must have annual revenue of at least $100M	Will DHS amend the stated requirement of prime contractors to have $100 million in annual revenue, with the following, "$100 million in annual revenue OR the ability to provide a performance bond in the amount $100 million"?	DHS will not amend the stated requirement of prime contractors to have $100 million in annual revenue.
124	General Question		In an attempt to give the state more options; may a company submit a response as a primary contractor, as well as being included as a subcontractor in another company's proposal submission?	The RFP has been updated to reflect a vendor can submit one response as the primary vendor while also being included as a subcontractor on another bid.

Question ID	RFP Reference (page number, section number, paragraph)	Specific RFP Language	Question	Response to Vendor
125	RFP, page 8, 1.4 Procurement Schedule	Critical Due dates and milestones for this procurement are listed in Table 1.	Considering the size, scope, and importance of this project, would DHS please consider including a period for clarification questions that directly result from the Q&A? This can be accomplished with a short Q&A window following the initial posting of answers and could have a significant benefit to ensure the vendor community fully understands the State's answers.	A second question and answer period has been added to the procurement timeline.
126	RFP, page 22, Section 2.5.2.1, Table 3, T-15 description	This section of the Vendor's Technical Proposal includes the Terms and Conditions that will govern this contract and any contracting forms that the Vendor will need to provide with their Proposal and those forms required prior to commencing activities under this Contract.	Template T_15_Terms_and_Conditions does not appear to contain the form and substance expected of a contract document for a project of this size and scope. Does DHS intend to release a contract template to govern these services? If so, when would Vendors receive this template?	A review of the Terms and Conditions is being conducted and, if required, an updated version will be provided when the final RFP is released.
127	RFP, page 41, Section 3.3.2.1, client counts by program	Arkansas Client Eligibility System (ACES) is a mainframe system that is comprised of 17 sub-systems servicing approximately 180,000 Medicaid clients and 25,000 TEA clients. Food Stamps System (FACTS) is a mainframe system that is comprised of 10 sub-systems serving approximately 106,000 clients. Development Disabilities Services System (DDS) is a mainframe system that is comprised of 14 sub-systems serving approximately 6,000 clients	Would DHS please provide system user counts by program (Medicaid, SNAP, and TANF) in addition to the client counts provided?	The system currently has the following users by program: Medicaid - 1,012,117 SNAP - 371,825 TANF - 3,389
128	RFP, page 50, Section 3.5.1, Figure 12	The figure below graphically captures the generic framework that depicts in sequential order all of the business functionality throughout the Life of the Case (Access/Intake, Case Management, and Eligibility Review).	The reference to Figure 12 describes the Life of the Case as Access/Intake, Case Management, and Eligibility Review, but Figure 12 depicts the Life of the Case as Access/Intake, Benefit Management, and Eligibility Review. Table 9 on page 52 depicts Benefit Management and Case Management as separate functionality. Would DHS please clarify the definitions of Benefit Management versus Case Management?	In this instance Benefits Management is the administration of all benefits (including both financial benefits such as SNAP and high touch case management such as welfare to work and counselling). Case management is a sub-set, focused on high touch case management.
129	RFP, page 48, Section 3.4.1, Table 8, Functional Area: Legacy Rationalization Requirements for IE-BM Vendor	Developing detailed functional specifications and for any enhancements to the legacy systems	Would DHS please provide examples of enhancements to legacy systems that would be the responsibility of the IE-BM Vendor versus those that would be the responsibility of the legacy application owners?	See Section 3.4.1 for additional details. Table 8 has been updated to clarify the responsibilities. The IE-BM vendor will not be responsible for any enhancements to the legacy system (e.g. ANSWER) . If an interim interface is required to the legacy system the IE-BM vendor would be responsible for building the functional specification for the interface and the legacy vendor will be responsible for DDI work on the legacy mainframe.

Question ID	RFP Reference (page number, section number, paragraph)	Specific RFP Language	Question	Response to Vendor
130	RFP, page 51, Section 3.5.1.1, Child Care Assistance description RFP, page 51, Section 3.5.1.1, WIC description	Child Care Assistance – The IE-BM Solution will support the screening, application and "potential" determination of eligibility for Child Care. WIC – For the WIC Program, the IE-BM Solution's integrated application approach will be an additional application channel and will support the screening, application, and first phase of determination of Eligibility for WIC.	Would DHS please clarify the difference between "potential determination" as stated in the Child Care Assistance description and "first phase of determination of eligibility" as stated in the WIC description?	Section 3.5.1.1 has been update to read "The IE-BM Solution will support screening and the collection of application information for Child Care. Client information will be provided to the TEA/TANF system for eligibility determination and enrollment."
131	RFP, page 57, Section 3.5.2.2, sentence under Figure 14	For additional details, see the IE-BM Platform and Components document in the Procurement Library.	We are unable to locate the "IE-BM Platform and Components" document in the Procurement Library. Would DHS please make this document available to Vendors?	Please see answer to question 78.
132	RFP, page 70, Section 3.6.3.2.1, Table 11, Security Expert Expected Qualifications	Note - does not need to be dedicated to the account – This is a dedicated resource	Will DHS please clarify the Security Expert's expected commitment to the project, specifically the difference between "not dedicated to the account" versus "a dedicated resource"?	Please see answer to question 48.
133	RFP, page 116, Section 3.9, first paragraph	DHS is anticipating the IE-BM Project to be approximately 30 months in duration with one (1) three (3) year contract with four (4) additional one (1) year extensions at the discretion of the State.	Would DHS please clarify if the IE-BM Project initial contract term is anticipated to be "30 months in duration" or a "three (3) year contract" term (36 months)? This will ensure that bidders are normalized in the term of the contract that is priced.	Section 3.9 has been updated to read 36 months.
134	RFP, page 77, Section 3.6.4, fifth paragraph	Remote work will be limited to 10% of staff. The Vendors' staff must be available to participate in services-related meetings as scheduled by DHS. On-site work must be performed during normal State business hours, Monday through Friday 8:00 AM until 5:00 PM.	Would the State please consider increasing the offsite staffing percentage allotment from 10% to a maximum of 50%. This will allow proven, high-quality vendors in the Integrated Eligibility market the ability to leverage established Delivery Centers that are built to support these type of projects. The Delivery Center approach would allow Arkansas access to the skills and knowledge that exist across a multitude of States implementing and maintaining similar systems. This delivery model would still provide resources that need to have frequent interaction with the State to be located in Little Rock. The State could also consider limiting the Delivery Center to a State that borders Arkansas to ensure there is a closer proximity of these resources in the event that they need to travel on-site. Lastly, will the State please confirm that offshore resources are prohibited to deliver services to the State of Arkansas for this project.	Arkansas has updated Section 3.6.8 to read "In support of the shoulder-to-shoulder environment and collaboration, the vendor will primarily work on-site. All Key Personnel and no less than 50% of each vendor team (e.g. testing, training) shall be on-site at any time during regular business hours. Additionally, DHS prefers any remote work be performed within Arkansas. Tasks being performed off-site cannot be more than 25% of the effort and must be highlighted in the Project Schedule deliverable and be approved by DHS"

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135	RFP, page 121, Section 4.3 Minimum Mandatory Qualifications, first paragraph	The Vendor (Prime only) must have experience with three (3) engagements similar in size, complexity and scope to this procurement in the last five (5) years.	Would DHS please clarify that the qualifications required for this bid require a Vendor to have been the Prime contractor responsible for successfully implementing at least 3 Integrated Eligibility systems for a State or County in the United States?	As stated in Section 1.2.1, the Prime Vendor and each Subcontractor must provide at least three (3) references that are State Human Services systems implementations. Additionally, the Prime Vendor must provide at least three (3) references showing experience in engagements that are similar in size, complexity, and scope to this procurement. All references must be within the past five (5) years as stated in Section 1.2.1. The references submitted in Template T-3 must include the experience required to meet the minimum mandatory requirements.
136	C1 - Cost Workbook, Tab 2. Labor Rates, Cell C83	Formula in Cell C83 =SUM(C67:C82)	Please confirm that the formula in Cell C83 should be =SUM(C66:C82) and includes Project Manager in the composite weighting percentage.	Please see answer to question 116.
137	C1 - Cost Workbook, Tab 4. Appl M&O, Cells C16 to I16	Formula in Cell C16 =(SUM(C9:C15)*C8)	Please confirm that the formula in Cell C16 should be =(SUM(C12:C15)*C11). Cells D16 to I16 also have the same formula discrepancy and would need to be adjusted accordingly.	Please see answer to question 117.
138	C1 - Cost Workbook, Tab 4. Appl M&O, Cells C17 to I17	Formula in Cell C17 ='2. Labor Rates'!E66	Please confirm that the formula in Cell C17 should be ='2. Labor Rates'!E83. Cells D17 to I17 also have the same discrepancy, and would need to replace Row 66 with Row 83 accordingly.	The cost workbook has been updated.
139	C1 - Cost Workbook, Tab 8. Reports, Cells E12 and E13	Formula in Cells E12 and E13 ='2. Labor Rates'!E29 and ='2. Labor Rates'!E30, respectively	Please confirm that the formulas in Cells E12 and E13 should reference Cell ='2. Labor Rates'!E28	The cost workbook has been updated.
140	C1 - Cost Workbook, Tab 5. Packaged Software, Instructions	For existing software components already within the DHS Enterprise which the Vendor's solution will leverage the Vendor must provide anticipated maintenance costs.	Would DHS please provide to the Vendors the existing software licenses (quantity, license type) and software maintenance agreements so that they may give an accurate estimate of anticipated maintenance costs for existing software components?	The software licenses from the end of February has been added to the procurement library.
141	C1 - Cost Workbook, Tab 6. Hardware, Instructions	For existing hardware already within the EEF environment which the Vendor's solution will leverage the Vendor must provide anticipated maintenance costs for the hardware required to support the EEF Solution.	Would DHS please provide to the Vendors the existing hardware types quantities and hardware maintenance agreements so that they may give an accurate estimate of anticipated maintenance costs for hardware required to support the EEF solution?	Unless DHS decides to buy the optional hosting service, DIS will provide the infrastructure and will be responsible for the associated maintenance costs.
142	Template T3_Vendor_References, page 1, Section 1.0, Tables 1, 2, 3	Vendor Reference Tables	There are differences between Table 1 and Tables 2 / 3. Table 1 does not include the Estimated One-time Costs, Actual One-time Costs, and Reason(s) for Change in One-time Costs fields found in Table 2 / 3. Additionally, Table 1 asks for Initial Contract Value and Actual Contract Value, while Tables 2 / 3 ask for Original Value of Vendor's Contract and Actual Total Contract Value. Would DHS confirm if the Vendor should use the format of Table 1 or that of Table 2 / 3 for all three Vendor References when responding?	Table 1 has been updated to align with table 2 and 3.

Question ID	RFP Reference (page number, section number, paragraph)	Specific RFP Language	Question	Response to Vendor
143	Template T6_Functional_RTM, Instructions tab, Solution Method, definition of Third Party Product Template T8_Technical_RTM, Instructions tab, Solution Method, definition of Third Party Product	Note: In the Vendor Response column, indicate the name of the proposed third-party software vendor and proposed components and indicate its compliance to State's technology or architecture standards.	Tabs FR1 - FR13 of the Functional_RTM workbook and Tabs G1 - T7 of the Technical_RTM workbook do not include a "Vendor Response" column. Would DHS please provide updated Templates or clarify what column Vendors are to use to specify the details of the third-party product?	Please see answer to question 50.
144	Template T6_Functional_RTM, Instructions tab, Solution Method definitions Template T8_Technical_RTM, Instructions tab, Solution Method definitions	IE-BM Vendor response to how the Functional Requirement will be met by the IE-BM Vendor solution. Indicate how the requirement will be met by selecting one of: * Leveraged Functionality - The State Requirement will be met by leveraging/enhancing the Medicaid E&E Solution functionality already configured and implemented at DHS * Configuration - The State Requirement will be met by configuring existing DHS Platform assets * Third Party Product - The State Requirement will be met by commercially available third-party software asset and is included in this proposal. Note: In the Vendor Response column, indicate the name of the proposed third-party software vendor and proposed components and indicate its compliance to State's technology or architecture standards. * New Development - The State Requirement will be met through new software code developed to provide specific business or technical services where there are no leverageable off-the-shelf software assets and is included in this proposal.	Would DHS advise Vendors on how to best respond to the Solution Method of a requirement when more than one of the defined Solution Methods may apply? For example: if the Vendor proposes to use existing DHS Platform Assets (Solution Method = Configuration) and augment those capabilities by proposing additional third party products (Solution Method = Third Party Product)	These are in order of the amount of customization required (low to high). Respond with highest customization and add a comment to clarify.

Question ID	RFP Reference (page number, section number, paragraph)	Specific RFP Language	Question	Response to Vendor
145	Template T8_Technical_RTM, Tab G4, Requirement G4.35	The System will include the telephony integration required to satisfy the ability to dial a phone number directly from data within the System based on user request, and provide the capability to automatically bring up the caller's record upon the receipt of an incoming call.	Would DHS please provide the technical details (e.g., manufacturer, license type, brand name, version) of the telephony system with which the IE-BM system must integrate?	See the "Lync SFB Audio Voice Recording and Phone Script documents" included in the procurement library.
146	Template T8_Technical_RTM, Tab G8, Requirement G8.26	The System will provide Service Level Agreement (SLA) monitoring and reporting capabilities. Service Level definitions will be drafted into a single document provided as an attachment.	We are unable to locate the attachment containing drafted Service Level definitions. Would DHS please make this attachment available to Vendors?	Please see answer to question 113.
147	Template T8_Technical_RTM,Tab T4.3, Requirement T4.3.9	The Data Integration/MDM component's data model must be able to support the State's standards for data content and coding where they exist.	Would DHS please provide Vendors the State's standards for data content and coding?	There are no existing documented standards. The Vendor will work with the State to develop and publish Data and Coding standards.
148	Template T9_Technical_Requirements, page 10, Section 3.1.1, Instructions, second paragraph	For portal technologies, DHS currently uses Cúram Citizen Portal (part of Cúram SPMP) for the current EEF MAGI Medicaid deployment. DHS has “No Preference” to leverage this technology product as part of the solution design.	This paragraph contradicts Template T8_Technical_RTM, Tab T0. Technology Stack, Section T1.1 which states "Cúram Citizen Portal - Part of Cúram SPMP Package (Preferred)". Would DHS please clarify the preference for Cúram Citizen Portal?	Please see answer to question 63.
149	Template T9_Technical_Requirements, page 12, Section 3.2.3, Instructions, second paragraph	The current EEF implementation uses Xerox DocuShare. DHS “mandates” Xerox Docushare as their enterprise solution for ECM technologies.	This paragraph contradicts Template T8_Technical_RTM, Tab T0. Technology Stack, Section T3.3 which states "No Preference" for Enterprise Content Management / ECM. Would DHS please clarify the preference for ECM technologies?	Please see answer to question 64.
150	Template T9_Technical_Requirements, page 13, Section 3.3.1, Instructions, second paragraph	For Enterprise Service Bus and Application Integration technologies, the current EEF deployment uses RedHat JBoss ESB, but in a limited footprint. However, DHS has “Preference” for Informatica or Mulesoft ESB products which the Vendor can leverage as part of their solution design.	This paragraph contradicts Template T8_Technical_RTM, Tab T0. Technology Stack, Section T4.1 which states "Informatica (Preferred)" for Application Integration and Enterprise Service Bus (ESB). Would DHS please clarify the preference for Enterprise Service Bus and Application Integration technologies?	Please see answer to question 13.
151	Template T9_Technical_Requirements, page 16, Section 3.4.2, Instructions, second paragraph	The current EEF implementation uses Cognos. DHS “Preferred” technology for BI and reporting includes Cognos. DHS has “No Preference” to leverage this technology product as part of the solution design.	This paragraph contradicts Template T8_Technical_RTM, Tab T0. Technology Stack, Section T5.2 which states "Cognos or Business objects (Preferred)" for Business Intelligence (BI). Would DHS please clarify the preference for BI and reporting?	Please see answer to question 66.

Question ID	RFP Reference (page number, section number, paragraph)	Specific RFP Language	Question	Response to Vendor
152	Template T10_Implementation_RTM, Tab I7. OCM-Training-KT, Requirement I7.7	Produce all required training materials to address training needs identified through the initial analysis. This will include, but may not be limited to, instructor lead classroom training, on-line trainings, workshops, training manuals and interactive trainings.	Would DHS please consider requiring Web-based training? The total cost of ownership and value of this training type is often higher than the cost, so a requirement to include Web-based or Computer-based training would ensure that Vendors are incented to propose a solution not driven by cost.	Arkansas expects an integrated approach which includes CBT/web based training. Deliverable I.2.8 includes web based training; req. I7.7 includes on-line training (considered the same as web based training)
153	Template T12_M_and_O_RTM, Tab O6. SLRs	Maintenance, Operations and Support Services Level Requirements (SLRs)	Does DHS own any Application Performance or SLA Monitoring software? If so, would DHS please provide the information on the available software? If not, should the Vendor account for this as part of the Vendor response?	DHS does not own a SLA monitoring software. The vendor should consider the best value approach to providing SLA reports, including the cost of any tools.
154	Template T13_MO_Requirements_Response, page 2, Maintenance and Operations Approach introduction, second paragraph	While responding, the Vendor should reference the IE-BM SOW, the Generalized System Design (GSD) document and other technical and infrastructure documentation provided as part of the Procurement Library, to gain an overall understanding of the current application and infrastructure environment and future DHS vision.	We are unable to locate the "IE-BM SOW" and "Generalized System Design (GSD)" documents in the Procurement Library. Would DHS please make these documents available to Vendors?	Please see answer to question 78.
155	Template T15_Terms_and_Conditions, page 1, Section 1.0, first paragraph	The Vendor must review and sign Template T-15, “Terms & Conditions of this RFP and Any Resulting Contract” in multiple sections in order to note the Vendor’s acknowledgement of Mandatory Terms and Conditions and acknowledgement, intent of compliance.	Would DHS please consider providing Vendors with the opportunity to suggest clarifications to the Terms & Conditions included in Template T-15, either through the proposal or during contract negotiations?	The included Terms and Conditions are not negotiable.
156	TP056 AR EEF System Design Document, page 12, Section 7, first paragraph	The Hardware Architectural Diagram is located in a separate document titled AR_Architecture_Diagram_consolidated.	We are unable to locate the "AR_Architecture_Diagram_consolidated" document in the Procurement Library. Would DHS please make this document available to Vendors?	This document has been added to the procurement library.
157	Page 121, Section 4.4 Evaluation Scoring	DHS’ Proposal Review Team (PRT) will evaluate the Proposals that successfully proceed through Compliance Screening and the Minimum Mandatory Requirements review and score each proposal based on the criteria outlined in the table below	Can the State provide any more detail about the specific criteria it will use to evaluate proposals? For example, can the State provide more detail on how it will evaluate the Business Solution?	The RFP has ben updated to include the weights of the subcategories. These are the only additional details the State of Arkansas will provide.
158	T8_Technical RTM, G6 Regulatory & Security (G6.19 - G6.23); T6.1 Identity and Access Management (T6.1.10 - T6.1.14)	Multiple Requirements	Requirements G6.19 through G6.23 appear to be duplicates of Requirements T6.1.10 through T6.1.14. Will the State please provide clarification as to whether or not these are in fact duplicate requirements?	The duplicate requirements have been removed from G6.

Question ID	RFP Reference (page number, section number, paragraph)	Specific RFP Language	Question	Response to Vendor
159	T8_Technical RTM, G6 Regulatory & Security (G6.19 - G6.23); T6.1 Identity and Access Management (T6.1.10 - T6.1.14)	Multiple Requirements	As a follow-up to, if Requirements G6.19 through G6.23 are not duplicates of Requirements T6.1.10 through T6.1.14, will the State please expand on what the differences are between the requirements?	The duplicate requirements have been removed from G6.
160	T8_Technical RTM; T6.1 Identity and Access Management (IAM)	Multiple Requirements	The following pairs of requirements on T8_Technical RTM, Tab T6.1 IAM, appear to be duplicates: T.6.1.45 and T6.1.50; T6.1.46 and T6.1.51; T6.1.48 and T6.1.52; T6.1.49 and T6.1.53; T6.1.36 and T6.1.61; T6.1.37 and T6.1.62; T6.1.38 and T6.1.63; T6.1.24 and T6.1.64. Will the State please provide clarification? Are these in fact duplicates? If not, please clarify the differences associated with each pair of requirements listed.	The duplicate requirements have been removed.
161	T8_Technical RTM; T6.1 Identity and Access Management (IAM)	Multiple Requirements	As a follow-up, if the following pairs of requirements on T8_Technical RTM, Tab T6.1 IAM, : T.6.1.45 and T6.1.50; T6.1.46 and T6.1.51; T6.1.48 and T6.1.52; T6.1.49 and T6.1.53; T6.1.36 and T6.1.61; T6.1.37 and T6.1.62; T6.1.38 and T6.1.63; T6.1.24 and T6.1.64, are not duplicates, will the State please clarify the differences associated with each pair of requirements listed.	The duplicate requirements have been removed.
162	RFP page 9, Table 1, Section 1.4 - Procurement Schedule and Page 117, Figure 17, Section 3.9 - Proposed Project Work Plan	Table 1 lists the contract start date as 9/1/2017 while Figure 17 shows planning and requirements validation starting on May 2017 and June 2017 respectively.	Please clarify project acquisition timelines and project schedule timelines.	Figure 17 has been updated.

Question ID	RFP Reference (page number, section number, paragraph)	Specific RFP Language	Question	Response to Vendor
163	RFP page 50,Paragraph 1, Section 3.5.1 - IE-BM System Functional Scope	DHS used a rigorous and disciplined process to complete a comprehensive Business Process Analysis (BPA) (included in the Procurement Library) that documents the target, "to-be" state of the IE-BM business processes. The BPA details a "to-be" state that would fulfill all business requirements, enhance the client experience, improve operational effectiveness and efficiency, align DHS' In-scope programs' model of practice and, most importantly, enable all of DHS to fulfill its vision.	The documentation in the Business Process Analysis folder of the Procurement Library appears to be the "as-is" and historical states for MAGI Medicaid. If there is additional documentation on the "to-be" state for IE-BM planning purposes will the State please share these artifacts?	Please refer to the Document Index in the root directory of the Procurement Library. The folder includes the "as-is" documentation the Business Process Analysis document includes the "to-be" processes.
164	RFP page 71, Table 11, Last row "Security Expert", Qualification Column, Section 3.6.3.2.1 - Vendor Project Staffing	Table 11 - Vendor's DDI Key Personnel Roles - Expected Qualifications column contains the following: Note - does not need to be dedicated to the account - This is a dedicated resource	This language contradicts itself. Please confirm the Security Expert does not need to be a dedicated resource.	Please see answer to question 48.
165	RFP Page 106, first paragraph, Section 3.7.3.9 - Group 9 Deliverables - Steady State (Warranty Period) and Template 10, Tab I9, Warranty Support	DHS expects functionality to be warrantied for 2 years after the entire system has been migrated to production and has been accepted by DHS (Deliverable I.8.2). Req. I.9.3 Provide warranty support for 12 months after all of the System functionality has been rolled out to all users, from the date of each release.	Please clarify the difference between the warranty period of 12 months and the warranty period of 24 months.	Please see answer to question 14.
166	RFP page 107, Section 3.8 - IE-BM Engagement - Maintenance and Operations Scope of Work	General	How many defects (by severity and type) are currently in the EEF solution backlog and what is it expected to be upon contract award?	Please see answer to question 104.
167	RFP page 122, Table 18, Section 4.4 - Evaluation Scoring	Table 18 Evaluation Scoring Grid	Please provide a more detailed scoring grid, assigning points to individual templates and template sections?	Additional scoring details have been added to the RFP.
168	T6_Functional RTM, Instruction Tab	The Functional Requirements document contains the following sections: 1) Instructions 2) Functional Requirements 3) Use Case List 4) Process Flow List	The Process Flow List identifies four flow and references diagrams. Where are these diagrams located?	The Process Flows are captured in the Business Process Analysis Report in the Procurement Library. Please refer to the Document Index in the root directory of the Procurement Library.
169	Template 6 - Functional RTM, FR1. General Tab FR 1.22	The System will support establishing and issuing emergency benefits, and issuing benefits resulting from court cases	Will the State pleas provide a comprehensive list of emergency benefits programs to be included in the IE BM Solution?	The only emergency benefits the State currently provides is Expedited Food Stamps.

Question ID	RFP Reference (page number, section number, paragraph)	Specific RFP Language	Question	Response to Vendor
170	Template 6 - Functional RTM, Tab FR3. Application; Requirement FR 3.17	The System will flag information for review by the Eligibility Worker if the results of the verifications are different than what is reported by the Applicant	Please clarify the State's expectations with regard to the integrated application and flagging verifications. Is it the State's expectation that the system will create verification flags for programs that DHS/DCO does not complete eligibility determinations (WIC, VA Benefits, Child Care)? For example, if someone applies for WIC via the integrated application, will the system flag verifications for WIC (if they are different than what is reported by the Applicant) even though DHS will not be completing the eligibility determination for WIC?	The data will be flagged for an eligibility worker to review during interview. If the person is only applying for programs that are not administered by IE-BM (WIC, VA Benefits, Child Care) the data will be flagged and sent to the appropriate system. Requirement has been updated to clarify.
171	T6_Functional RTM, FR3. Application Tab; FR 3.1	The System will support the following application submission approaches: a. On-line via the portal b. Fax c. Email d. Mail e. In person f. Drop off g. On the telephone	Please describe the current business processes and technologies used to record and retain attestations and/or signatures provided by clients and/or authorized representatives during telephone applications or interviews.	Please see the answer to question 77.
172	T6_Functional RTM, FR3. Application Tab; FR 3.1	The System will support the following application submission approaches: a. On-line via the portal b. Fax c. Email d. Mail e. In person f. Drop off g. On the telephone	Please provide distinct monthly totals for applications, recertifications, change reports, secondary applications, renewals, and Semi-Annual Reviews by method of receipt, online, telephone, in-person (face-to-face), and document-based (fax, drop off, email) for the past 12 months.	"MOA-ntouch.xls" has been added to the Procurement Library. It includes the monthly totals received via paper and electronic.
173	T12_M_and_O Requirements, Tab O1. EEF M&O Transition	Requirement O1.4 is repeated (rows 12 and 19)	We request that the State correct the numbering.	Row 19 has been updated to reflect the correct content.
174	T12_M_and_O Requirements, Tab O4. Modifications-Enhancements	Requirements O4.13 and O4.18 appear to be duplicative	Please clarify how these requirements are different if they are not duplicative.	O4.13 states the training materials need to be updated when changes are made to the system (categorized under Minor Enhancements and Ad-Hoc Requests). O4.18 requires the vendor maintains the training materials even if no system changes have occurred (e.g. updating URLs if the training environment is moved).
175	T12_M_and_O Requirements, Tab O5. M&O Turn-Over	Requirement O5.2 uses the term "Disentanglement Plan"	This term is not used in the RFP, nor is it in the list of deliverables. Please provide clarification of the term "Disengagement Plan".	The requirement has been updated and "and the Disentanglement Plan" has been removed.
176	T12_M_and_O Requirements, second paragraph	Template refers to "Generalized System Design (GSD) document" in the Procurement Library	Please provide the "Generalized System Design (GSD)" document as it does not appear to be in the Procurement Library.	Please see answer to question 78.
177	Procurement Library, SNAP Rules FDD	Two page PDF from Excel file.	There are only two pages from the file included. Will the State please provide the entire SNAP Rules Excel sheet?	The SNAP rules has been added to the procurement library.
178	C1_Cost_Workbook, tab 4. Appl M&O		Can the State provide data necessary for sizing the EEF Solution Application M&O work, including existing software Lines of Code (or function points), number of service tickets by severity and type and number of "small" enhancements by type?	See procurement library for the JIRA extract which includes current product issues. The current support organization chart is included in the procurement library, though this team includes both M&O and ongoing enhancement staff.

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179	C1_Cost_Workbook, tab 4. Appl M&O	O.4 – Enhancements and Modifications, 15,000 hours per year	Can the State provide an estimate of the average hours per enhancement, or how many enhancements per year are expected, as well as the current enhancement backlog?	The average hours per enhancement cannot be estimated and will vary drastically from a few hundred hours to a few thousand hours. Arkansas has provided historical change information in the procurement library; however these should not be indicative of the future and Arkansas anticipates the volume will decrease.
180	C1_Cost_Workbook, tab 4. Appl M&O	O.1 – EEF M&O Transition Planning and Services	The current evaluation cost scoring model does not support a fair competition given that the State has a current incumbent contractor. We recommend that the State consider other State best practices associated with transition costs with an incumbent contractor. Nationally, States have allowed the transition portion of the total bid costs to not be included within the cost evaluation scoring model with non-incumbent Vendors.	The Transition costs have been removed from the evaluation though the vendor must include them in the cost workbook and discuss their approach in template T-13.
181	Procurement Library, file ProcurementLib\SP-17-0012 DHS Integrated Eligibility Benefit Management (IE-BM) Procurement Library SNAP Function Design 033.zip		It appears that there are only portions of the documents listed below in the Procurement Library. - IEG for Disaster SNAP FDD v2.0 151009 (Signed Off - Do Not Edit).pdf - IEG for Universal Access FDD (SNAP Only) v1.0 140508 (Signed Off - Do Not Edit).pdf - IEG for Worker Part 1 FDD v1.0 140508 (Signed Off - Do Not Edit).pdf - IEG for Worker Part 2 FDD v1.0 140508 (Signed Off - Do Not Edit).pdf - Integration - Security FDD v1.0 150901 (Signed Off - Do Not Edit).pdf Libra Will the State please make the entire documents available?	Entire documents are available in both pdf and Excel within the Procurement Library.
182	Page 31, Paragraph 4, Section 3.1.1 - History and Engagement Overview	Though the SNAP functionality was also developed using the EEF technologies, it was halted at the beginning of the UAT phase (User Acceptance Testing).	Design documents for SNAP are included in the procurement library. Are development artifacts, such as code and database design also available to bidding vendors?	The SNAP development artifacts cannot be re-used. Section 3.3.1 has been updated.

Question ID	RFP Reference (page number, section number, paragraph)	Specific RFP Language	Question	Response to Vendor
183	Page 65, Paragraphs 3 and 4, Section 3.6.3.1 - Vendor Key personnel and Staffing Changes	The Vendor shall seek and receive DHS approval before hiring or replacing any Key Personnel. The Vendor shall remove and replace Key Personnel, if requested by DHS, within two (2) weeks of the request for removal. The Vendor must provide DHS with written notification of anticipated vacancies of Key Personnel within two (2) business days of receiving the individual's resignation notice, the Vendor's notice to terminate an individual, or the position otherwise becoming vacant. Replacements for Key Personnel shall have qualifications that meet or exceed those specified in this section and will be subject to approval by DHS. The Vendor shall provide DHS with status update reports every week on the progress of the replacement candidate recruiting process until a qualified candidate is hired. The Vendor shall have in place a qualified replacement within sixty (60) days of the last day of employment of the departing Key Personnel. During the recruitment and training period, the Vendor shall provide an interim replacement for all Key Personnel.	Will the State consider changing the timeframe for replacing key personnel to 60 days when the removal is requested by the State or the position needs to be replaced?	The RFP has been update to read "The Vendor shall have in place a qualified replacement within sixty (60) days of the written notification of anticipated vacancies.
184	RFP Page 57, Section 3.5.2.3 IE-BM Solution - Summary of Current Component Architecture with State of Arkansas Preferences; Paragraph 3	For a variety of reasons, DHS has a strong preference that the Solution be on premise rather than a cloud solution.	Is the State open to fulfilling non-core requirements with products hosted from the cloud?	DHS prefers the solution be hosted by the State of Arkansas data center, however, the state has added an optional vendor hosted solution to assess whether this may be best value. Additionally, DHS vendors may propose solutions that meet non-core requirements through cloud hosted solutions though they must provide adequate justification.

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185	General		What are the current hardware specifications that are in use supporting the current application (all environments)?	Below is a list of all servers and their configuration: Name Assigned CPUs Maximum CPUs Memory (GB) Power Version CURAM02_VIOS1 2 4 16.00 Power7 CURAM02_VIOS2 2 4 16.00 Power7 CURAMBATCHPRD 20 32 188.00 Power7 CURAMCOGDBPRD 4 16 8.00 Power7 CURAMCOGPRD1 4 16 14.00 Power7 CURAMCOGPRD2 4 16 14.00 Power7 EEFCURAMDBPRD 12 32 200.00 Power7 EEFCURAMIHSPRD1 4 8 14.00 Power7 EEFCURAMIHSPRD2 4 8 14.00 Power7 EEFCURAMWASPRD1 13 32 100.00 Power7 EEFCURAMWASPRD2 13 32 100.00 Power7 EEFFUSEESBPRD 4 8 24.00 Power7 EEFIDSDBPRD 4 8 16.00 Power7 EEFINFORAPPPRD1 4 16 22.00 Power7 EEFINFORDBPRD 4 16 8.00 Power7 EEFSFTPPRD 2 16 6.00 Power7 EEFWSSHRPRD 4 16 16.00 Power7 USLDBPRD 4 16 24.00 Power7 CONVIDSDB 4 16 16.00 Power7 CURAM01_VIOS1 4 8 16.00 Power7 CURAM01_VIOS2 4 8 16.00 Power7 CURAMCOGDBSTG 4 16 4.00 Power7 CURAMCOGSTG1 4 16 12.00 Power7 CURAMCOGSTG2 4 16 12.00 Power7 CURAMFS 2 4 10.00 Power7

Question ID	RFP Reference (page number, section number, paragraph)	Specific RFP Language	Question	Response to Vendor
185				CURUSLDB 4 8 12.00 Power7 EEFCURAMDBDC 6 16 100.00 Power7 EEFCURAMDBTFP 4 14 128.00 Power7 EEFCURAMIHSDC 4 16 8.00 Power7 EEFCURAMIHSTFP1 4 16 6.00 Power7 EEFCURAMIHSTFP2 4 8 6.00 Power7 EEFCURAMWASDC 4 16 32.00 Power7 EEFCURAMWASTFP1 6 16 70.00 Power7 EEFCURAMWASTFP2 6 8 70.00 Power7 EEFFUSEESBDC 2 4 16.00 Power7 EEFFUSEESBQRY1 4 8 6.00 Power7 EEFFUSEESBTFP 4 16 12.00 Power7 EEFINFORAPPSTG1 4 16 32.00 Power7 EEFINFORDBSTG 4 16 10.00 Power7 EEFINTDBDC 4 8 8.00 Power7 EEFINTWASDC 4 8 16.00 Power7 EEFSFTP 4 16 4.00 Power7 EEFWSSHRDC 2 16 12.00 Power7 EEFWSSHRTFP 2 8 8.00 Power7 IDSDBTFP 4 16 16.00 Power7 CURAM03_VIOS1 4 6 16.00 Power8 CURAM03_VIOS2 4 6 16.00 Power8 CURAMBATCHDEV 4 8 72.00 Power8 CURAMCOGDBDEV 4 8 8.00 Power8 CURAMCOGDEV 4 8 20.00 Power8 CURIDSDB 4 8 6.00 Power8 DB2DEV1 6 8 32.00 Power8 EEFCURAMDBDEV 4 16 48.00 Power8

Question ID	RFP Reference (page number, section number, paragraph)	Specific RFP Language	Question	Response to Vendor
185				EEFCURAMDBTRN 4 8 30.00 Power8 EEFCURAMDBTST 4 8 24.00 Power8 EEFCURAMIHSDEV 4 16 8.00 Power8 EEFCURAMIHSTRN 4 8 16.00 Power8 EEFCURAMIHSTST 4 8 8.00 Power8 EEFCURAMWASDEV 2 16 54.00 Power8 EEFCURAMWASTRN1 4 16 80.00 Power8 EEFCURAMWASTRN2 4 8 80.00 Power8 EEFCURAMWASTST 2 16 50.00 Power8 EEFFUSEESBDEV 4 16 32.00 Power8 EEFFUSEESBDEV-POC 4 8 16.00 Power8 EEFFUSEESBTRN 4 8 16.00 Power8 EEFFUSEESBTST 4 8 20.00 Power8 EEFFUSESANDBOX 2 16 24.00 Power8 EEFIDSDBTRN 4 8 8.00 Power8 EEFINFORAPPDEV 4 8 16.00 Power8 EEFINFORDBDEV 4 8 12.00 Power8 EEFINTDBTRN 4 8 16.00 Power8 EEFINTIHSTRN 4 8 4.00 Power8 EEFINTWASTRN 1 8 32.00 Power8 EEFWSSHRTRN 4 8 13.00 Power8 OPTIMDEV 4 8 24.00 Power8 RSADB 4 8 16.00 Power8 RSASERVER 4 8 24.00 Power8 WSSHRDEV 4 8 24.00 Power8 WSSHRTST 1 8 24.00 Power8
185				CURAM04_VIOS1 4 8 16.00 Power8 CURAM04_VIOS2 4 8 16.00 Power8 CURAMBATCHSTG 20 20 169.75 Power8 CURAMPRDFS 1 8 4.00 Power8 EEFCURAMDBUAT 8 8 240.00 Power8 EEFCURAMIHSUAT 4 16 5.00 Power8 EEFCURAMWASUAT 8 8 74.00 Power8 EEFFUSEESBUAT 2 16 45.00 Power8 EEFSFTPSTG 4 8 4.00 Power8 IDSDBUAT 4 16 28.00 Power8 JENKINSDEV 6 16 48.00 Power8 SVNDEV 4 16 12.00 Power8 USLDBUAT 4 16 24.00 Power8 WSSHRUAT 4 16 28.00 Power8 See procurement library for architecture design.
186	T8_Technical RTM; Tab G3 Perf. And Avail.; Requirement G3.10	G3.10 The System must be architected to support the replication of the virtual machines to a secondary site so DIS can recover the environment within the RTOs and RPOs.	This points to a two (2) site solution.	Please see answer to question 5.

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187	T8_Technical RTM; Tab G3 Perf. And Avail.; Requirement G3.10	G3.10 The System must be architected to support the replication of the virtual machines to a secondary site so DIS can recover the environment within the RTOs and RPOs.	Also, what are the RPOs and RTOs in question?	The current RTO is 4 hours and the RPO 24 hours though these may change due to business needs. DIS will perform a daily full backup and make this available to the IE-BM vendor.
188	T8_Technical RTM; Tab G3 Perf. And Avail.; Requirement G3.10	G6.31 The System will include the same security provisions for the development, System test, acceptance test and training environment as those used in the production environment.	Does this requirement still apply if the data is asked in the lower environments?	This requirement has been updated.
189	T9_Technical RTP; Tab G6 Regulatory _&_Security Requirement G6.31		Please provide the Service Level Agreements the Vendor has to adhere to.	Please see the answer to question 113.
190	General		Please provide the full list of Hardware and Software licenses available for transfer to the Vendor.	The software licenses from the end of February has been added to the procurement library.
191	T8_Technical RTM, G6 Regulatory & Security ; Requirement T6.14	T6.14 The IAM component will provide protection to maintain the integrity of data during concurrent access.	How many unresolved Plan of Action & Milestones (POA&M) items remain from previous security audits? What is the spread of severity e.g. are there any open material weaknesses?	There are approximately 178 open POAM items. The auditing entity has not rated the items nor assigned a severity rating. Not all of these items are related to the eligibility application.
192	T9_Technical_RTM; Tab T6.1 IAM; Requirement T6.14		- If the State does possess a Learning Management System which LMS does the State possess and what communication method is preferred for online course packages (e.g., AICC, SCORM, TinCan)?	Please see answer to question 6.
193	General - Learning Management System		What is the size of the training audience (e.g., end-users, super-users, supervisors/managers, analytics and business intelligence)?	There are 1,652 field staff that will need to be trained. There are 167 non-field staff that will also need to be trained (e.g. training, program staff). Section 3.7.3.7 now includes these metrics.
194	General - Training Audience		What is the distribution of the training audience across the state?	Please refer to the County Office Operations Report (COOR) in the Procurement Library.
195	General - Training Audience		Will the Vendor deliver a Train-the-Trainer program to the State trainers prior to end-user training delivery	The vendor will be responsible for training the State on the new system. The State will perform ongoing trainings. The only train-the-trainer training required is for the State's training department. The same role break-down applies to M&O enhancements also. See Table 10 for DDI responsibilities and Table 13 for M&O responsibilities.
196	RFP; Deliverable I.2.4	Integration with Statewide active directory services for authentication and CA IAM	What IAM integration is in place and for what class of users (internal, external, citizen)?	The Citizen Access Arkansas Portal is the only application which supports SSO with Curam.
197	T8_Technical_RM; Tab G6 Regulatory and Security; Requirement G.6.7	The System will comply with all applicable State security policies and adhere to all legal, statutory, and regulatory requirements. For example, MARS 2.0. The list of policies and regulations are provided as part of the procurement library.	Is SMS in use for notifications?	No.
198	C-1_Cost_Workbook-1; Table 1 and Table 2	Table 1 Implementation Hourly Rates and Table 2 Reporting Hourly Rates only have one column.	Would the State be willing to modify the rate table to include hourly rates for each year of the implementation separately so the vendors can provide different rates for each year?	No. The vendor must use one rate for the entire project.

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199	C-1_Cost_Workbook-1; Table 1 and Table 2	Composite Weight % Column	Would the State be willing to add a separate column for Composite Weight% for each year so the vendors can utilize a different weight % for each year if needed?	Please see answer to question 118.
200	C-1_Cost_Workbook-1; Table 3 and Table 4	For Deliverable Group O.4 - Enhancements and Modifications, Vendors must assume a level of effort representing 1000 hours each year. However, the Application Maintenance Operations Support table lists 15,000 hours on row 18.	Please specify which number the Vendor is expected to use.	The instructions on tab 4 have been updated to read 15,000.
201	C-1_Cost_Workbook-1; Tab 4 Appl M&O, Row 7 and Row 18	For existing software components already within the DHS Enterprise which the Vendor's solution will leverage the Vendor must provide anticipated maintenance costs. Note that there are no one time, acquisition costs for this software.	Would the State provide the vendors with a full list of all Software components for the vendors to determine the anticipated maintenance cost?	The software licenses from the end of February has been added to the procurement library.
202	C-1 Cost Workbook; Tab 5 Packaged Software - Row 7	For existing hardware already within the EEF environment which the Vendor's solution will leverage the Vendor must provide anticipated maintenance cost for the hardware required to support the EEF Solution. Note that there are no one time acquisition costs for this hardware.	Would the State provide the vendors with a full list of all existing Hardware components for the vendors to determine the anticipated maintenance cost?	See response to question 185 for hardware inventory. The hardware is provided by DIS and is out of scope for this contract. If the Vendor chooses to bid on the optional hosting service any hardware maintenance costs should be included in the hosting cost.
203	C-1 Cost Workbook; Tab 6 Packaged Software - Row 7	DHS has specified a number of mandated reports as “Statutory Reports and Notices” and the Vendor should understand and support the Federal policies and regulations under which these reports must be generated.	Will the State please provide the current Reports Inventory from the legacy systems related to the programs included within the IE BM scope of work?	This inventory is not available. See functional requirements for required functionality. The expectation is these will be determined during discovery.
204	RFP Page 79; Section 3.7.1.2 Reporting Approach	The Vendor shall scope the effort to provide 40 reports at each complexity level.	Will the State please provide State provide a list of the State and Federally mandated reports associated with the programs included in the IE BM scope of work?	Please see answer to question 203.
205	RFP Page 80; Section 3.7.1.2 Reporting Approach	The Vendor shall scope the effort to provide 40 reports at each complexity level.	Will the State please include the complexity categorization (Low, Medium, High) for each of the reports requested?	The State expects the vendor to produce a fixed budget for 120 reports, 40 in each category.
206	RFP Page 80; Section 3.7.1.2 Reporting Approach	Although DocuShare is Arkansas' current CRM, the Vendor may propose whatever CRM component they deem the best value, however, if the Vendor chooses to use a CRM other than DocuShare, their implementation project must include the migration of the documents currently in DocuShare to the new CRM solution.	Can the State provide the Types of Notices and the volume of those Notices currently on DocuShare?	Approximately 185 separate notices are supported (see procurement library). The monthly notices sent is as follows: 2016-Jul 74,426 51,031 2016-Aug 149,323 108,535 2016-Sep 118,395 89,420 2016-Oct 200,433 163,201 2016-Nov 235,305 194,330 2016-Dec 208,299 165,335 2017-Jan 168,712 129,275 2017-Feb 238,786 178,112

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207	RFP Page 59, paragraph 2	The System provides the Applicant a list of community action agencies at which the Applicant can apply if the Applicant appears eligible for LIHEAP	Can the State clarify: Is the LIHEAP Program is seasonally administered or is it administered year around?	LIHEAP is administered seasonally starting in January with crisis programs throughout the year.
208	RFP page 52; Section 3.5.1.1 Overview of Programs and Capabilities In-Scope; T6-Functional_RTM Tab FR2. Pre-Screening FR2.16	The System provides the Applicant a list of community action agencies at which the Applicant can apply if the Applicant appears eligible for LIHEAP	Can the State define the role of the community action agencies in LIHEAP eligibility determination process?	The Community Action Agencies administer the LIHEAP program including eligibility determination, the enrollment process and case management.
209	T6-Functional_RTM; Tab FR2. Pre-Screening; Requirement FR2.16	The System provides the Applicant a list of community action agencies at which the Applicant can apply if the Applicant appears eligible for LIHEAP	Will the State please clarify the process of providing the LIHEAP eligibility data to the community action agencies?	Please see answer to question 74.
210	T6-Functional_RTM; Tab FR2. Pre-Screening; Requirement FR2.16	The System will provide an auto archive/purge of the log files to prevent uncontrolled growth of the log and historical records storage using administrator-set parameters.	Will the State please provide data sizing information for the following in Terabytes: 1. Current total size of production database 2. Current data amount to be archived 3. projections for database size increase for year on year over the term of the contract contemplated by this RFP.	The database is currently 2.5TB and growing ~200GB per month. Currently purging or archiving are not being performed though the expectation is this will occur during the life of the contract.
211	T8_Technical_RTM Template, Tab "G8 Solution Mgmt, Admin & Perf". General, G8.4, Row 13	Provide M&O services for the State's EEF (MAGI Medicaid only) solution immediately upon Project initiation	1. Can the State provide the incident / problem history (across Level 1, 2, 3 support) by priority for last 6 to 12 months. This information is needed to determine the staff required for EEF M&O support.	Please see the answer to question 20.
212	RFP page 106; Section 3.8.1 M&O Scope of Work Overview; Bullet 1	Provide M&O services for the State's EEF (MAGI Medicaid only) solution immediately upon Project initiation	Who is currently providing Level 1 help desk support for the EEF solution?	Level 1 help desk is provided by DIS.
213	RFP page 106; Section 3.8.1 M&O Scope of Work Overview; Bullet 1	Provide M&O services for the State's EEF (MAGI Medicaid only) solution immediately upon Project initiation	Can the State provide the current support organization structure for EEF including the total number of FTEs by specific application scope?	See answer to question 95.
214	RFP page 106; Section 3.8.1 M&O Scope of Work Overview; Bullet 1	Provide M&O services for the State's EEF (MAGI Medicaid only) solution immediately upon Project initiation	What are the required support hours (i.e. 24x7, Mon-Fri)?	The expectation is the vendor will be on call 24X7 to provide Level 2 support in alignment with the SLAs. Requirement O2-27 has been updated.
215	RFP page 106; Section 3.8.1 M&O Scope of Work Overview; Bullet 1	Perform all deployments between environments	Can the State provide the number environments required to support EEF, including any changes that will be required if this work is transitioned to the Vendor.	There are currently Six (6) Environments supporting the EEF System - Development, System Test, UAT, Staging, Production, and Disaster Recovery. The expectation is a similar configuration will be required for the IE-BM solution. Section 3.3.1.1 has been updated to capture this information.

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216	RFP page 106; Section 3.8.1 M&O Scope of Work Overview; Bullet 1	The Vendor should refer to the Joint Operations Performance Manual (JOPM) as well as the Clear Point SOW provided as part of the Procurement Library to get a better understanding of the IT operational processes.	Can the State please provide the JOPM referenced here? This is currently not available in the procurement library.	The JOPM has been included in the procurement library.
217	RFP Page 46, Paragraph 3, Section 3.3.5 Current IT Operations Support	Vendor will perform the M&O activities in accordance with the Service Level Requirements (SLRs).	Can the State please provide the service level performance history against the specific service level requirements in T_12 for last 6 to 12 months (historic data)?	This information is not available.
218	RFP Page 112; Section 3.8.2.2 Group 2 Deliverables - Provide M&O Services, Status Reporting and Quality Assurance	EEF On-going Enhancements	1. Can the State provide information on upcoming enhancements or other EEF related projects (within the next 6 months) that will require an increase in application related staff?	Currently development is on a 6 month cycle (e.g. Jan - June). The enhancements included in the current cycle are included in the procurement library.
219	RFP Page 46; Section 3.3.6.2 EEF On-going Enhancements	EEF On-going Enhancements	How are priorities set for ongoing support, enhancements and projects?	Arkansas meets every 6 months for enhancements prioritization/scheduling and adjusts if needed throughout that time period. Details of process are not required for developing a proposal.
220	RFP Page 46; Section 3.3.6.2 EEF On-going Enhancements	Describe the Vendor's approach to development and implementation of security measures that will provide security and protection for the System including but not limited to: - Server OS Security - Client OS Security - Mobile Devices Security - Web Server Security - Browser Security	What current security measures and/or best practices are currently employed/implemented by DIS/DHHS for the listed platforms, operating systems and browsers?	The EEF infrastructure uses CMS, MARS-E 2.0 security controls for security and compliance requirements. Other systems outside the EEF infrastructure use IRS Pub 1075 and NIST 800-53r4 to define the security and compliance requirements. The EEF security-relevant software protecting the system and information consist of weekly Nessus scans, RBAC, CA-IAM, OWASP, CIS Benchmark, and the associated boundary devices. - Server OS Security: Baseline configurations are in place using industry best practices and CIS Benchmarks. - Client OS Security: ADFS, LDAP, and industry best practices. - Mobile Devices Security: ADFS, LDAP, and industry best practices. - Web Server Security: OWASP guidance is used to secure the web servers in addition to two way TLS 1.2 is in place. From initial request through the web interface through data storage, all connections are encrypted using Transport Layer Security (TLS) version 1.12. Data stored within the SAN is a hardware based encryption meeting FIPS 140-2. - Browser Security: Two way TLS 1.2 is in place. From initial request through the web interface through data storage, all connections are encrypted using Transport Layer Security (TLS) version 1.2. Data stored within the SAN is a hardware based encryption meeting FIPS 140-2.

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221	T9_Technical Requirements; Section 2.6.4 Software and Hardware Security	Describe the Vendor's approach to support Data Backup including, but not limited to: - Database and application backup procedures must be updated to include backups for the System - Full online data backups must occur, as well as offline backups using tape storage	What is the current approach/implementation for DIS/DHHS data backup across the application, database and system realms? Please define and expand on the term "online" backups in the context of the first question. Please also include frequency of each type of backup currently employed.	DIS completes a daily full online backup of the production database and daily incremental file level backups. Additionally a full system level mksysb images of the AIX is performed weekly.
222	T9_Technical Requirements; Section 2.8.4 Data Backup	Describe the Vendor's approach to reestablishing operations in the event of a catastrophe, as well as its envisioned approach to developing a disaster recovery plan for DHS. Include the required components, configurations, and procedures to enable a recovery.	What is the current approach/implementation for DIS/DHHS completed successful DR exercises? Please describe primary, secondary and potentially tertiary data center sites that may be employed in developing a comprehensive DR solution.	The system is replicated to the DR data center using disk array replication. Backups are replicated from the primary data center to the DR using virtual tape library (VTL) replication. This is done annually.
223	T9_Technical Requirements Section 2.8.5 Disaster Recovery	Describe the Vendor’s methodology for monitoring and reporting System performance, as well as the Vendor’s approach to technology management. This includes the methods for centrally managing System resources such as servers, backup, archiving, and recovery equipment, databases and applications. Address methods for auditing, tracing and scanning the System. Provide details on the use of specialized tools the Vendor will use to automate and track monitoring and management activities. The Vendor’s response, at a minimum, should take the following topics into consideration while providing the details: - System and Platform activities, components and configurations monitored and logged - Monitoring metrics provided as reports, dashboards and alerts - Catering for a variety of Performance Monitoring stakeholder roles DHS has not yet identified a preference for a management toolset. The Vendor should propose one or more monitoring tool(s) to proactively monitor the	The RFP mentions the use of Nagios and Ganglia as currently employed for network and system monitoring. Does the State wish to retain these tools and build upon/augment them? What, if any, current integration exists between Nagios and Ganglia and how is it accomplished?	Nagios and Ganglia are preferred tools and it is the State's preference that these tools are to be retained and built upon. There is no integration between Nagios and Ganglia at this time. These have been updated in Figure 15 and Tab T-0 of Template T-8

Question ID	RFP Reference (page number, section number, paragraph)	Specific RFP Language	Question	Response to Vendor
224	T9_Technical Requirements Section 2.8.7 Performance Monitoring and Management	Describe the Vendor’s methodology for monitoring and reporting System performance, as well as the Vendor’s approach to technology management. This includes the methods for centrally managing System resources such as servers, backup, archiving, and recovery equipment, databases and applications. Address methods for auditing, tracing and scanning the System. Provide details on the use of specialized tools the Vendor will use to automate and track monitoring and management activities. The Vendor’s response, at a minimum, should take the following topics into consideration while providing the details: - System and Platform activities, components and configurations monitored and logged - Monitoring metrics provided as reports, dashboards and alerts - Catering for a variety of Performance Monitoring stakeholder roles DHS has not yet identified a preference for a management toolset. The Vendor should propose one or more monitoring tool(s) to proactively monitor the	The RFP mentions the use of Nagios and Ganglia as currently employed for network and system monitoring. If the current toolset is being deemed inadequate, what specific areas does the current implementation fall short of the desired state of monitoring and management?	Nagios and Ganglia are preferred tools and it is the State's preference that these tools be retained and built upon. Further, there is no integration between Nagios and Ganglia at this time. However, as stated in the RFP section 3.5.2.3, the Vendor can provide alternate technologies with appropriate justification. These have been updated in Figure 15 and Tab T-0 of Template T-8

Question ID	RFP Reference (page number, section number, paragraph)	Specific RFP Language	Question	Response to Vendor
225	T9_Technical Requirements Section 2.8.7 Performance Monitoring and Management	Describe the Vendor's approach to capture and monitor performance metrics and take appropriate action to improve performance. The Vendor's response, at a minimum, should take the following topics into consideration while providing the details: - Approach to capturing system performance metric and take timely action - Approach to logging System transactions - Approach to detecting performance issues as well as any major errors related to one or more components - Approach to monitoring critical performance parameters such as response time, resource availability CPU Utilization, etc. - Approach to Role-Based Access - Approach to providing useful information and both real-time and snapshot views DHS has not yet identified a preference for a performance management toolset. The Vendor should propose one or more monitoring tool(s) to proactively monitor the performance of key infrastructure components of the	What current metrics are being collected and used by the Nagios and Ganglia monitoring systems? What systems and platforms are being monitored and managed by Nagios and Ganglia relative to DHS systems and DIS? Please define/expand on what "Role-Based Access" means to DHS in this context.	All of the EEF servers are monitored by Nagios and Ganglia. Standard Nagios services that are monitored are: - disk space - host load - swap space usage - NRPE - NTP offset - ping (network connectivity check) - sendmail/postfix service check - NTPD running check Standard Ganglia metrics monitored are: - CPU and core usage - disk space usage - memory usage - I/O usage - network usage. Custom scripting provides checks for expiring SSL certificates and expiring LDAP and local user/service accounts.
226	T9_Technical Requirements Section 2.8.8 Performance Metrics	Provide details on the Data Storage software and hardware components the Vendor proposes to use in its proposed Solution architecture.	What is the current storage architecture employed by DHS/DIS? Please describe relevant SAN/NAS storage subsystems, their use cases within the scope of this RFP and any advanced features and functions of the storage architecture being utilized or planned, especially as regards backup and Disaster Recovery. Does DHS intend to replace all current storage with a new solution/architecture that can scale in the future?	The EEF solution leverages the DIS enterprise SAN. The SAN environment consists of a redundant dual FC fabric in a core-edge topology.
227	T9_Technical Requirements Section 3.6.4 Data Storage Architecture	Describe the Vendor's System approach to network topology and hardware required to achieve the desired architecture (e.g., load balancing utilizing hardware and software based load balancers ahead of the Web servers, Virtual Private Networks (VPNs), creation of DMZs by firewalls.	Please describe the current DHS/DIS network topology and implementation as regards load-balancing, web servers, DMZ, firewalls and VPNs. Please supply a redacted network diagram of schematic of the current network environment.	The files "AR EEF Infrastructure Services by Layer" and AR EEF Deployment Environments" have been added to the procurement library.

Question ID	RFP Reference (page number, section number, paragraph)	Specific RFP Language	Question	Response to Vendor
228	T9_Technical Requirements Section 3.6.5 Network Architecture	Describe the architecture of other devices such as printers, scanners and electronic signature pads etc., which are necessary for the Vendor's proposed solution. Include minimum and recommended specifications to support the Solution.	Many peripherals of various types may be utilized by solutions requested in this RFP. Please supply a list of specific desired peripherals and their associated use cases, as well as an estimate of quantities by location for each peripheral so listed.	It is up to each prospective Vendor to propose and provide detailed information (quantity, product, specs, etc.) regarding its proposed technology components based on the Business Process Analysis (in procurement library), Functional Requirements (T6) and Technical Requirements (T8) Traceability Matrices in the RFP package.
229	T9_Technical Requirements Section 3.6.6 Peripheral Architecture	The current EEF solution runs on the following infrastructure components: - Operating System AIX 6000 - Database - DB2 - Virtualization Platform - Power VM Ware - Server Hardware Power 770 - Datacenter and Hosting - DIS Data Center and hosting facilities in Little Rock	Please provide detailed configurations, to include LPAR details/settings/layouts of the Power770 servers used in the current solution. General performance statistics/metrics of the LPARs and physical servers is desirable to improve initial sizing exercises. Please also provide AIX and PowerVM version/release/maintenance/fix levels.	See answer to question 185 and procurement library for additional details.
230	RFP page 39; Section 3.3.1.1 EEF Platform - Technology Architecture	DIS currently offers data center and hosting services, including but not limited to Mainframe services, Windows, UNIX and Linux server hosting, enterprise data storages services, Exchange email and disaster recovery services.	What brand(s) and version(s) of Linux does DHS/DIS prefer?	Release 7.3.
231	RFP pages 45-46; Section 3.3.4.1 Data Center and Hosting	DIS currently offers data center and hosting services, including but not limited to Mainframe services, Windows, UNIX and Linux server hosting, enterprise data storages services, Exchange email and disaster recovery services.	Is there a preferred LAMP stack?	There is currently NO preference for a LAMP (Linux, Apache, MySQL and PHP/Python/Perl) stack.
232	RFP pages 45-46; Section 3.3.4.1 Data Center and Hosting	DIS currently offers data center and hosting services, including but not limited to Mainframe services, Windows, UNIX and Linux server hosting, enterprise data storages services, Exchange email and disaster recovery services.	What, if any, open-source databases are preferred?	There is currently NO preference for Open-Source databases.

Question ID	RFP Reference (page number, section number, paragraph)	Specific RFP Language	Question	Response to Vendor
Example	*Page 5, Paragraph 1, Section 1.1*	*This Request for Proposals (RFP) is issued by the State of Arkansas (State) Department of Human Services (DHS)*	*Please confirm the issuing entity of this RFP is the Department of Human Services.*	
1	Generic	N/A	What is the annual cost incurred for Cognos, Docushare, SQL server, CA IAM, VMWare, EDW, and Informatica Power Center?	This information has been provided in the Procurement Library. SQL, CA IAM, VMWare, and EDW are not available.
2	Page 44, Section 3.3.4	A significant portion of the equipment was purchased 4 years ago (and will need to be refreshed during the project) and the other equipment was purchased 2 years ago.	Please provide an inventory of equipment and purchase date.	Please see the State's response to questions #36 and #229 in the first round of Q&A. Purchase dates are not available, however vendors should assume all hardware will be refreshed 18 months after contract signing. DHS' refresh cycle is 3-5 years.
3	Page 44, Section 3.3.4	A significant portion of the equipment was purchased 4 years ago (and will need to be refreshed during the project) and the other equipment was purchased 2 years ago.	Does the State have a specific refresh schedule that you can share with vendors?	Vendors should assume all hardware will be refeshed 18 months after contract signing. DHS' refresh cycle is 3-5 years.
4	Question 3 in Q&A (also Questions 25, 26, 140, 190, 201)	Existing Tools and Licenses	The response to Question 3 of the Q&A released on 5/2 reads, "The license agreements have been added to the Procurement Library." However, we cannot locate these licenses or a summarized listing. Please clarify where this might be found.	An XLS file with the number of licenses by product has been added to the Additional Files folder within the Procurement Library. The name of the file is "Copy of Software Licenses 02-27-2017.XLS". This file has a list of software products and number of licenses currently paid by DHS. However, any additional software can be bought by DHS. Review the requirements mentioned in Technology RTM T-8, tab "T0-.Technology Solutions Stack."
5	RFP Page 106, Section 3.8 - Question 21 in Q&A	M&O	The response to Question 21 of the Q&A released on 5/2 reads, "The State's roadmap has been added to the procurement library." However, we cannot locate it. Please clarify where this might be found.	The detailed roadmap cannot be provided at this time. An overview of the upcoming EEF project is included in Section 3.3.6.2 . Currently there are no major enhancements planned for the other in scope applications.
6	3.5.1.3.1 Core Mainframe Systems - Question 70 in Q&A (also Question 194)	Food Stamps System (FACTS) is a mainframe system that is comprised of 10 sub-systems serving approximately 106,000 clients.	The response to Question 70 of the Q&A released on 5/2 reads, "Please refer to the County Office Operations Report (COOR) in the Procurement Library." However, we cannot locate it. (The "FDD EEF3412 Enrollees By County Report.pdf" in the 032-EEF Function Design Folder of the 1st Draft Procurement Library explains how to design the report but does not provide the actual report.) Please clarify where this might be found.	This file is located in the Additional Files folder within the Procurement Library.
7	Question 77 in Q&A (also Questions 145 and 171)	N/A	The response to Question 77 of the Q&A released on 5/2 reads, "See the "Lync SFB Audio Voice Recording and Phone Script documents" included in the procurement library." However, we cannot locate it. Please clarify where this might be found.	This file is located in the Additional Files folder within the Procurement Library.

Question ID	RFP Reference (page number, section number, paragraph)	Specific RFP Language	Question	Response to Vendor
8	IE-BM System Overview - Question 105 in Q&A	(none)	The response to Question 105 of the Q&A released on 5/2 reads, "Current release schedule has been added to the Procurement Library." However, we cannot locate it. Please clarify where this might be found.	Information cannot be provided at this time. It will be made available to Vendors once it has been approved.
9	T6_Functional_RTM - Question 115 in Q&A	FR1.43 The System will provide the user easy access to self-service help files or multi-media procedure documentation FR1.44 The System will provide an online help system, available from any screen and any screen field, that provides a description of and the processing performed by a screen or window, data entry format and restrictions, explanation of error messages and other information helpful to the user	The response to Question 115 of the Q&A released on 5/2 reads, "DHS has help files and they have been added to the procurement library." However, we cannot locate them. Please clarify where these might be found.	Curam MAGI Desk Guide and CURAM MAGI Online Training is located in the Additional Files folder within the Procurement Library.
10	TP056 AR EEF System Design Document, page 12, Section 7, first paragraph - Question 156 in Q&A	The Hardware Architectural Diagram is located in a separate document titled AR_Architecture_Diagram_consolidated.	The response to Question 115 of the Q&A released on 5/2 reads, "This document has been added to the procurement library." However, we cannot locate it. Please clarify where this might be found.	The file " AR_Architecture_Diagram_consolidated.PDF" has been added to the Additional Files folder in the Procurement Library.
11	T6_Functional RTM, FR3. Application Tab; FR 3.1 - Question 172 in Q&A	The System will support the following application submission approaches: On-line via the portal Fax Email Mail In person Drop off On the telephone	The response to Question 172 of the Q&A released on 5/2 reads, ""MOA-ntouch.xls" has been added to the Procurement Library. It includes the monthly totals received via paper and electronic." However, we cannot locate it. Please clarify where this might be found.	The file "MOA-ntouch.xls" has been added to the Additional Files folder within the Procurement Library.
12	Procurement Library, SNAP Rules FDD - Question 177 in Q&A	Two page PDF from Excel file.	The file "SNAP Rules FDD v1.0 140606 (Signed Off-Do Not Edit).pdf" was not complete. The response to Question 177 of the Q&A released on 5/2 reads, "The SNAP rules has been added to the procurement library." However, the document doesn't appear to have been updated. Please clarify where this might be found.	The file "SNAP Rules FDD v1.0 140606 (Signed Off-Do Not Edit).xls" has been added to the Additional Files folder within the Procurement Library.

Question ID	RFP Reference (page number, section number, paragraph)	Specific RFP Language	Question	Response to Vendor
13	SNAP Function Design - Question 181 in Q&A	It appears that there are only portions of the documents listed below in the Procurement Library. IEG for Disaster SNAP FDD v2.0 151009 (Signed Off - Do Not Edit).pdf IEG for Universal Access FDD (SNAP Only) v1.0 140508 (Signed Off - Do Not Edit).pdf IEG for Worker Part 1 FDD v1.0 140508 (Signed Off - Do Not Edit).pdf IEG for Worker Part 2 FDD v1.0 140508 (Signed Off - Do Not Edit).pdf Integration - Security FDD v1.0 150901 (Signed Off - Do Not Edit).pdf	The files listed were not completed. The response to Question 177 of the Q&A released on 5/2 reads, "Entire documents are available in both pdf and Excel within the Procurement Library." However, the documents don't appear to have been updated and no Excel versions appear to be available. Please clarify where these might be found.	The XLS version of these files have been added to Procurement Library. The PDFs were removed.
14	T9_Technical Requirements Section 3.6.4 Data Storage Architecture - Question 227 in Q&A	Describe the Vendor's System approach to network topology and hardware required to achieve the desired architecture (e.g., load balancing utilizing hardware and software based load balancers ahead of the Web servers, Virtual Private Networks (VPNs), creation of DMZs by firewalls.	The response to Question 227 of the Q&A released on 5/2 reads, "The files "AR EEF Infrastructure Services by Layer" and AR EEF Deployment Environments" have been added to the procurement library." However, we cannot locate them. Please clarify where these might be found.	The files "AR EEF Infrastructure Services by Layer" and AR EEF Deployment Environments" have been added to the Additional Files folder within the Procurement Library.
15	Costing Worksheet	Price Sheets	The Cost Proposal Worksheets require a level of detail not normally required for a fixed price bid, but rather for a time and materials engagement. Further, this proposal is seeking solutions that may involve pre-existing products, COTS products, and/or software as a service, as such hourly rates are not applicable for such elements which have already been completed. Would the State modify the cost proposal to remove hourly rates and instead allow vendors to provide the Total Cost Summary detail, as is standard for fixed price engagements?	No, DHS will not make this adjustment to the Cost Workbook.

Question ID	RFP Reference (page number, section number, paragraph)	Specific RFP Language	Question	Response to Vendor
16	Costing Worksheet	Price Sheets	We understand based on answers to vendor questions (Questions 198 and 199) that the state would like to see rates fixed over the life of the contract. However, over time it is possible that rates would decrease due to efficiencies and steady state realization. i. Based on this possibility, would states reconsider its requirements to keep rates fixed over time? ii. Could the state please clarify if rates are to be fixed for the base contract term (36 months) , or are they to remain fixed over any and all optional years as well?	The cost workbook accomodates modifying rates throughout the M&O contract. DHS does not expect, nor does the cost workbook accommodate, modifying rates during the initial DDI project. The expectation is the DDI project will be completed before the initial contract terms are completed. The cost workbook also accomodates decreasing hours to accomdate any efficiency gains.
17	Template 9 section 2.8.7	Use of Wiley for application monitoring	Please confirm the version of Wiley currently being used for application monitoring. Is it CA Application Performance Management (APM)? (formally Wily Software)?	The version currently used by DHS is CA Wiley Introscope Version 9.1.1.1 (Build 581768).
18	Template 9 section 2.8.7	Monitoring notifications	How are notifications sent out from the monitoring tools (Wiley, Nagios and Ganglia)? Are integrations built between the monitoring tools and Jira to create auto tickets for monitoring events?	Wiley notifications are sent out via email. Certain critical Nagios alerts, such as low disk space alerts and application/process failures, are sent to the oncall systems administrator to remediate. All other Nagios alerts are sent via email. Ganglia is being used as a monitoring tool only and no notifications are being sent. Jira is not integrated with any of these three software products.
19	Template 9 section 3.3	3.3 Application Infrastructure Services Layer	Can you clarify your meaning of “Application Infrastructure Services Layer” in document T9_Technical_Requirements section 3.3? Is this referring to the Infrastructure Layer as defined by Eric Evans in Domain-Driven Design?	See section 3.5.2 of the RFP and the Generalized System Design included in the Procurement Library.
20	I7.4 in T10_Implementation _RTM__final	Provide a software tool that supports generation, presentation and maintenance of on-line trainings.	Please clarify what software tool we are being asked to provide for "generation, presentation and maintenance of on-line training".	DHS has no preference for a specific tool for managing the training program. The vendor must provide a tool which presents on-line courses to the users and tracks attendance and other expected features required to manage an on-line and off-line training program as outlined in the RFP. The requirement has been updated. A system is needed in order to track registration, completion, and performance of on-line and off-line training content.
21	Training facilities	N/A	Are there classroom facilities available for use outside of Little Rock? If so, how many people can they accommodate? Do they have computers that can be used during training?	There are approximately a dozen training labs outside of Little Rock in various county offices across the state which can accomodate 10-15 people. These labs can be leveraged as long as no other DCO required trainings are scheduled at that time. Section 3.7.3.7 has been updated.

Question ID	RFP Reference (page number, section number, paragraph)	Specific RFP Language	Question	Response to Vendor
22	Duration of Current Training Offering	N/A	How long does it currently take to train your staff on your current system for each role?	Each of the following include pre-training (online modules) that takes between 5-6 hours of time to complete total. - Inquiry – 2 days in classroom - Clerical-Intake – 5 days in classroom Each of the following include the above online training modules PLUS a policy pre-training workbook that takes between 5-6 hours of time to complete total. - DCFS Eligibility Worker – 5 days in classroom - Hospital Eligibility Worker – 12 days in classroom - DCO Eligibility Worker – 12 days in classroom Supervisors receive all of the above training PLUS another online training that takes around 60 minutes to complete.
23	Number of staff in each role	N/A	How many staff do you have in each job role using the current system per location and DHS program?	There are currently 2540 active usersin the system. By role, this includes approximately: - Inquiry only - 419 - Limited Inquiry - 2 - Worker - 1057 - System Coordinator - 148 - New Worker - 702 - Service worker - 202 - DWS System Coordinator - 10
24	Attrition training	N/A	Following train-the-trainer training, will the state provide training for any new staff that is on-boarded during DDI?	As outlined in Table 13, once the DDI project is complete it is DHS' responsibility to deliver trainings to State employees.
25	Field Staff locations	N/A	Do accommodations need to be made for staff that work strictly at home?	No accomodations need to be made for staff that work strictly at home.
26	Template T8	Requirements T7.8	There are currently 6 line items labeled as "T7.8". Would the State break those lines up with new requirement IDs for traceability purposes?	The requirements have been updated with new requirements IDs.
27	Template T10	Requirement I1.35	The State added "DHS" to end of this requirement. Did the State intend there to be more language added?	The requirement has been updated.
28	Question ID # 3, Vendor_QA_042617__final	Cognos and Business Objects are the preferred, however vendors are encourage to bid the best value solution. The **license agreements** have been added to the Procurement Library.	We were unable to locate the highlighted document in the Procurement Library. Please provide.	Please refer to the answer for Question 4.

Question ID	RFP Reference (page number, section number, paragraph)	Specific RFP Language	Question	Response to Vendor
29	Question ID # 20, 104, and 178 Vendor_QA_042617 __final	Risk and Issues Report	The JIRA extract referenced in the answers to #20, 104, 178 wasn't immediately apparent in the Procurement Library. If this extract is the EEF Risk and Issues Report_2017_05_03.pdf, the document appears to only contain data for a one week time period. Would the State provide an incident log that spans multiple months to provide a more comprehensive view of the incident types and severities over time?	Please refer to the following files added to the Additional Files folder within the Procurement Library . "JIRA export 2-24-2017.XLS" and "EEF Risk and Issues Report_2017_05_03.pDF".
30	Question ID # 25, Vendor_QA_042617 __final	The **software licenses from the end of February** has been added to the procurement library.	We were unable to locate the highlighted document in the Procurement Library. Please provide.	A document with current software licenses has been added to the Addtitional Files folder within the Procurement Library. Also please refer to the answer to Question 4.
31	Question ID # 35, Vendor_QA_042617 __final	The **EEF Architecture document (AR_Architecture_Diagram_consolidated)** has been added to the Procurement Library.	We were unable to locate the highlighted document in the Procurement Library. Please provide.	The EEF Architecture document "AR_Architecture_Diagram_consolidated.pdf" has been added to the Additional Files folder within the Procurement Library.
32	Question ID # 58, Vendor_QA_042617 __final	Currently the paper applications are scanned, indexed and uploaded but there is no OCR. See the **Business Process Analysis Report** for further details on the desired process.	We were unable to locate the highlighted document in the Procurement Library. Please provide.	The Business Process Analysis document has been added to Procurement Library. The file name is "AR IE-BM Business Process Analysis - v6 - changes accepted.DocX". It is located in folder "SP-17-0012 IEBM Procurement Library" at the root level.
33	Question ID # 70, Vendor_QA_042617 __final	Please refer to the **County Office Operations Report (COOR)** in the Procurement Library.	We were unable to locate the highlighted document in the Procurement Library. Please provide.	The document "COORJanuary2017,pdf" has been added to the Procurement Library. It is located in folder "SP-17-0012 IEBM Procurement Library" at the root level.
34	Question ID # 77, Vendor_QA_042617 __final	See the "**Lync SFB Audio Voice Recording and Phone Script documents**" included in the procurement library.	We were unable to locate the highlighted document in the Procurement Library. Please provide.	This file is located in the Additional Files folder of the Procurement Library.
35	Question ID # 172, Vendor_QA_042617 __final	**MOA-ntouch.xls** has been added to the Procurement Library. It includes the monthly totals received via paper and electronic.	We were unable to locate the highlighted document in the Procurement Library. Please provide.	The document "MOA-ntouch.xls has been added to the Additional Files folder within the Procurement Library.
36	Question ID # 180, Vendor_QA_042617 __final	The Transition costs have been removed from the evaluation.	Transition costs are real costs that can vary drastically based on a vendor's maintenance and operations approach. In order to provide an "apples-to-apples" comparison and to provide the State a comprehensive picture of project costs, would the State consider reinstating transition costs as part of the evaluation of total cost?	DHS has decided not to include transition costs to ensure a competitive procurement.
37	Question ID # 227, Vendor_QA_042617 __final	The files **"AR EEF Infrastructure Services by Layer" and AR EEF Deployment Environments"** have been added to the procurement library.	We were unable to locate the highlighted document in the Procurement Library. Please provide.	Both files have been added to the Additional Files folder within the Procurement Library.

Question ID	RFP Reference (page number, section number, paragraph)	Specific RFP Language	Question	Response to Vendor
38	T7, 19, Section 1.15	*The State of Arkansas is considering legislation to require certain Medicaid recipients attest that they are meeting specific criteria (e.g. searching for work, training) required to continue receiving Medicaid benefits …..*	This is a new section. Will the State please update T-6 to reflect specific requirements in support of this new area.	This information cannot be provided at this time. If this results in significant changes to the scope of this engagement a change request (Section 3.6.5) will be processed
39	T-6 Funtional RTM; FR6.45	*The System will provide access to external databases for the Eligibility Worker to conduct any additional research that may be required*	FR6.45 refers to external databases for the eligibility worker to conduct additional research. Can the State clarify whether these should by hyperlinks to sources or whether interfaces are required. If so, how many.	This requirement refers the business process detailed on page 90 of the BPA. As an Eligibility Worker is reviewing information provided in a Semi-Annual Report or Annual Review, he or she may review additional verification source data. These are identified in step 4 of Use Case [13].
40	T-6 Functional RTM; FR1.15	*The System will have rules-based access control at the data field level and display information based on the following:* *a. User role and program affiliation* *b. Consent provided by a Client* *c. Any other regulatory or policy-based restrictions*	Is State's requirement around consent management in the context of internal caseworkers? Would the State provide clarification and details around the use of consent for access control, such as whether it is for internal workers and external workers or limited to specific roles.	See Functional and Technical Requirements and the Business Process Analysis Report for additional information related to consent management. The clients will provide consent to share information and the system will ensure the information is only shared when approval is provided.
41	Page 51, Section 3.5.1.1 - Overview of Programs and Capabilities In-Scope, 5th bullet point and Page 52, Section 3.5.1.2 - Functional Requirements Overview, note #5 on Table 9 - IE-BM Solution Programs and Functionality In-scope	***Child Care Assistance*** *– The IE-BM Solution will support screening and the collection of application information for Child Care. Client information will be provided to the TEA/TANF system for eligibility determination and enrollment. Case management for Child Care is not in-scope for IE-BM.* ***Case Management*** *(for E&T and TANF/TEA) — The IE-BM Solution will integrate with the E&T and TANF/TEA case management solutions (both providing eligible client information to the case management systems and receiving updates from them) and these external systems will provide the required case management support.*	The updated RFP states that for Child Care Assistance "client information will be provided to TEA/TANF system for eligibility determination and enrollment." However, the 3.5.1.2 chart displays TEA/TANF eligibility as in scope for the IE-BM solution. Please clarify how the IE-BM solution and it's business processes will be distinctly integrated with E&T and TANF/TEA case management solutions for (1) eligibility, (2) enrollment, and (3) case management.	The client will apply for TANF/TEA and E&T through the IE-BM Solution. The IE-BM Solution will assess whether they are eligible for benefits (e.g. meet the income requirements) and the client's information will be sent to the systems managing the E&T and TANF/TEA programs for enrollment. The client will apply for Child Care Assistance through IE-BM and the client's information will be provided to the Child Care program (which currently leverages the same system as TANF/TEA) for eligibility determination. See the Business Process Analysis Report for further details.

Question ID	RFP Reference (page number, section number, paragraph)	Specific RFP Language	Question	Response to Vendor
42	T-7 Functional Requirement	Arkansas DHS has established a clear vision for the future IE-BM System. This includes new approaches to technology and moving from stand-alone silos to shared technology components and services. This Vision provides Arkansas with key benefits: ■ Leverages IT Best Practices and National HIT standards/initiatives and technology trends including: - Service Oriented Architecture (SOA) - Modularity; - Reusability (Build Once User Many Times); - Multi-channel Access; - Cloud and Software-defined Infrastructure; - Social Networking and Collaboration	There are no requirements in T-6 supporting this requirement in T-7. Can DHS provide additional information regarding the type of functionality you are looking for and whether the collaboration is intended to be within the solution, in the form of collaboration across the multi disciplinary teams?	This question is related to how the solution (defined through the functional or technical requirements) will meet the business objectives defined in the RFP. As such, there are not requirements aligned with this question.
43	General		The RFP asks for optional components, such as private cloud hosting, indicating those components would not be scored as part of the proposal evaluation. However, the RFP also indicates failure to provide an option could reduce a bidder's score, which implies these components will be scored. Can the state clarify whether optional components will be evaluated and, if so, how they will be evaluated?	We assume this question is referring to language in Section 2.4.1. Failure to provide an optional deliverable will not impact the bidder's score. The wording in this section applies to all other elements of the RFP. See Section 4.1 and 4.4 for the scoring details.
44	General		The state asks for an initial contract term of 36 months, but also requires a 12 month warranty period after every release. If final release is less than 12 months before the contract's expiration, what is the state's expectation for warranty support?	If implementing the solution takes more than 24 months and DHS decides not to extend the contract, a contract revision will be negotiated to allow for the full warranty period to be provided. As outlined in the cost workbook, any warranty costs are included in the implementation project deliverables completed before the warranty period commences.
45	FR3.61	*The System will utilize bar coding and Optical Character Recognition (OCR) to read the application and pre-populate information whenever possible*	Does the State provide the OCR capability in its document processing center? Is converting the paper application to an electronic format using OCR in scope for vendor?	See response to question 58 from the previous questions "Currently the paper applications are scanned, indexed and uploaded but there is no OCR." See the Functional Requirements and Business Process Analysis Report for further details on the desired use of OCR.
46	M&O General		Is the encumbent vendor responsible for warranty covering the enhancements that will be completed before the start of IE-BM? If so, what is the period that the incumbent will be performing warranty and the period that the new vendor will be covering warranty?	The State currently does not have a warranty program with the encumbent vendor.

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47	C1 - Cost Workbook		There are several questions about costing the hosting environment. Such as, What kind of DR is required? What are the SLAs that have to be met? What is included in "optional" costs for Years 4 - 7? Will the State be providing more information about hosting requirements or should our response include all our assumptions that can be discussed and adjusted in a negotiation?	Tab "O6 - Hosted Private Cloud" of template T12 includes the requirements for the optional hosted private cloud scope of work. The RTO and RPO are captured in tab "O7 - SLAs" of T12. Years 4-7 are optional scope/extensions with a similar scope to the previous years. Vendor responses should include any additional assumptions required.
48	Question ID # 17, Vendor_QA_042617 __final	DIS will provide and maintain all the required infrastructure for all environments.	Can the State please confirm that the bidders need not account for any Infrastructure resources as part of their scope, including WebSphere Administrators, Database Administrators, ESB Administrators, etc.?	Infrastructure in this context is up to and including servers and operating systems (i.e. data center, network, servers, storage and, OS). DHS will provide and support this infrastructure and the IE-BM should not include these cost (except as part of the optional private hosted cloud deliverable). The IE-BM vendor will be responsible for the M&O of any software applications/COTS included as part of the EEF and those implemented as part of the IE-BM solution and database administration (see section 3.6.7.3). Section 3.8.1, requirement O2.4 and the SLAs have been updated to clarify the IE-BM Vendor's responsibilities.
49	Question ID # 62, Vendor_QA_042617 __final	The M&O cost for one year from the current vendor for the ANSWER System is $9.2 Million.	Can the State please confirm the per year M&O cost for the EEF System from the current vendor?	The EEF M&O costs are $17,771,100 annual. The scope of the current M&O contract is different than the definition in this RFP. An overview of the scope has been added to the Procurement Library.
50	Question ID # 94, Vendor_QA_042617 __final	Current vendor has assigned 12 resources to provide Cúram technical support.	Can the State please confirm the total number of current vendor resources on the EEF Project?	Currently the M&O vendor has approximately 70-80 resources on site. This includes: - Project Management - 2-4 - M&O - AOPS 14-18 - AMS 24-28 - DDI 25-30 There is a separate reporting contract which includes 8-10 resources. The scope of the current M&O contract is different than the definition in this RFP. An overview of the scope has been added to the Procurement Library.

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51	RFP Page # 33, Section # 3.2.1.4 - Decrease Technology Risk and/or Costs	Additionally, by enabling Programs to share the technology, DHS envisions lowering future ongoing M&O costs. DHS would prefer to lower these costs as quickly as possible, which includes sequencing the project such that current technology costs can be decreased as early in the project as possible.	We agree with the State that by enabling programs to share the technology, future ongoing M&O costs can be lowered. Can the State share the current annual cost of M&O for the ANSWER Legacy System and Cúram based MAGI Medicaid System?	The ANSWER annual M&O costs are not available. The EEF annual M&O vendor costs are $17,771,100 annually. The scope of the current M&O contract is different than the definition in this RFP. An overview of the scope has been added to the Procurement Library. In addition, 38-46 internal resources are tasked with supporting the solution.
52	RFP Page 8, Paragraph 1, Section 1.2; Template T-3	The Vendor's team (both Prime and Subcontractors) must have proven experience implementing and maintaining State human services systems similar to the IE-BM Solution, as defined in the RFP, with at least three (3) implementations similar in size, complexity and scope in the past five (5) years (Vendor responses to Template T-3 shall be used to confirm this)	Please confirm that this means that Subcontractors identified in the proposal "must have proven experience implementing and maintaining State human services systems similar to the IE-BM Solution, as defined in the RFP, with at least three (3) implementations similar in size, complexity and scope in the past five (5) years"	The RFP has been updated to reflect only the Prime must have experience with IE-BM Solutions. DHS would prefer subcontractors have HHS experience, but it is not mandatory. Please see section 1.2.1.
53	RFP Page 8, Paragraph 1, Section 1.2; Template T-3	The Vendor's team (both Prime and Subcontractors) must have proven experience implementing and maintaining State human services systems similar to the IE-BM Solution, as defined in the RFP, with at least three (3) implementations similar in size, complexity and scope in the past five (5) years (Vendor responses to Template T-3 shall be used to confirm this)	We request that the State consider refining this past experience requirement in order for the State to receive proposals from vendors that have the proven and relevant experience and solutions. We would suggest changing the requirement as follows: The Vendor's team must have proven experience implementing and maintaining Integrated Eligibility (IE) systems, including eligibility for Medicaid, SNAP and TANF programs within a single system similar to the IE-BM Solution. In addition, the vendor's experiences of implementing IE systems should be with that of the vendor's proposed solution. The Vendor's experience should be proven with at least three (3) references (as a Prime Vendor) of successful implementations that is similar in size, complexity, scope and proposed solution in the past five (5) years. (Vendor responses to Template T-3 shall be used to confirm this) This information will not only demonstrate the Vendor's ability to perform but it will demonstrate and highlight the vendor's ability with the proposed solution, thereby, giving the state confidence that the solution being implemented is proven.	Please see Mandatory Qualifications in section 1.2.1 of the RFP.

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54	RFP Page 6, Paragraph 2, Section 1.1	It is DHS' preference that proposals leverage the current IBM Cúram implementation (Eligibility and Enrollment Framework, EEF) in building out the IE-BM Solution, however, Vendors are encouraged to propose best value solutions irrespective of the existing solution, with the appropriate justifications.	In order to provide appropriate justifications, can the State please provide the costs for hardware and software related to the "current IBM Cúram Implementation" - both initial costs and ongoing costs?	The State cannot provide initial and ongoing hardware costs. See the ARDHS Annual Support contract file in the Procurement Library for software costs. This file is located in the Additional Files folder.
55	RFP Page 77, Paragraph 4, Section 3.6.8	Remote work will be limited to 10% of staff. The Vendors' staff must be available to participate in services-related meetings as scheduled by DHS.	The state may be able to take advantage of efficiencies of scale by leveraging remote development centers. We recommend that the State remove the remote work limitation.	Please refer to the response to question 134 from the previous question and answer. This was modified in the previous draft of the RFP.
56	RFP Page 99, Paragraph 2, Section 3.7.3.8	The duration of the Pilot must be for a sufficient amount of time to evaluate the system (usually a minimum duration of 3 months)	In order for the State to make an equal comparison between vendors, we recommend that the State restate this FNS suggested requirement to definitively include a 3 month Pilot: "The Pilot must be at least 3 months in duration."	The RFP and requirement I8.7 have been updated to read "The pilot must be a sufficient duration of time to thoroughly evaluate the system and must be at least 3 months in duration."
57	RFP Page 17, Paragraph 1, Section 2.2.2	OSP will host a Pre-Proposal Conference session that is mandatory for all Vendors submitting Proposals. Vendors are encouraged to attend in person, however, a teleconference/webinar option is also available.	Please provide a list of all companies that attended the pre-proposal conference.	The list has been added to the Procurement Library.
58	T-6 Functional RTM, FR6.45	The System will provide access to external databases for the Eligibility Worker to conduct any additional research that may be required	Can the State clarify what "external databases" mean in this context?	See response to question 39.
59	T-6 Functional RTM, FR3.1	The System will support the following application submission approaches: a. On-line via the portal b. Fax c. Email d. Mail e. In person f. Drop off g. On the telephone	We recommend that State include the support of processing applications received via Federally Funded Marketplace (FFM) with this requirement. We also recommend providing details on the State's standing as a determination/assessment state and including the future vision with the implementation of IE-BM system.	Applications received from the FFM will be processed following a similar flow to applications received on-line. The BPA has been updated to reflect the need to receive applications from the FFM and an additional functional requirement was added. Currently the State of Arkansas is a determination state but has the vision to migrate to an assessment state.
60	T-8 Technical RTM, G3.10	The System must be architected to support replication of the virtual machines to a secondary site so DIS can recover the environment within RTOs and RPOs	Does the EEF solution have a DR environment across geographically separated locations? What are the site's RTO/RPOs? What are the State's desired RPO and RTO for IE-BM system?	See Section 3.3.4.1 for the locations of the data centers. DIS' current RTO is 72 hours and the RPO is 24 hours, however, DIS is in the process of improving these.

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61	Page 60, Section 3.5.3.1, bullet #10	**Secure and Manageable:** The target architecture for the next generation system needs to be protected against the common Internet threats and will be manageable within the existing operational and financial constraints	1.Does the State currently license and use any automated code-scanning solutions (Static code-scanning, dynamic code-scanning)? If so, please provide the solutions' names, versions and quantity of the licenses. 2. Does the State currently license any tools for static (e.g., HP Fortify, Checkmarx) and dynamic (e.g., IBM AppScan, HP WebInspect) vulnerability scanning solutions? If so, please provide the solutions' names, versions and quantity of the licenses.	The State currently uses open source software (Findbug and Checkstyle, which are eclipse plugins) for static code analysis.
62	T8_Technical_RTM.xlsx - Tab T 6.1 IAM - Req # T6.1.3	The IAM component will implement security controls in accordance with all Federal and State security policy and regulations.	Does the State currently license a Remote Identity Proofing solution. If so, please provide the solutions' names, versions and quantity of the licenses.	No. The State does not license a remote identity proofing solution.
63	T8_Technical_RTM.xlsx - Tab T 6.1 IAM - Req # T6.1.21	The IAM component design must use an advanced form of user authentication utilizing multiple form factors and/or "biometric" mechanisms. The design must account for advanced forms of user authentication (including two-factor authentication using hardware tokens, biometric devices, confirmation codes sent to a mobile phone, etc.) that will maximize effectiveness and minimize inconvenience for DHS and legitimate users.	Does the State's existing IAM solution include multi-factor authentication? If so, please provide the solutions' names, versions and quantity of the licenses.	No. The State's IAM solution does not include mulit-factor authentication.
64	T8_Technical_RTM.xlsx - Tab G6 Regulatory_&_Security - Req # G6.25	The System will not transmit or store any Personally Identifiable Information (PII) using publically available storage over the Internet or any wireless communication device, unless: 1) the PII is “de-identified” in accordance with 45 C.F.R § 164.514(b)(2); or 2) encrypted in accordance with applicable law, including the American Recovery and Reinvestment Act of 2009 and as required by policies and procedures established by DHS	Please confirm if the State has any data masking or obfuscation solution in place for de-identification of data.	The State has access to a tool that can deidentify the information. However, DHS does not run this program and does not allow PII information on a publicly available storage.

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65	T-9 Technical Requirements Response Template, Page 3, Paragraph 4, Section 2.3.2	How the System will allow access for 24x7x365 with a 99.75% uptime SLR, with the exception of scheduled downtime	Could the State please explicitly specify the current planned downtime schedules for the EEF solution?	The Citizen's Portal portion of the EEF Solution is currently taken offline daily from 9PM to 7AM. Production application deployments and systems maintenance operations are typically scheduled for this downtime period. Batch processing, backups, and other processing normally occur during this window as well. The expectation is planned downtime will be significantly shortened within a year of the inception of this project and only required for deploy code modifications.
66	T-11 Page 9, Section 7.3	Describe what the Vendor believes to be an effective approach to training all end-users who will use the System including end-users and executives. Include different classifications of users, the proposed method of training for each of these classifications of individuals, estimated duration of each component of the training program, and the method to be used to ensure that the training was successful.	States typically classify users by role and by responsibility. Examples of roles include supervisors, case workers, and administrators. Examples of responsibility include generalist (meaning they work across multiple programs), SNAP specialist, TANF specialist, Medicaid specialist, etc. Can the state please provide the number of users per each classification it uses?	See response to question 23.
67	T-11 Page 9, Section 7.3	Describe what the Vendor believes to be an effective approach to training all end-users who will use the System including end-users and executives. Include different classifications of users, the proposed method of training for each of these classifications of individuals, estimated duration of each component of the training program, and the method to be used to ensure that the training was successful.	States typically classify users by role and by responsibility. Examples of roles include supervisors, case workers, and administrators. Examples of responsibility include generalist (meaning they work across multiple programs), SNAP specialist, TANF specialist, Medicaid specialist, etc. Can the state please provide the number of users per each classification it uses?	See response to question 23.
68	C1 - Cost Workbook - 7. Hosting Tab	Instructions: In Table 1 and 2, list the Vendor's cost of providing different sized environments.	Please provide clarification in regard to the reference to "table 2" as it does not appear on the worksheet as mentioned in the instructions.	The reference to Table 2 has been removed.
69	Question # 63, Vendor Q&A	DHS does not have a preference for Cúram SPMP and Cúram Citizen Portal.	DHS has clearly indicated a preference for some software in which it has made an investment, such as Cognos, DocuShare, and others. But, it is clear that DHS has an even larger investment in Cúram which has increased over several years. Based on this, would it not be preferable to DHS that a vendor leverage this substantial investment in building the IE-BM solution? Would the State reconsider stating this as a preference?	DHS has no preference for IBM Cúram. DHS is interested in the best value soluiton aligned to the goals and requirements defined in the RFP.

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70	Question #180, Vendor Q&A	The Transition costs have been removed from the evaluation.	Transition costs are part of TCO and driven by the approach a vendor takes to transition. It would seem that these costs should be evaluated along with all other costs to the State. To not do so could undermine the importance of TCO. In our years of working with numerous states, we have not seen transition costs excluded from RFP evaluation because they are real costs. Would the State consider adding these back to the evaluation so that all costs are accounted for in evaluating cost proposals?	See respones to question 36.
71	Question #182, Vendor Q&A	The SNAP development artifacts cannot be re-used.	We understand that a significant amount of work on the SNAP solution in Cúram was performed by the State and a previous vendor. Since this investment has already been made by the State, would you allow a vendor to assess the existing SNAP code and project documentation to determine if it could be utilized to lower the time and cost to implement SNAP?	As noted in 3.3.1 DHS expects the SNAP configuration and code cannot be leveraged as part of the IE-BM solution. Vendors' proposals should assume no re-use.