



IT Governance and Investment Management Guidance Supplement: Investment Management - Capital Planning and Investment Control Process Guide

Version 1.0

September 30, 2019

Document Revision History

Document Version	Date	Revision Description	Author
1.0	9/30/2019	Initial Release	OCIO/ITPS/IAMB

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1 Purpose

This document has been prepared by the U.S. Department of Education (Department or ED). This process guide outlines the Capital Planning and Investment Control (CPIC) process, as an element of IT Investment Management (ITIM), and serves as a supplemental document to the IT Governance and Investment Management Guidance (ITGIMG), dated April 30, 2019. The ITGIMG provides an overview of the elements needed to ensure compliance with laws, policies and regulations governing the management of Federal Information Resources, e.g. the Federal Information Technology Acquisition Reform Act of 2014 (FITARA) and the Clinger-Cohen Act of 1996.

This process guide provides direction for the Department's CPIC process as a part of the cross-functional IT governance framework defined in the ITGIMG. This process guide describes (1) the responsibilities for performing CPIC processes throughout the Department, (2) how the CPIC process aligns and works with other IT governance controls, and (3) the process steps undertaken in each CPIC phase.

This process guide is a living document and will be reviewed and updated as necessary to keep pace with emerging technology needs and business practices that enhance the Department's ability to support the effective management and delivery of IT solutions, support and services.

2 Scope

This process guide applies to all ED Principal Offices (PO), Segment Owners, Program/Project Managers (PM), IT governance bodies, senior accountable officials as defined by FITARA, and organizations conducting business for and on behalf of the Department through contractual relationships when procuring or maintaining IT resources. This guidance also applies to all ED IT investments and IT projects throughout their entire lifecycle, regardless of funding source, whether owned and operated by ED or on behalf of ED.

3 IT Investments: Definitions, Lifecycles Phases, Reporting Classifications

CPIC is carried out through oversight of the IT portfolio and the IT investments and projects within. The governance framework can review IT initiatives at either the portfolio, investment, or project level. The Department then categorizes and reports IT investments by lifecycle phase and by reporting category.

3.2 Definitions

An **IT project** is defined as a temporary endeavor undertaken to accomplish a unique product or service with a defined start and end point and specific objectives that, when attained, signify completion. Projects can be undertaken for the development, modernization, enhancement, disposal, or maintenance of an IT asset. Projects consist of activities.

An **IT investment** is defined as the expenditure of IT resources to address mission delivery and management support and is typically the sum of multiple related projects. All IT investments should have a defined lifecycle with start dates and end dates that represent the end of the currently estimated useful life of the investment. An IT Investment is represented by budget exhibits in the Department's portfolio management tool, as of the date of this release, eCPIC) and identified by a unique investment identifier (UII). The totality of all IT investments makes up the Department's **IT portfolio**.

3.3 IT Investment Lifecycles

IT investments can exist in three general lifecycles: Development, Modernization, and Enhancement (DME), Operations and Maintenance (O&M), or mixed lifecycle. In the CPIC process, an IT investment's lifecycle determines how the investment is monitored.

3.3.1 DME

DME efforts lead to new IT assets/systems, or change/modify existing IT assets to substantively improve:

- Capability or performance;
- Implement legislative or regulatory requirements; or
- Meet an agency leadership request.

Associated capital costs can include:

- Hardware;
- Software development and acquisition costs;
- Commercial off-the-shelf acquisition costs; or
- Government labor costs and contracted labor costs for planning, development, acquisition, system integration, and direct project management and overhead support.

Development, modernization, or enhancement efforts may occur at any time during an investment's lifecycle.

3.3.2 O&M

O&M efforts are for IT assets that are operating in a production environment. O&M costs can include:

- Operations, maintenance activities, and maintenance projects needed to sustain the IT asset at the current capability performance levels;
- Federal and contracted labor costs;
- Corrective hardware and software maintenance;
- Voice and data communications maintenance and service;
- Replacement of broken or obsolete IT equipment; or
- Overhead costs.

3.3.3 Mixed Lifecycle

Mixed lifecycle efforts have IT projects and activities for both development, modernization, and enhancement, as well as for operations and maintenance. For example, a mixed lifecycle IT investment could include:

- A prototype or module of an IT system that is operational with the remainder of the IT system undergoing development, modernization, or enhancement; and
- A service contract for operations and maintenance of the current IT system with a modernization requirement for IT system upgrade or replacement.

Mixed lifecycle investments should use the reporting structure in Figure 1.

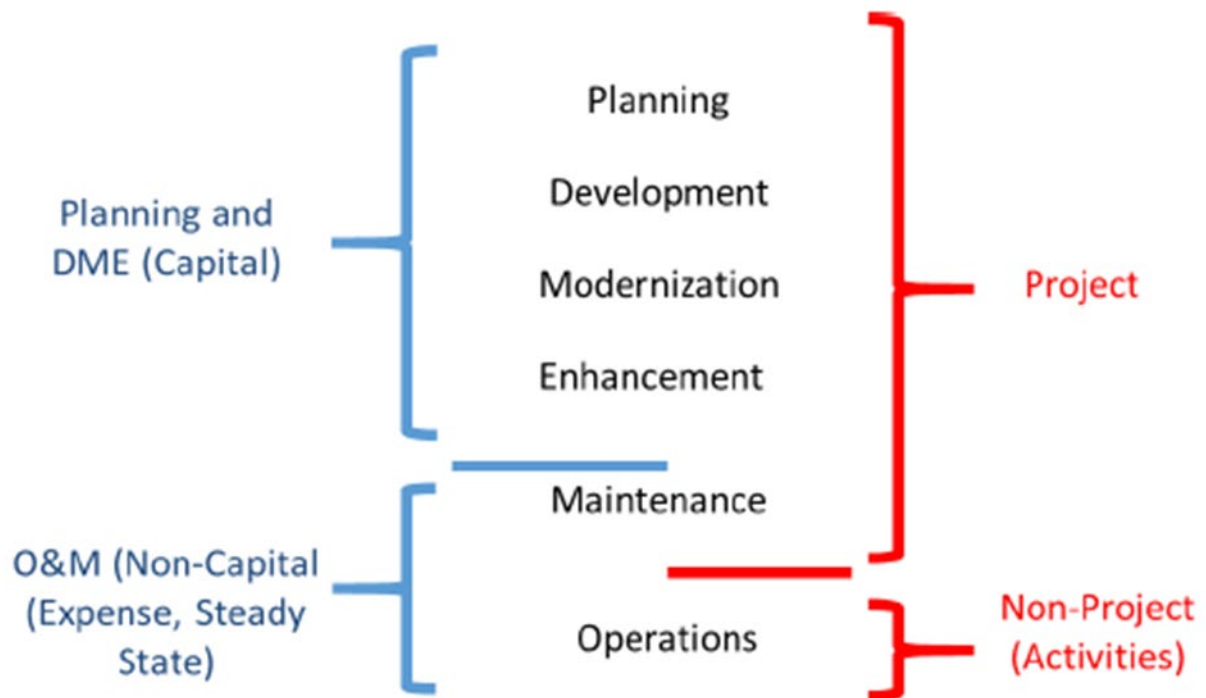


Figure 1 – Investment Reporting Structure

3.4 IT Investment Classifications

IT investment classifications are based on OMB’s A-11 with additional criteria defined by the Department for Major, Non-Major, and Standard investment classifications. Investment classifications are important in the CPIC process to determine the amount of oversight needed, and the regularity of reviews, to effectively manage an IT initiative. As a Departmental best practice, the same level of reporting detail is needed for all its investments (such as cost and schedule monitoring, performance metrics, contract data, systems inventory, and many other IT business details) regardless of classification.

3.4.1 Major IT Investment

A Major investment refers to any IT investment that is critically important to the mission and function of the Department and meets one or more of the following criteria:

- Total lifecycle costs greater than \$10M (including FTE) over a three-year period;
- Authoritative financial system; or
- Identified as Major by the CIO, IRB, or the Secretary of Education due to factors such as size, scope, impact, risk, legislation.

3.4.2 Standard Investments

Standard Investments are common IT service delivery functions such as IT Management, IT Security, and IT Infrastructure (Network, End-User, Data Center, Application, Output, Delivery, and Platform). Standard investments are typically OCIO managed enterprise-wide investments that provide an IT service to the Department's mission delivery applications but can also be investments managed by Federal Student Aid (FSA) to serve the Student Loan portfolio. Standard investments are required by OMB to provide Standard Investment Reports (SIRs).

3.4.3 Non-Major Investments

A Non-Major IT investment refers to any investment that does not meet one of the criteria of a Major or a Standard investment.

4 Governance Cycle

As described in the ITGIMG, the governance framework utilizes specialized boards to assess certain aspects of an IT initiative, such as lifecycle phase, risk, performance, etc. These governance boards inform each other and also provide for tiered accountability for the IT portfolio. Below is the cadence with which each board meets and the CPIC phases that it supports.

EIMB – Monthly: The EIMB is typically convened on a monthly cadence but may meet more or less frequently as needed. The EIMB cycle drives the activities of the Pre-Select Phase as well as the Evaluate Phase.

ERB – Monthly: The ERB is typically convened on a monthly cadence but may meet more or less frequently as needed. The ERB reviews inform the Select and Control Phases.

PIRWG - Monthly: The PIRWG typically convenes on a monthly cadence but may meet more or less frequently as needed. The monthly PIRWG cycle drives the activities of the Pre-Select Phase, the Select Phase, the Control Phase, and the Evaluate Phase.

IRB - Quarterly: The IRB typically convenes on a quarterly cadence but may meet more or less frequently as needed. The quarterly IRB reviews and approves the activities of the Pre-Select Phase, the Select Phase, the Control Phase, and the Evaluate Phase.

5 Pre-Select Phase



The purpose of the Pre-Select Phase is to assess the validity of a newly identified business need to determine if the need supports ED’s strategic goals and objectives and delivers a necessary capability for the broader ED IT portfolio. The Pre- Select Phase is one in the same with the EPMR Business Need Phase and serves as the initial touch point between the capital planning process and the project lifecycle management process.

All new IT initiatives (i.e. IT investments) or new IT modernization proposals must enter the investment management process through the Pre-Select Phase.

More information on the EPMR Framework can be found [here](#).

5.2 Key Steps and Actions

- **Business Need Identification:** A Business Owner identifies an IT need.
- **Business Need Statement:** The Business Owner completes the [Business Need Statement template](#) and submits it to OCIOIAMT@ed.gov. The Business Need Statement should address:
 - The proposed need(s) and the problem being solved;
 - The goals and scope of the effort;
 - Business value;
 - A rough order of magnitude of estimated lifecycle costs;
 - Planned acquisition approach;
 - Proposed contract type/vehicle;
 - Risks and mitigation strategies;
 - The planned operational environment; and
 - Security & Privacy considerations, if necessary.
- At this point in the process the Business Need Statement should not be driven by a technical solution or specified product.
- **IAMT Review:** A preliminary review of the Business Need Statement is conducted to ensure information is provided in sufficient detail to facilitate an EIMB review. Upon completion of this review, IAMT submits the Business Need Statement to the EIMB or returns to the Business Owner for adjustments/additional detail.
- **EIMB Review:** A comprehensive, cross-functional assessment of the Business Need Statement is conducted to provide informative guidance and assistance to the Business Owner and other

stakeholders: to help make modifications to the Business Need Statement where necessary and ensure the proposal:

- Aligns to the strategic goals and objectives of the Department;
- Adheres to laws, regulations and policies;
- Aligns to the Enterprise Architecture (EA) and the current makeup of the IT portfolio, in that:
 - No duplication exists
 - No shared services or existing solutions exist that can be leveraged
 - A determination can be made on whether it constitutes a new stand-alone investment or if it would be a project under an existing investment;
- Contains appropriate cost estimates;
- Identifies adequate funding;
- Can be satisfied with a viable acquisition plan / strategy;
- Addresses risks and mitigation plans; and
- Is compliant with standards and requirements for:
 - Security
 - Privacy
 - Infrastructure
 - Records Management
 - 508 Compliance
 - Human Capital

At the completion of the review, the EIMB provides a recommendation to the PIRWG on whether or not a business need should be approved and funded.

- **PIRWG Review:** The EIMB analysis / assessment is considered and a recommendation is provided to the CIO on whether the business need should be approved and funded or if there is an existing solution that could satisfy the need.
- **CIO Review:** A cursory review of the PIRWG's recommendation is conducted by the CIO to gain an understanding of the cost and operational risks and impacts of funding or not funding the business proposal.
- **IRB Approval:** The IRB serves as the approval authority and makes one of the following determinations on proposed business needs:
 - Approved – A new investment, or a new project within an existing investment, is established as part of the IT portfolio and approved to make a request for funding
 - Not approved – process ends

- **Ad Hoc Reviews:** In the event that a business need requires approval outside of the established quarterly IRB review cycle, it may be considered for an ad-hoc review by the IRB. These reviews take place at the discretion of the CIO or IRB and may occur at any regularly scheduled meeting during the year or a specially convened IRB. Ad-hoc reviews are subject to the same criteria used during regular business need reviews with the addition of a justification statement to explain why an ad-hoc review is necessary, provided to OCIOIAMT@ed.gov.
- **Virtual Reviews:** In order to accommodate the review and approval of a proposed business need, the EIMB and PIRWG may conduct virtual reviews rather than in-person meetings. This option may be used especially in the case of an ad-hoc review of a proposed business need.

5.3 Key Outputs of the Pre-Select Phase

- An approved business need.
- CIO and CFO involvement in the internal planning processes for how the agency uses IT resources to achieve its objectives.
- Support for rationalization of the IT portfolio by revealing new IT needs and addressing performance gaps in business operations.

6 Select Phase



The purpose of the Select Phase is to ensure that the IT investment portfolio is comprised of the appropriate range of investments that will best support the mission and strategic goals of the Department. The development of a comprehensive business case is required at this phase for a new investment, in addition to creation of the OMB-required budget exhibits through eCPIC. For existing investments, the update of a comprehensive business case is required in addition to updates to the budget exhibits.

6.2 Key Steps and Activities

6.2.1 Business Case and Budget Exhibit Development

- **Business Case Development:** Newly established investments that have been approved through the Pre-Select Phase develop a comprehensive business case, while existing investments update their current business cases (to include the addition of new projects that have been approved through

the Pre-Select Phase). The business case provides additional clarity on budget requirements, scope, schedule, structure and expected outcomes to be achieved, and is a key artifact in facilitating OCIO oversight for planning and program management throughout an investment's lifecycle. The PM is responsible for developing and keeping the business case current. The PM ensures the business case:

- Justifies the IT need and communicates clear deliverables and associated cost;
 - Identifies the major stakeholders and major milestones;
 - Is compliant with requirements to leverage incremental development; and
 - Outlines the expected business benefits and the return on investment.
- **Unique Investment Identifier (UII) Creation:** A UII is a number that serves as a unique data tag to identify each investment. The UII is created when the business need is approved as an investment and the request is sent to the eCPICHelpdesk@ed.gov to add the new investment to the portfolio.
 - **Budget Exhibit Development:** Newly established investments populate the appropriate budget exhibits in eCPIC, which can be the:
 - IT Portfolio Summary;
 - Major IT Business Case (however this is not exclusive to just Major investments);
 - SIR, if applicable; and
 - Additional Investment Data as required/requested.
 - **Budget Exhibit Updates** Existing investments update their current budget exhibits in eCPIC, to include the addition of new projects that were approved through the Pre-Select Phase. A baseline change request may be necessary to add or update project data and should be coordinated through IAMB.
 - **EA Alignment:** The EA team aligns investments to functional areas based on the ED segment architecture.

6.2.2 Acquisition Strategy/Plan

The CPIC process has touchpoints with the Department's IT Acquisition Lifecycle Framework (ALF), which provides a structured approach to the planning, execution, and monitoring of all acquisitions at the Department. The CAO or their designee is a voting member on the EIMB which conducts reviews of all IT strategies, plans, contracts, and inter-agency agreements (IAAs) for new and existing IT investments or projects. The CAO coordinates with the EIMB, as the designee of the CIO, to ensure that all acquisitions that contain IT are provided, reviewed and approved by the CIO.

- **PM/POC Planning:** After a business case and budget exhibits have been developed, a PM will develop an Acquisition Plan and Acquisition Strategy.
- **EIMB Review:** The EIMB, as the designee of the CIO, will conduct a review of all Acquisition Strategies and Plans to ensure that a viable approach is defined. The CAO will be a voting member of the EIMB and will ensure that all IT acquisitions are brought to the attention of the Board to

ensure there is no shadow IT. The EIMB will ensure that the contract approach meets all the governance controls such as privacy considerations, 508 compliance, cybersecurity regulations, EA alignment, and performance measures to ensure delivery of intended products and services. The EIMB, as the designee of the CIO, is the approver of all acquisition plans and strategies that contain IT.

6.2.3 IT Budget Formulation

The Select Phase is integrated throughout the annual budget process in establishing funding priorities for IT.

- **IT Budget Guidance Development:** OCIO provides direction on IT strategy, including priority initiatives such as web consolidation, cyber reporting, category management, and shared services. In particular, Enterprise Architecture will provide guidance for strategic planning to meet overall IT modernization goals.
- **IT Budget Guidance Issuance:** IAMT works with Budget Service to incorporate IT Budget Guidance as a part of the Department-wide Budget data call. Subsequently, the Department issues IT Budget Guidance to the POCs
- **IT Budget Formulation:** One of the primary drivers of the Select Phase is the request for funding. An IT funding request (ITFR) captures a budget year request for a given IT investment. It serves as the primary input into the eCPIC budget exhibits that are submitted to OMB and also drives the development of the Departmental IT budget. Sufficient planning should go into budget year ITFRs so as to minimize the need to make adjustments immediately prior to the execution year. The ITFR should be informed by the IT Budget Guidance.
 - PMs work within their POs to identify IT resources needed for IT investments
 - PMs submit their ITFR to IAMT and provide additional requested information that can include objectives or milestones, previous accomplishments, and performance resultsThe ITFR informs analysis used in PIRWG recommendations to the IRB in the fourth quarter for an IT portfolio and IT budget approval decision.
- **Portfolio Approval Request:** Leading in to the fourth quarter, Segment Owners develop a Portfolio Approval Request to support their funding requests for the investments in their respective segment. Segment Owner reviews focus on the performance management and the elimination of redundant or inefficient IT systems/applications/services, thoroughly evaluating cost, schedule, and performance parameters to reduce risks necessary to rationalize the portfolio and improve probability of an investment's success. The portfolio approval request includes a memorandum signed by the Segment Owner asserting the completion of their review and that technologies contained in their segment of the portfolio are compliant with the Department's policies and practices governing the management of IT resources. The portfolio approval request should also note the request for budget year funding, as well as the data for current year and prior year funding. Segment Owners are responsible for conducting the necessary coordination with PMs to develop the request memorandum. The portfolio approval request should be provided to IAMT

through OCIOIAMT@ed.gov. IAMT is responsible for providing the information contained in the request to the PIRWG.

- **IAMT Analysis:** An analysis of investments and technology initiatives that impact the broader operations and performance of the IT portfolio is conducted and can occur for a variety of reasons, including supporting the EIMB, PIRWG, or IRB. These reviews provide recommendations to support the PIRWG analysis and recommendations for the Department's IRB decisions. During the first three quarters of the fiscal year, IAMT conducts analysis on a logical grouping of segments, and the investments within, based on related capabilities and functions. This analysis is done in conjunction with functional partners, Segment Owners, PMs, and other stakeholders, as applicable.
 - PMs will update their business cases and submit their project management documentation for review. They will provide updates to their performance metrics, risk register, operational analysis (OA), acquisition strategies and plans, return on investments (ROI) documentation, investment architecture (current and target), cybersecurity posture, modernization planning, use of incremental development, to provide IAMT with a clear update on the performance and planning efforts within the investment.
 - Elements of these reviews include, but are not limited to, an assessment of:
 - Cost and Schedule Variances
 - Key Performance Indicators
 - Value Measurement
 - Risk Measurement
 - Alignment to:
 - EA
 - Acquisition plans/strategies
 - Budget Formulation activities
 - Cybersecurity, Privacy and Records Management requirements
 - Infrastructure Requirements such as network and cloud suitability (leveraging the Cloud Computing Decision Framework, Appendix D)
 - Consolidation and/or optimization opportunities such as Enterprise License Agreements, Shared Services, enterprise solutions, and merging/streamlining investments with like functions

During the fourth quarter, IAMT draws on and consolidates the reviews and analysis conducted over the first three quarters to produce a comprehensive portfolio assessment and provide a recommendation for a formal portfolio and IT budget approval.

- **PIRWG Review:** An evaluation of the analysis and recommendations provided by IAMT is conducted. The PIRWG provides direction on where further analysis is needed and directs the development and presentation of data / information regarding issues and concerns to be provided to the IRB. This review supports the PIRWG's mission to provide the IRB a baseline understanding of the health and performance of the portfolio to develop a recommendation for, and inform an approval of, the IT portfolio and the IT budget in the fourth quarter. During the fourth quarter, the PIRWG leverages the analysis and reviews conducted throughout the year to determine what data,

information, and recommendations should be presented to the IRB to inform a formal decision on portfolio approval. This process, referred to as the Select Phase Deliberations, is the approval of the formal selection of the investment makeup of the portfolio

- **Record of decision:** IAMT coordinates with the IRB to document the results of its decisions in a Portfolio Decision Memorandum that includes an attachment of approved funding. This Portfolio Decision Memorandum is signed by the CIO and the CFO.
- **Ad- Hoc IT funding request:** Investments that are not approved as part of the formal fourth quarter IT portfolio and IT budget approval decision, or have an emergent need, may be brought forward during the next IRB quarterly review.
- **Virtual Reviews:** In order to accommodate the review and approval of an IT investment, the PIRWG and IRB may conduct virtual reviews rather than in-person meetings. This option may be used especially in the case of an ad-hoc review of a proposed business need.
- **IT Budget Submission to OMB:** The ITFR, the Portfolio Approval Request, IAMT analysis, and the Select Phase Deliberations drive and inform the development of the budget request that is submitted to OMB in September of each year through the Budget Exhibits. PMs work with IAMT to populate the necessary data in eCPIC.

6.3 Key Outputs of the Select Phase

- CIO and CFO concurrence, documented through a Portfolio Decision Memorandum and the submission of budget exhibits to OMB, on an approved portfolio of IT investments that are required to meet the priorities and objectives of the department and a budget designed to support the investments contained in the IT portfolio.
- Submission of the necessary Budget Exhibits for each investment that is part of the IT portfolio to OMB.

7 Control Phase



The primary objective of the Control Phase is to monitor IT initiatives during the planning, acquisition, deployment, and operations/maintenance phases of the investment lifecycle. The EIMB, PIRWG, and IRB examine investments in the Control Phase to ensure IT investments are conducted in a disciplined, well-managed, and consistent manner through timely oversight, quality control, and programmatic reviews.

7.2 Key Steps and Actions

- **IAMT Assessments:** IAMT designates investments to assess per quarter, in accordance with the quarterly IRB cycle. Examples of evaluation criteria that are considered are:
 - Cost, schedule, performance
 - Contract Oversight
 - Quality Management
 - Scope Management
 - Change Management
 - Risk Management
 - Requirements Management
 - Cybersecurity Posture
- IAMT and PMs work together during the assessment of project management practices. PMs may be required to provide project management documentation such as:
 - Business Cases
 - Project Charters
 - Project/Activity Data
 - Performance Data
 - Risk Data and Risk Management Plan
 - Strategic Plan
 - Analysis of Alternatives
 - Security Plan
 - Additional project management artifacts
- **Findings:** IAMT incorporates findings from the assessments into a recommendation for a CIO Rating, as applicable per OMB requirements, described in further detail in the section below.

7.2.1 Monthly Reviews of Major and Standard Investments

All Major and Standard investments are reviewed on a monthly basis. These are structured and repeatable reviews that leverage a variety of data and input including investment data and project management documentation.

- **Monthly Data Call:** IAMT sends out a monthly data call to investments PMs to request that data in the eCPIC Investment Business Case and any applicable SIRs are updated in eCPIC.
- **Updates to the eCPIC Budget Exhibits:** PMs make the necessary updates in eCPIC to include, but not limited to, project and activity data, performance metrics, and risk.
- **IAMT Review:** IAMT conducts a review of each Major and Standard investment that includes both a programmatic element, such as project management documentation, and a technical validation of the data entry process in eCPIC. The programmatic review focuses on trends observed in cost and schedule variance and performance deficiencies.
 - IAMT documents its findings and collaborates with PMs to better understand the issues noted.

- PMs collaborate with IAMT to provide additional information around the issues noted.
- Record of Findings: IAMT retains records of all findings from month to month.
- **CIO Ratings:** ED is required to submit a CIO Rating to the public-facing Federal IT Dashboard for all Major and Standard investments. The CIO Ratings are determined by the monthly reviews. IAMT incorporates findings from the reviews into a recommendation for a CIO Rating, as applicable, that feed the IT Dashboard’s “Investment Evaluation by Agency CIO”. The following evaluation factors are considered:
 - Risk Management
 - Requirements Management
 - Contractor Oversight
 - Historical Performance
 - Human Capital
 - Other factors the CIO deems important to determining future success.

Additionally, a tiered approach is used to categorize and score the investments.

- Tier 2 are considered “Inherently Risky” investments
- Tier 1 are all other Major and Standard investments

The specific methodology, evaluation criteria, and categorization criteria for “inherently risky “ investments are found in the Appendix C.

- **Elevation to CIO:** IAMT determines if any issues identified during the reviews need to be elevated to the CIO for awareness and/or action. Examples are significant cost/schedule variance, significant performance deficiencies, and recommendations to change a CIO Rating.
- **CIO Record of Recommendations:** IAMT develops a memorandum each month for signature by the CIO to highlight major issues with investments and any potential recommendations for a change to the CIO Rating which the CIO may or may not decide to take action on. In doing so, the CIO reviews the CIO Rating for the investments that are submitted monthly to the Federal IT Dashboard.
- **CIO Determination:** The final determination on this rating is from the CIO, who assigns a rating of 1 (high risk) to 5 (low risk) based on the CIO’s informed judgment of the level of risk facing the investment.
- **Submission to OMB:** IAMT submits the eCPIC Investment Business Case for Major Investments to the Federal IT Dashboard through eCPIC.

7.2.2 Quarterly Portfolio Reviews

- **IAMT Analysis** – IAMT will conduct analysis both from an investment review standpoint including input from monthly review, project and activity updates to provide the PIRWG with a status on a third of the portfolio each quarter. Additionally, IAMT will work with EA to identify portfolio optimization opportunities for shared services and consolidation.
- **Segment Owner Input** – Segment owners work with IAMT through the PIRWG to detail modernization progress as it relates to their segment’s investments during the quarter that their segments are being reviewed. They will review and approve all IAMT analysis and help provide recommendations and/or actions that the PIRWG and other IT Governance functions and bodies can take to streamline, improve, or monitor the health of investments and the portfolio at large.
- **IRB Quarterly Review:** The IRB reviews the analysis and recommendations of the PIRWG to gain a baseline understanding of the health and performance of the portfolio during the first three quarters of the fiscal year.
- During the fourth quarter, the IRB renders a decision on the approval of the IT portfolio and IT budget based on the data-driven analysis that is provided by the PIRWG. The following are potential decision outcomes for the IRB’s decision on the IT portfolio:
 - **Approval:** The IT portfolio is approved in whole and investments within are recommended for integration into the IT budget;
 - **Approval with conditions:** The IT portfolio is approved in whole or in part with conditions levied by the IRB. Conditions can include, but are not limited to the following:
 - Partial approval, e.g. investment(s) 1, 6, and 12 are not approved
 - IT portfolio is approved pending submission of additional information or documentation pertaining to one or more investments contained; and
 - **Disapproval:** The IRB may identify deficiencies, redundancies or performance issues within the IT portfolio that may warrant disapproval or further review and analysis before it can be recommend for approval.

If an investment is not fully approved, approved with conditions, or disapproved, PMs may appeal IRB decisions. Requests for appeal should be submitted in a timely manner and should include a rationale and the specific elements of decision to be reconsidered.

The CIO and CFO, as voting members of the IRB, are fully engaged in the IRB reviews and IT portfolio and IT budget approval decision.

7.2.3 TechStat

Investments that are designated as high-risk for a period of three months or longer, or have a trend of re-plans and rebaselines, may be recommended for a TechStat review.

- **Notification:** IAMT works through the PIRWG to notify the appropriate PM and Segment Owner of the investment to undergo a TechStat, as well as identify the functional partners that should be engaged in the process.
- **Formal Notification:** IAMT works with the CIO to notify OMB of the investment to undergo a TechStat, in accordance with OMB policy and the FITARA implementation plan. OMB determines whether they intend to be a part of the review.
- **TechStat Toolkit:** IAMT leverages the Federal CIO’s TechStat toolkit located [here](#) to coordinate the development of the TechStat content.
- **TechStat Session:** IAMT coordinates the TechStat session to review findings with, at a minimum, PMs, investment teams, functional partners, and the CIO or designee.
- **TechStat Follow Up:** IAMT schedules follow up session to ensure that actions and/or mitigation plans that result are carried out.



7.3 Key Outputs and Outcomes

- Investment assessments of program/project management practices
- Monthly investment updates to the IT Dashboard for Major and Standard investments
- CIO Ratings for Major and Standard investments
- TechStats, if applicable

8 Evaluate Phase



The Evaluate Phase is intended to assess whether operational IT investments have met their stated outcomes/objectives by delivering the benefits and requirements outlined in the business case. It

compares projections against actual estimates to assess the initiatives' performance and identify areas where decision-making can be improved.

8.1 Key Steps and Activities

Activities conducted during the Evaluate Phase support ongoing improvement efforts and an increased maturity of the IT Investment Management process. Lessons learned from project performance can be used to adjust and improve the IT portfolio, refine investment selection criteria, improve risk management, and determine appropriate project increments and associated levels of funding. The Evaluate Phase consists of the OA and the Post Implementation Review (PIR).

- **OA** – the OMB preferred method of measuring performance of investments in the steady state operations and maintenance (O&M) lifecycle. The Department of Education, in accordance with OMB Circular A-11, requires an annual OA be conducted on every Major investment to ascertain whether the investment is continuing to meet its objectives and whether the investment meets current organizational needs. The OA culminates with a recommendation to continue the investment, modify or enhance it, or replace or retire it. Per OMB guidance the OA focuses on the following four core areas of measurement (1) customer satisfaction, (2) strategic and business results, (3) financial performance, and (4) innovation. The OCIO IAMT has developed an OA Guide to assist the PM in planning, conducting and reporting the results of an OA.
- **PIR** – tracks and measures the impact and outcomes of implemented IT investments to ensure they meet the program mission and/or obtain lessons learned. The PIR evaluates the actual results compared to estimates or expectations for cost, schedule, performance, and mission outcomes/strategic performance. A PIR also determines the root cause of Major differences between the planned and actual results to improve project management practices. The results of the PIR are used by the OCIO to make improvements to the IT Investment Management process.

8.2 Key Outcomes and Outputs

- A PIR for all recently completed projects
- An OA for all operational systems
- Transparency and insight into systems in O&M
- Greater accountability in assessing if investments are meeting goals and expected objectives

Appendix A: List of Abbreviations

CAO	Chief Acquisition Officer
CFO	Chief Financial Officer
CIO	Chief Information Officer
CPIC	Capital Planning and Investment Control
DME	Development, Modernization, and/or Enhancement
ED	Department of Education
EA	Enterprise Architecture
eCPIC	Electronic Capital Planning and Investment Control
EIMB	Enterprise Investment Management Board
EPMR	Enterprise Program Management Review
ERB	Enterprise Review Board
FITARA	Federal Information Technology Acquisition Reform Act
FSA	Federal Student Aid
IAMT	Information and Acquisition Management Team
IRB	Investment Review Board
IT	Information Technology
ITIM	Information Technology Investment Management
O&M	Operations and Maintenance
OA	Operational Analysis
OCIO	Office of the Chief Information Officer
OMB	Office of Management and Budget
PIR	Post Implementation Review
PIRWG	Planning and Investment Review Working Group
PM	Program/Project Manager
PO	Principal Offices
TBM	Technology Business Management
UII	Unique Investment Identifier

Appendix B: Federal Legislation, Requirements & Guidance for Investment Management

Clinger-Cohen Act of 1996:

The Clinger-Cohen Act of 1996 requires agencies to improve mission performance by implementing an ITIM process for selecting, controlling, and evaluating IT investments. Enactment of this legislation and its accompanying regulations requires agencies to establish accountability, reduce duplicative spending, eliminate inefficiencies, and maximize the value of IT investments

Federal Information Technology Acquisition Reform Act (FITARA) of 2014:

FITARA aims to assist agencies in establishing management practices that align IT resources with agency missions, goals, programmatic priorities, and statutory requirements, and establish Government-wide IT management controls that will meet FITARA requirements while providing agencies with the flexibility to adapt to agency processes and unique mission requirements. Additionally, FITARA establishes a “Common Baseline” for roles, responsibilities, and authorities, and aims to enable the CIO’s role and involvement in IT-related processes.

OMB Circular A-11: Preparation, Submission and Execution of the Budget

Appendix C: CIO Rating

Weighted Criteria:

Department of Education Scoring Criteria Categories		
#	Category	Weight of Criteria
1	Risk Management	25%
2	Requirements Management	20%
3	Contractor Oversight	20%
4	Historical Performance	20%
5	Human Capital	15%

Scoring Ranges:

Score Range	Risk Level	Color
4.5 – 5.0 = 5	5 – Low Risk	Green
3.5 – 4.4 = 4	4 – Low Risk	Green
2.5 – 3.4 = 3	3 – Medium Risk	Yellow
1.5 – 2.4 = 2	2 – High Risk	Red
0 – 1.4 = 1	1 – High Risk	Red

Risk Management Criteria:

Applies to all Investment Life Cycle Types		
Score	Tier 1	Tier 2
5	<p>In addition to meeting the requirements of a rating of 4:</p> <ul style="list-style-type: none"> The Project and Operational Risks Table is current and complete At least three operational risks are listed for an O&M investment At least three operational and project lists are listed for a Mixed Investment with a mitigation plan At least three project risks are listed for DME investments with a mitigation plan Risk Assessments are performed, and risk management activities are documented and updated to OCIO monthly and at least quarterly throughout the life of the investment 	<p>All Tier 1 plus:</p> <ul style="list-style-type: none"> Risk Assessments are performed, and Risk Register is updated on a weekly basis. At least 6 projects risks are DME and mitigation plan is provided At least 6 O&M risks
4	<p>In addition to meeting the requirements of a rating of 3:</p> <ul style="list-style-type: none"> The Risk Management Plan, Risk Register and Project and Operational Risk table identify risk mitigated in other parts of the business case The risk mitigation strategies are in place for all identified risks Risks are written in "If" "Then" statements Security Plan is in place Security costs are included in the program budget 	<p>All Tier 1 – rating 4 Plus:</p> <ul style="list-style-type: none"> Issues Plan has been provided Risk & issues mitigations are listed
3	<ul style="list-style-type: none"> The Risk Management Plan and Risk Register are current (showing the most recent minimum monthly) and uploaded to the eCPIC Resource Library Risk mitigation strategies are not listed. 	<p>All of Tier 1 – Rating 3 Plus</p> <ul style="list-style-type: none"> Risk Register is updated bi-weekly Risk Mitigation strategies are adequate
2	<ul style="list-style-type: none"> The Investment has a current Risk Management Plan, or a current Risk Register uploaded to the eCPIC resource library but not both 	
1	<ul style="list-style-type: none"> None of the criteria for a rating of 3 are met 	

Historical Performance Criteria:

Applies to all Investment Life Cycle Types		
Score	Applies to all Investment	Applies to O&M Investments Only
5	<p>In addition to meeting the requirements for a rating of 4: For an existing project, cost or schedule variance is less than or equal to 10% of the established baseline.</p> <p>Tier 2 Investments:</p> <ul style="list-style-type: none"> Variance is less or equal to 5% of the baseline established 	<p>In addition to meeting the requirements for a rating of 4: In the Operational Performance Actual Results Table (Major IT Business Case, Section C: Operational Data, C.1A) all actual performance metrics meet or exceed the stated target performance goals.</p> <ul style="list-style-type: none"> Target for the CY and BY are clearly listed. Each column on table C.1A is addressed. Metrics are aligned to the agency strategic objective or priority goal.
4	<p>In addition to meeting the requirements for a rating of 3:</p> <ul style="list-style-type: none"> The PM reported project costs metrics, which include project reports with cost and schedule metrics. <p>Performance progress of cost and schedule metrics should be within 90% and monitored and tracked along with scope control and reported during the set monthly and quarterly updates to OCIO.</p> <p>Tier 2 Investments</p> <ul style="list-style-type: none"> Provide an EVM report 	<p>In addition to meeting the criteria for a rating of 3:</p> <ul style="list-style-type: none"> The Operational Performance Actual Results Table (Major IT Business Case : Section C: Operational Data, C.1B) shows an average success rate of at least 95% but less than 100% in meeting stated target performance goals. The Operational Performance Actual Results Table information has been updated at the frequencies identified in the Operational Performance Table. <p>Tier 2 Investments</p> <ul style="list-style-type: none"> Reported on Financial and Innovation Metrics Section C,1B shows an average of success rate of 100%.
3	<p>All information within the Projects and Project Activities tables (Major IT Business Case Details: Project Plan and Execution Data, B.1, B.2.1 and B.2.2 tables) is complete and consistent. All project activities reported in Projects table produce functionality within 6 months of the Actual Start Date. All actual start/end dates and costs are captured in the Project Activities table. The critical path is identified clearly in the table. The total planned, projected and actual costs are listed and updated on a regular basis.</p>	<p>The Operational Performance Table (Major IT Business Case: Section C: Operational Data, C.1A) information is complete.</p> <ul style="list-style-type: none"> The Operational Performance Table includes a minimum of 1 Customer Satisfaction metric. Minimum 3 on Strategic and Business Results metrics on the operation performance table.
2	<p>At least half of the requirements for a rating of 3 but not all of the requirements for a rating of 3 are met.</p>	<p>At least half of the requirements for a rating of 3 but not all of the requirements for a rating of 3 are met.</p>
1	<p>Less than half of the requirements for a rating of 3 are met.</p>	<p>Less than half of the requirements for a rating of 3 are met.</p>

Human Capital Criteria:

Applies to all Investment Life Cycle Types	
Score	
5	<p>In addition to meeting the criteria for a rating of 4:</p> <p>Program/project management skills are evidenced by the investment receiving a score of 4 in each of the following rating criteria sections:</p> <ul style="list-style-type: none"> • Contract/Acquisition Strategy • Performance • Risk Management
4	<p>In addition to meeting the criteria for a rating of 3:</p> <p>Program/project management skills are evidenced by the investment receiving a score of 4 in each of the following rating criteria sections:</p> <ul style="list-style-type: none"> • Contract/Acquisition Strategy • Performance
3	<p>The Projects Table (Major IT Business Case, Project Plan and Execution Data, B.1 Table) is complete and the PM Level of Experience is:</p> <ul style="list-style-type: none"> • “Appropriate Certification Level” (e.g. FAC P/PM, PMP), or • “Other certification with between 2- and 4-years PM experience (within the last five years)” and the other certification documentation is uploaded to the eCPIC Resource Library. • “No certification, but with 4 or more years PM experience (within the last five years)” and verifiable information to that effect is available to present if requested, and <p>Program/project management skills are evidenced by the investment receiving a score of 2 in each of the following rating criteria sections:</p> <ul style="list-style-type: none"> • Contract/Acquisition Strategy • Performance • Risk Management <p>The Integrated Project Team (IPT) Charter date is supplied. (Major IT Business Case : Section B: Investment Detail, Question 10)</p> <p>The required contact information for all required IPT members (IT Program Manager, Business Owner, Acquisition Lead, Technical Lead and Security Lead) and some additional optional information is provided. (Major IT Business Case, Section B, Investment Detail, Question11)</p> <ul style="list-style-type: none"> • The signed Project Charter is uploaded into the eCPIC Resource Library.
2	<ul style="list-style-type: none"> • 2 to 4 of the criteria for a rating of 3 are met.
1	<ul style="list-style-type: none"> • None or only 1 of the criteria for a rating of 3 is met

Requirements Criteria:

Applies to all Investment Life Cycle Types		
Score	Tier 1	Tier 2
5	<p>In addition to meeting the criteria for a rating of 4:</p> <ul style="list-style-type: none"> Investment objectives are clear and scope is controlled IPT Charter has been provided and IPT meeting minutes for the month are provided Product backlog is prioritized periodically based on recent release and stakeholder feedback 	<p>In addition to meeting the criteria for a rating of 4:</p> <ul style="list-style-type: none"> Requirements Management Plan is provided Requirements Traceability Matrix is provided Change Control Board Members and Meeting Minutes
4	<p>In addition to meeting the criteria for 3:</p> <ul style="list-style-type: none"> Requirements have been baselined and approved by stakeholders Plan for managing scope has been documented 	<p>In addition to meeting the criteria for 3:</p> <ul style="list-style-type: none"> Investment objectives are clear and scope is controlled IPT Charter has been provided and IPT meeting minutes for the month are provided Product backlog is prioritized periodically based on recent release and stakeholder feedback
3	<p>In addition to meeting the criteria for 2: All the plans have been submitted</p> <ul style="list-style-type: none"> Alternative Analysis Baseline change request Scope Management Plan 	<p>In addition to meeting the criteria for 2: All the plans have been submitted</p> <ul style="list-style-type: none"> Alternative Analysis Baseline change request Scope Management Plan Requirements have been baselined and approved by stakeholders Plan for managing scope has been documented
2	<ul style="list-style-type: none"> Scope Management Plan has been submitted. The requirements are consistent with the business case and contract SOW 	<p>Scope Management Plan has been submitted. The requirements are consistent with the business case and contract SOW.</p>
1	<ul style="list-style-type: none"> None or only 1 of the criteria for a rating of 2 is met 	<p>None or only 1 of the criteria for a rating of 2 is met.</p>

Contract Oversight Criteria:

Applies to all Investment Life Cycle Types	
Score	
5	<p>In addition to meeting the criteria for a rating of 4:</p> <ul style="list-style-type: none"> • Risk is mitigated through the use of performance-based contracts. • All contracts are competitively awarded or justified via supporting documentation. • All contracts that require EVM have the appropriate clause • All contracts follow the EPMR methodology
4	<p>In addition to meeting the criteria for a rating of 3:</p> <ul style="list-style-type: none"> • The majority of contracts and task orders are either competitively awarded or the use of non-competitive contracts is justified. • Risk to the Federal government is fully mitigated risk as evidenced by predominantly performance-based contracts
3	<p>All seven (7) criteria listed below need to be met:</p> <ul style="list-style-type: none"> • A current Acquisition Plan document is uploaded to the eCPIC Resource Library. • The Contracts/Task Orders Table (Business Case Detail: Section D: Acquisition/Contract Strategy Section) is complete. • Many contracts and task orders are competitively awarded, and the use of non-competitive contracts is justified. • Contracts accommodate Section 508 as required. • There are only minor ($\pm 10\%$) variances in cost and/or schedule in the Master Cost & Schedule: Comparison of Actual Work Completed and Actual Costs to Current Approved Baseline Table (Major IT Business Case: Section B: Project Plan and Execution Data Section, B.2). • All the Contracts/Task Orders Table data with the exception of interagency agreements are consistent with information recorded at http://usaspending.gov. • The agency uses the OCIO SOW process for acquisitions for this investment
2	<ul style="list-style-type: none"> • 3 out of 6 of the criteria for a rating of 3 are met
1	<ul style="list-style-type: none"> • None or at most 2 of the criteria for a rating of 3 are met

Appendix D: Cloud Computing Decision Framework

Evaluating new applications for cloud deployment occurs in conjunction with the ERB as part of the EPMR process, typically in the Planning Phase and at the end of the Sprint/Staging Phase. Existing applications are evaluated at the ERB's discretion. Along with these evaluations, a consistent and repeatable mechanism for tracking cost savings and cost avoidances from the migration and deployment of cloud services will be employed.

The Cloud Computing Decision Framework enables the Department to make efficient use of cloud services that have consistent architectural designs. A systematic and objective evaluation of cloud service providers and cloud deployment models is conducted to determine if cloud computing is appropriate, what cloud service provider (CSP) should be employed, and what deployment model should be utilized for both legacy and new applications.

The Cloud Computing Decision Framework is comprised of the following criteria:

Cloud Applicability	Can the application be supported in the Cloud?
Cloud Service Provider	Which cloud service provider is the best candidate for the application?
Cloud Deployment Model	Which cloud deployment model is best for the application?
Cloud Governance	Is the CSP and cloud-based application and deployment model compliant with Federal and Departmental policy for Cloud Computing