AF/A5/7
CAPABILITY DEVELOPMENT GUIDEBOOK

Volume 2D

JCIDS Document Development

October 2022

Air Force Futures, Center 2, Requirements Oversight Team

AF/A5/7DR, Pentagon 5C858

PREFACE

This Guidebook is one in a series of AF/A5/7 developed guidebooks describing the Air Force process for the development, documentation, staffing, and validation of *operational requirements* in support of overarching Capability Development efforts, this volume addresses document development. **This guidebook describes the specific requirements actions and artifacts that support the development of JCIDS documents** and is a "how to" guide for use by all stakeholders participating in the AF operational requirements development process.

There are no restrictions on release or distribution of this guidebook.

NOTE: Although the AF/A5/7 Capability Development Guidebooks are not statutory or regulatory policy in nature, they represent official guidance and standard procedures developed by AF/A5/7D to ensure compliance with and implementation of overarching Requirements and Acquisition policies. Per AF/A5/7 direction and authority under HAF Mission Directive 1-57 (draft), to the maximum extent practical all Air Force Sponsors will follow the guidance and procedures described in these guidebooks or coordinate with AF/A5/7D through the AF/A5/7DR (Requirements Oversight Enabling Team) for case-by-case tailoring.

If you have questions regarding specific information within the Volume 2-series Capability Development Guidebook(s), or if you have suggestions for improvements, please contact:

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AF/A5/7DR Portal Page. Additional guidance and information to supplement this guidebook is located on the Air Force Futures' AF Portal Page:
https://www.my.af.mil/gcss-af/USAF/ep/globalTab.do?channelPageId=s6925EC1352150FB5E044080020E329A9

CHANGE SUMMARY

Change Summary	Date
This document captures updated organizations, roles, responsibilities, DoD and DAF guidance for operational requirements development and must be reviewed in its entirety. Portions of this guidebook were derived from the **AF/A5R Requirements Guidebook Volume 3 (24 June 2020, Version 5.02)**, which **is rescinded and replaced** by this Capability Development Guidebook Volume 2D.	N/A
Removed references to CDC and CDWG. Removed AoA process as it is now in Guidebook Vol 2D, Annex A. Office symbol updates and Admin changes.	Oct 2022

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SECTION 1. INTRODUCTION TO JCIDS DOCUMENT DEVELOPMENT

1.1. Initiation of JCIDS Pathway and Associated Document Development. Capability Development initiatives can be either "top-down" directed (via HAF-level or higher) or "bottom up" initiated (by MAJCOM/Agency Sponsor) as a result of gaps identified due to changes to the National Defense Strategy, Joint Warfighting Concepts, Air Force Concepts, Wargames, or direction from Senior Leader forums. Strategies to fill these gaps are documented in Capability Development Plans or Requirements roadmaps and informed by a Capability Based Assessment or similar studies. These processes are covered in Volumes 2B and 2C of the AF/A5/7 Capability Development Guidebook, Air Force Futures Capability Development Activities, and Capabilities Based Analysis, respectively. Refer to those volumes for details.

The resulting analysis, plans, and roadmaps are presented to AF/A5D at a Capability Portfolio Management Review (CPMR). If the AF/A5/7D approves a Capability Development Plan or Requirements Roadmap for solution development, the MAJCOM/Agency Sponsor submits a Document Strategy to the AF Gatekeeper (AFGK) chaired Solution Pathway Review (SPR). The AFGK will approve development of the appropriate JCIDS document. See AF/A5/7 Capability Development Guidebook, Volume 2A for details on the SPR.

In accordance with JCIDS guidance, for any documents subject to JCIDS oversight, the document team lead and the acquisition POC must be RMCT "Level B" certified. All other team members must minimally complete RMCT Level A and are highly encouraged to be RMCT Level B certified. See Section 6, Operational Capability Requirements Training, in Volume 2A of the AF/A5/7 Capability Development Guidebook.

1.2. JCIDS Document Descriptions

Listed below is a detailed summary of the different documents used to articulate capability requirements and associated gaps and to submit recommendations to the JCIDS Process for review and validation.

- *Format and content for JCIDS Documents (i.e., ICD, Draft CDD, CDD, CDD Annex, DCR, SW-ICD, and IS-ICD/CDD are described in the JCIDS Manual. Format and content for all CBA/study and AoA documents (not JCIDS documents in the true sense) are described in the Guidebooks.*
- *For JCIDS documents designated by the Joint Staff Gatekeeper as "JCB Interest" or "JROC Interest", the document must strictly comply with JCIDS Manual format and content guidance. For JCIDS documents designated as "Joint Information," Sponsors should comply with JCIDS format to the max extent practical, but strict compliance is not necessary or mandatory. The focus should be to make sure the documents capture the appropriate information at the necessary level of detail to support decision making and stakeholder coordination. Refer to* ***Section 3*** *of this Guidebook for more detail.*
- *Certain Air Force organizations and agencies have been granted specific authority to "determine requirements" for their assigned area. Organizations or agencies using their own authority should have their own process and their own form of documentation – organizations or agencies choosing to utilize the documents specified in the AF/A5/7 Guidebooks need to follow the AF/A5/7 process for development and approval of those documents. Outside organizations do not have independent authority to develop or approve/validate any of the documents described in the AF/A5/7 Guidebooks, except by following the AF/A5/7 process as described herein which includes submitting requests and documents to the AFGK for approval.*

DOTmLPF-P Change Recommendation (DCR). A DCR is used to recommend mitigating identified capability gaps with a "non-materiel" approach, by recommending changes in one or more of the DOTMLPF-P areas. A DCR may be used to propose non-materiel and/or non-developmental materiel capability solutions as an alternative to or in conjunction with "Big M" developmental materiel solutions. A DCR may be initiated during any phase of the JCIDS or acquisition process.

Initial Capabilities Document (ICD). An ICD specifies capability requirements and associated gaps which represent unacceptable operational risk if left unmitigated. The ICD is also used to recommend mitigating identified gaps (in part or in whole) with materiel solutions, non-materiel solutions or some combination of both. A validated ICD (along with an approved AoA Study Plan) is an entrance criterion for the Materiel Development Decision (MDD) and entry into the Materiel Solution Analysis Phase of acquisition.

Analysis of Alternatives (AoA). The AoA is an analytical comparison of the operational effectiveness, suitability, risk, and life cycle cost of potential alternatives under consideration to satisfy the validated capability needs (usually stipulated in an approved ICD). The AoA begins with approved Study Guidance and AoA Study Plan, followed by a Materiel Development Decision (MDD) to enter into the Materiel Solution phase of acquisition to execute the AoA, which culminates with the production of the AoA Final Report. Annex A of this Guidebook Volume contains detailed procedures and guidance for AoAs. Contact AF/A5/6D-OAS, the Office of Aerospace Studies for the most up-to-date guidance and assistance in conducting an AoA.

Draft (i.e. Preliminary) Capability Development Document ("Draft CDD" or "Draft CDD Annex", as appropriate). A Draft CDD outlines the minimum essential information for technology maturation and preliminary design for development of a materiel solution or capability increment. A Draft CDD is an entrance criterion for development of the Request for Proposals (RFP) for the Technology Maturation and Risk Reduction (TMRR) phase of acquisition and for the Milestone A acquisition decision.

- ***A "Draft CDD" is a stand alone JCIDS document limited in scope/content to support the Milestone A decision and TMRR Phase; the "Draft CDD" should not be confused with a "draft version" of the full CDD required later in the JCIDS process.***
- ***A "Draft CDD Annex" may be developed for an incremental program as a precursor to a CDD Annex to a previously-validated CDD. This strategy might be appropriate to support a Milestone A decision for entry into the TMRR phase of activity for a follow-on increment, block upgrade or other subsequent development/production based on a previously validated CDD.***
- ***The Draft CDD should, wherever possible, describe a Minimum Viable Product (MVP) to ensure RFPs and other documents are clear on the capability needed.***

Capability Development Document (CDD) and CDD Annex. A CDD specifies the capability development performance attributes (KPPs, KSAs, and APAs) and other related information necessary to support the development of one or more increments of a materiel capability solution. A validated CDD is an entrance criterion necessary for the Development RFP release point and for the Milestone B acquisition decision for entry into the Engineering Manufacturing and Development (EMD) Phase of acquisition.

1.3. JCIDS Document Validation

Per JCIDS, the validation of a requirement document does not expire unless specifically withdrawn by the validation authority or the document sponsor, and as long as the strategic guidance, operational plans, Service and Joint concepts, CONOPs, and other guidance justifying the validation of the original capability requirement document are still valid. Significant changes to the strategic guidance, threats or available

funding may require reassessment, update, and/or revalidation of previously validated capability requirement documents by an appropriate validation authority.

- *Procedural guidance for JCIDS document review and validation may be found in the Section 2 of this Guidebook and in the JCIDS Manual.*

- *For JCIDS documents with the potential to be designated by the Joint Staff Gatekeeper "JCB Interest" or "JROC Interest", the document must strictly comply with JCIDS Manual format and content guidance. For JCIDS documents likely to be designated "Joint Information", Sponsors should comply with JCIDS format to the max extent practical, but strict compliance is not necessary or mandatory. The focus should be to make sure the documents capture the appropriate information at the necessary level of detail to support decision making and stakeholder coordination.*

- *Sponsors are encouraged to work through AF/A5/7DR to initiate a dialogue with Joint Staff Gatekeeper early in document development process regarding proposed Joint Staffing Designator (JSD) and potential Joint Performance Requirements (JPRs) – i.e. Joint KPPs, this will ensure the staffing and approval process goes as smoothly and quickly as possible*

1.4. JCIDS Document Change/Update and Re-validation

Capability requirements are not expected to be static during the product life cycle. As knowledge and circumstances change, consideration of adjustments or changes may be requested by acquisition, budgeting, or requirements officials. Any requested changes relating directly to the substance of the document (e.g., performance attributes, cost, schedule and/or quantity), render the document invalid for the purpose of follow-on process (e.g., milestone decision review, contract award, etc.) until the requirements document is reviewed and revalidated by the appropriate JCIDS validation authority.

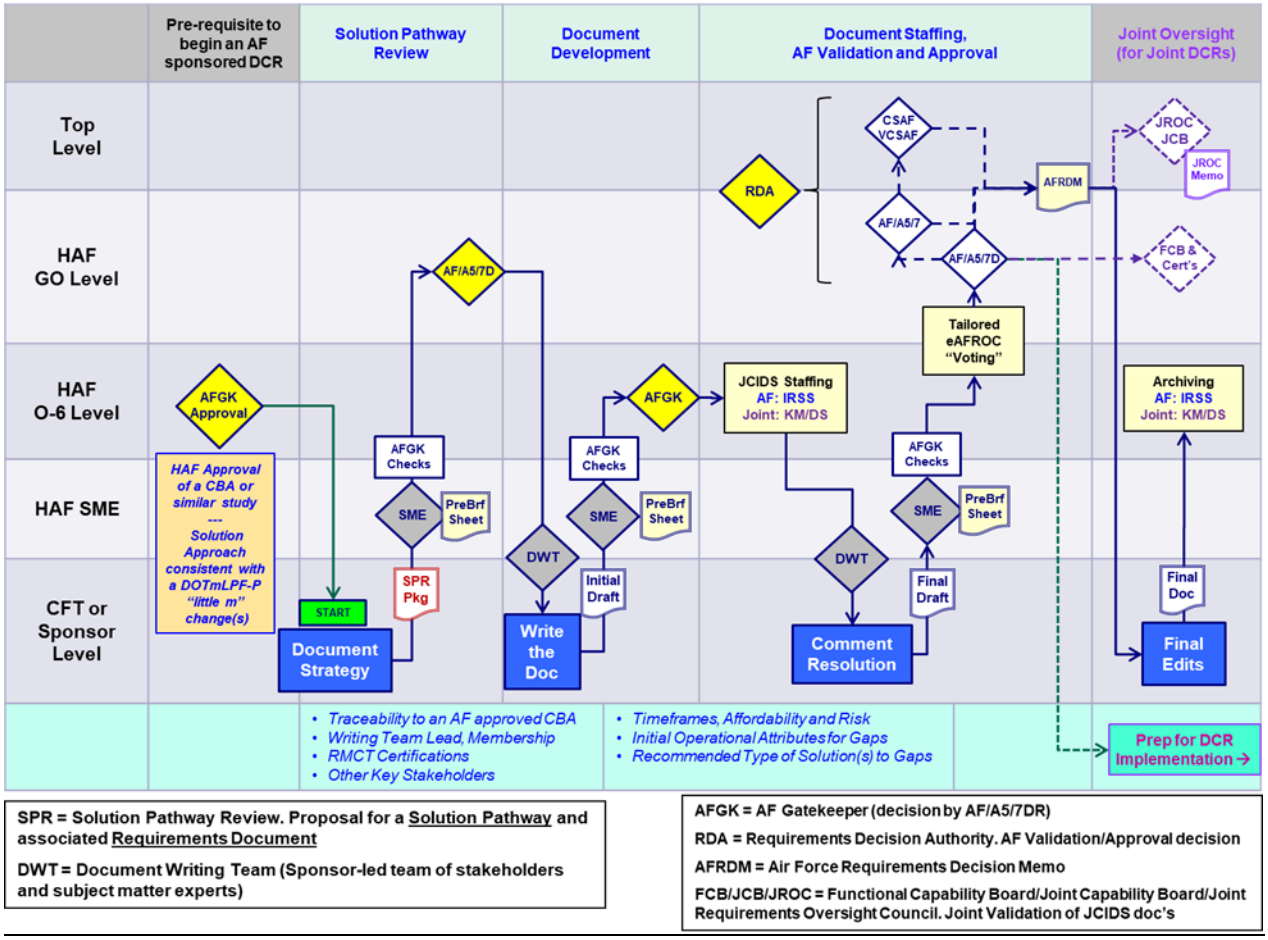
- *For any proposed JCIDS document change/update, the Sponsor, working through their MAJCOM/Agency requirements policy and process office contacts AF/A5/7DR to determine the appropriate level of AF and Joint review and approval. Proposed changes are accompanied by a funding strategy and schedule that have been coordinated with the appropriate program office, Program Manager, and Program Executive Officer (PEO).*

- *Formal AF decisions regarding document change/update or revalidation are documented in an official memorandum. AF/A5/7DR provides a copy of the decision memo and updated document (as required) to the Joint Staff Gatekeeper for archiving.*

SECTION 2. AF PROCEDURES FOR JCIDS DOCUMENT DEVELOPMENT

DCR Development (for "NON-MATERIEL" and NON-DEVELOPMENTAL MATERIEL Solutions)

Figure 2.1 DCR Process -- Overview



Solution Pathway Review (SPR) *– an AFGK review. Sponsors (working through their AF/A5/7D SME) submit a completed SPR Worksheet (available on the AF/A5/7DR Portal Page) to obtain AFGK approval prior to convening a document writing team for any requirements document writing event. The goal of the SPR is to ensure the Sponsor is on the correct pathway for development of the right document at the right time, with the right people involved.*

2.1. DOTmLPF-P Change Recommendation (DCR) – Overview

DCRs document recommendations for non-materiel and non-developmental materiel (e.g. COTS/GOTS) solutions being proposed as an alternative to, or complement of, a materiel solution. Refer to the JCIDS Manual for additional guidance on DCRs.

- *A DCR may be submitted at any time during the requirements process, when a non-materiel solution(s) has been identified as an effective means to address a capability gap and the recommendations are to be implemented across joint organizations/OPRs.*

2.1.1. Joint DCR

Applicability of the Joint DCR. A Joint DCR is used when proposed solutions require implementation of DOTMLPF-P changes by other organizations outside the Sponsor component (i.e. for changes beyond just AF organizations).

- *AF service-specific change recommendations do not use a "Joint" DCR; they are captured using the AF internal Change Recommendation processes or an AF-only DCR, if necessary. For more detail on AF-only DCR, see the next section below.*

Entry Criteria (Prerequisites) for a Joint DCR. HAF-level review and AFGK approval of the SPR Worksheet is required to proceed with development of an AF-sponsored Joint DCR.

- *Typically, results from a CBA or similar study, DOTMLPF-P analysis, or assessment are used to identify the specific change recommendations. The CBA/analysis must also provide the rationale and analysis to justify gap mitigation via a DOTmLPF-P (non-materiel or "little m" non-developmental materiel) approach.*

START. Pathway Proposal for a Joint DCR. The DOTmLPF-P Change pathway requires extensive and close collaboration with key stakeholders and DOTMLPF-P functional process owners to ensure this solution approach will address required capabilities identified in a CBA and/or DOTMLPF-P analysis. Sponsors are expected to establish effective dialog with key stakeholders to fully develop the solution approach and document writing team membership.

Step 1. Solution Pathway Review (SPR) followed by a Document Writing Event. HAF-level review and AF/A5/7D approval of the SPR Worksheet, followed by a Sponsor-led document writing event is required for development of any AF-sponsored Joint DCR.

- The Sponsor (working through their IRSS POC and the AF/A5/7D SME) submits an SPR Worksheet to AF/A5/7DR via IRSS not later than 21 days prior to the start of the proposed document writing event. Refer to **AF/A5/7 Capability Development Guidebook Vol 2A** for details on the SPR.

During the review of the SPR Worksheet for the Joint DCR, Sponsors need to be prepared to discuss the document preparation and document writing team membership to include the following:

- Ensure entry criteria (pre-requisites) are met as described above
- Proposed nomenclature; DCR title should reflect the particular mission/functional area
- Specific gaps which are to be mitigated in the DCR
- Timeframe when the recommendations need to be implemented
- Potential interdependencies with other AF or joint systems/solutions or other enablers
- Cost estimates (as applicable) and funding sources to ensure solution remains affordable with respect to available funding
- Proposed document writing team members (names and organization represented), location, dates and format (live or virtual), including any issues/concerns with support, funding, security, etc.
- Certification and Training (RMCT) and experience of Team Leaders and Acquisition POC(s)

- Proposed Plan of Action & Milestone (POAM) with a timeline for completion of the DCR
- Expected timeframe/date when the Sponsor expects to submit the document for initial staffing
- Projected follow-on requirements oversight/reviews and interaction with stakeholders from the Joint Staff, other Services and OSD (if required)
- Specific recommendations for proposed Joint Staffing Designator (JSD), and proposed AF Requirements Decision Authority (RDA)

Step 2. Document Review & Formal Staffing. After the Joint DCR is developed, the sponsoring MAJCOM/Agency POC submits the draft version of the document and supporting materials (via IRSS) for review by AF/A5/7DR and the AF/A5/7D SME followed by AFGK approval to initiate formal JCIDS staffing via IRSS and KM/DS. See **Sections 3.1 thru 3.3** for more detail on Initial Document Review and formal JCIDS staffing.

- *Change recommendations must be properly coordinated with the Joint and AF functional process owners (FPO's) to ensure the solutions are implemented in accordance with the appropriate processes for the type of non-materiel solution (e.g., training, doctrine, policy, manpower, facilities, etc.) Refer to the JCIDS Manual for additional detail on Joint FPO's.*

DOTMLPF-P Area	AF Functional Process Owners
AF Doctrine	Air University
AF Organizations	Air Staff – A1
AF Training	HQ AETC and Air Staff - A3T
AF Materiel	SAF/AQ and AFMC
AF Leadership & Education	HQ AETC / Air University
AF Personnel	Air Staff – A1
AF Facilities	Air Staff – A4
AF Policy	Various POCs – Topic Specific

Following completion of comment resolution, Sponsors normally conduct an internal review (as required) before the document goes forward for final validation and approval (see **Section 3.4.**)

Step 3. Validation and Approval of the Joint DCR. Following completion of sponsoring MAJCOM/Agency internal process, the Sponsor POC submits the updated, final validation-ready version of the document to AF/A5/7DR via IRSS to initiate eAFROC and validation staffing (see **section 3.5.**)

- *The eAFROC and Validation Staffing is not a commenting phase. The purpose is to route the document for final certifications/endorsements/attestations (as required) and for AF validation.*

The eAFROC review concludes with AF/A5/7D approval to 1) forward the package to the designated RDA (as determined by AF/A5/7D) for AF validation/approval and 2) forward the document to the FCB to begin joint validation, when required.

- *In an effort to expedite the validation process, AF documents may be submitted to the Joint Staff for review by the FCB Working Group(s) and/or FCB immediately following the eAFROC and AF/A5/7D approval – i.e. FCB review may be concurrent with AF validation staffing to the RDA.*

AF Validation Staffing. Formal decisions are documented in writing via a decision memo signed by the designated RDA, as determined by AF/A5/7D.

- *AF validation and approval includes both the AF decision/direction regarding validation of the document and the approval to forward to JCB and/or JROC for Joint Validation, when applicable – i.e. a decision memo, signed by the AF RDA) is required prior to releasing the document beyond the FCB level for final joint validation by the JCB and/or JROC.*

Validation Criteria. The Joint DCR must comply with JCIDS Manual format/content guidance. During final review and validation, Sponsors need to be prepared to discuss the following:

- The purpose of the change(s) and associated benefits (e.g., cost or manpower savings)
- Any potential roadblocks (e.g. funding, resource or time constraints)
- Specific Gap(s) to be mitigated in the DCR
- Projected implementation costs, and identified sources of funding
- Demonstrate approval of impacted stakeholders to include the functional process owner(s) responsible for oversight of the DOTMLPF-P specified area(s).

Completion/Exit Criteria for AF-sponsored Joint DCR. A copy of the final document with validation page, i.e. the signed JROCM, posted in IRSS and submitted to the Joint Staff for archiving in KM/DS.

2.1.2. AF-only DCR

Applicability of the AF-only DCR. AF-only DCRs may be used to document recommendations for AF unique non-materiel and non-developmental materiel solutions to gaps identified during a CBA or similar DOTMLPF-P analysis.

- *If the recommended solutions require changes in other components outside the AF, then a Joint DCR must be used. For more detail on the Joint DCR, see the previous section above.*

Entry Criteria (Prerequisites) for an AF-only DCR. HAF-level review and AF/A5/7D approval of the SPR Worksheet is required to proceed with development of an AF-only DCR.

- *Typically, results from a CBA or similar DOTMLPF-P study, analysis, or assessment are used to identify the specific change recommendations. The CBA/analysis must also provide the rationale and analysis to justify gap mitigation via a DOTmLPF-P (non-materiel or "little m" non-developmental materiel) approach.*

START. Pathway Proposal for an AF-only DCR. The DOTmLPF-P Change pathway requires extensive and close collaboration with key stakeholders and DOTMLPF-P functional process owners to ensure this solution approach will address required capabilities identified in a CBA and/or DOTMLPF-P analysis. Sponsors are expected to establish effective dialog with key stakeholders to fully develop the solution approach and document writing team membership.

Step 1. Solution Pathway Review (SPR) followed by a Document Writing Event. HAF-level review and AF/A5/7D approval of the SPR Worksheet, followed by a Sponsor-led document writing event is required for development of an AF-only DCR.

- The Sponsor (working through their IRSS POC and the AF/A5/7D SME) submits an SPR Worksheet to AF/A5/7DR via IRSS not later than 21 days prior to the start of the proposed document writing event. Refer to **AF/A5/7 Capability Development Guidebook Vol 2A** for details on the SPR.

During the review of the SPR Worksheet for an AF-only DCR, Sponsors need to be prepared to discuss the document preparation and document writing team membership to include the following:

- Ensure entry criteria (pre-requisites) are met as described above
- Proposed nomenclature: DCR title should reflect the mission/functional area
- Specific gaps which are to be mitigated in the DCR.
- Timeframe when the recommendations need to be implemented
- Potential interdependencies with other AF or joint systems/solutions or other enablers
- Cost estimates (as applicable) and funding sources to ensure solution remains affordable with respect to available funding
- Expected timeframe/date when the Sponsor expects to submit the document for initial staffing
- Projected follow-on requirements oversight/reviews and interaction with stakeholders from the Joint Staff, other Services and OSD (if required)
- Proposed document writing team membership (names and organization represented), location, dates and format (live or virtual), including any issues/concerns with support, funding, security, etc.
- Certification and Training (RMCT) and experience of Team Leaders and Acquisition POC(s)
- Proposed Plan of Action & Milestone (POAM) for completion of the DCR
- Specific recommendations for proposed AF Requirements Decision Authority (RDA)

Step 2. Document Review & Formal Staffing. After the AF-only DCR is developed, the sponsoring MAJCOM/Agency POC submits the draft document and supporting materials (via IRSS) for review by AF/A5/7DR and the AF/A5/7D SME followed by AFGK approval to initiate formal AF staffing via IRSS.

- See **Sections 3.1 thru 3.3** for more detail on Initial Document Review and formal JCIDS staffing.

  Change recommendations must be properly coordinated with the AF functional process owner to ensure the solutions are implemented in accordance with the appropriate processes for the type of non-materiel solution (e.g., training, doctrine, policy, manpower, facilities).

DOTMLPF-P Area	AF Functional Process Owners
AF Doctrine	Air University
AF Organizations	Air Staff – A1
AF Training	HQ AETC and Air Staff – A3T
AF Materiel	SAF/AQ and AFMC
AF Leadership & Education	HQ AETC / Air University
AF Personnel	Air Staff – A1
AF Facilities	Air Staff – A4
AF Policy	Various POCs – Topic Specific

- Following completion of comment resolution, Sponsors normally conduct an internal review (as required) before the document goes forward for final validation and approval (see **Section 3.4.**)

Step 3. Validation and Approval of the AF-only DCR. Following completion of sponsoring MAJCOM/Agency internal process, the Sponsor POC submits the updated, final validation-ready version of the document to AF/A5/7DR via IRSS to initiate eAFROC and validation staffing (see **section 3.5.**)

- *The eAFROC and Validation Staffing is not a commenting phase. The purpose is to route the document for final certifications/endorsements/attestations (as required) and for AF validation.*

The eAFROC review concludes with AF/A5/7D approval to 1) forward the package for AF validation staffing. AF-only DCRs are not required to be submitted for joint review or validation.

AF Validation Staffing. Formal decisions are documented in writing via a decision memo signed by the designated RDA, as determined by AF/A5/7D.

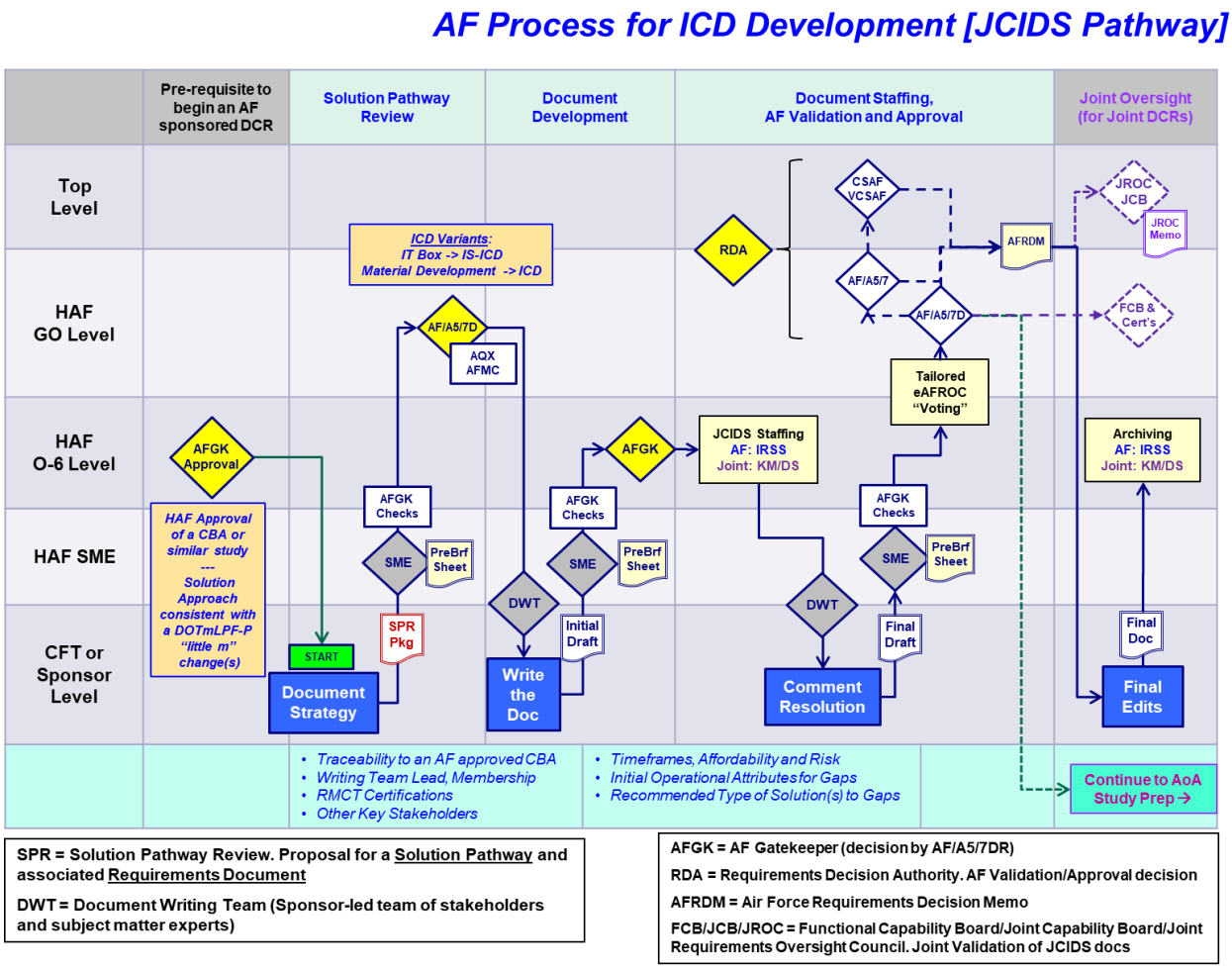
Validation Criteria. To the maximum extent practical, AF-only DCRs comply with JCIDS Manual format and content guidance. During final review and validation, Sponsors need to be prepared to discuss the following:

- The purpose of the change(s) and associated benefits (e.g., cost or manpower savings)
- Any potential roadblocks (e.g., funding, resource or time constraints)
- Any gap(s) mitigated
- Projected implementation costs, and identified sources of funding
- Demonstrate approval of impacted stakeholders to include the functional process owner(s) responsible for oversight of the DOTMLPF-P specified area(s).

Completion/Exit Criteria for an AF-only DCR. A copy of the final document with validation page, i.e., the signed AF RDM, posted in IRSS and submitted to the Joint Staff for archiving in KM/DS.

ICD (Materiel Solutions or combination of Materiel and Non-Materiel)

Figure 2.2 ICD Process -- Overview



Solution Pathway Review (SPR) *– an AFGK review, formerly known as the Requirements Strategy Review (RSR). Sponsors (working through their AF/A5/7D SME) submit an* SPR Worksheet *(available on the AF/A5DR Portal Page) to obtain AF/A5/7D approval prior to convening a document writing team for any requirements document writing event. The goal of the SPR is to ensure the Sponsor is on the correct pathway for development of the right document at the right time, with the right people involved…*

2.2. Initial Capabilities Document (ICD)

Applicability of the ICD. An ICD is used to document capability requirements and associated gaps and the Sponsor's intent to resolve those gaps through solutions which are materiel, or a combination of materiel and non-materiel.

- *Proposal to utilize the JCIDS pathway for materiel solutions must include a justification as to why an alternative agile/rapid process would not be more appropriate (e.g., MTA-804, Section 800 Software Pathway, AF Form 1067 Modification Proposal, etc.)*

- *A validated ICD along with approved AoA Study Guidance and AoA Study Plan, will be required to proceed to a Materiel Development Decision (MDD) review for approval to enter to the acquisition process to pursue a materiel solution. The MDD is an acquisition decision forum.*

Entry Criteria (Prerequisites) for development of an ICD. Prior to submitting an SPR Request for development of an AF-sponsored ICD the following is required: 1) A CBA (or equivalent study) approved by the designated Requirements Decision Authority (along with the official AF recommendation on way forward indicating a *materiel/acquisition approach*) or 2) AF/A5/7D (or higher) approval to use a non-AF CBA or similar study.

- *There are several dangers in seeking valid requirements from documents and analysis sponsored by other agencies – the context, mission needs, gaps/risk, and potential solution approach for the other agency may not be relevant to Air Force and just because we have the same or similar missions, doesn't automatically mean we have the same gaps or the need for the same solution approach.*

START. Pathway Proposal for the ICD. The solution pathway selection requires extensive and close collaboration with key stakeholders other process owners to ensure the requirements document strategy is consistent with the solution approach. Sponsors are expected to establish effective dialog with key stakeholders to fully develop the solution approach and document writing team membership.

Step 1. Solution Pathway Review (SPR) followed by a Document Writing Event. HAF-level review and AF/A5/7D approval of the SPR Worksheet (in consultation with SAF/AQX) followed by a Sponsor-led document writing event is required for development of any AF-sponsored ICD.

- The Sponsor (working through their IRSS POC and the AF/A5D SME) submits an SPR Worksheet via IRSS not later than 21 days prior to the start of the proposed document writing event. Refer to **AF/A5/7 Capability Development Guidebook Vol 2A** for details on the SPR.

During the review of the SPR Worksheet for an ICD, Sponsors need to be prepared to discuss the document preparation and document writing team membership to include the following:

- Justification as to why an alternative agile/rapid process would not be more appropriate (e.g. MTA-804, Section 800 Software Pathway, AF Form 1067 Modification Proposal, etc.)
- Ensure entry criteria (pre-requisites) are met as described above
- Proposed nomenclature - the title of an ICD should reflect the proposed type of approach associated with the core mission or gap area being addressed, for example:
    - *TAC-P Modernization* (for an ICD recommending a modernization approach)
    - *Tanker Recapitalization* (for an ICD recommending recapitalization approach)
    - *"Next Gen…"* (for an ICD recommending transformational approach)
- Timeframe when the capability needs to be delivered (IOC/FOC)
- Potential interdependencies with other AF or joint systems/solutions or other enablers

- Proposed document writing team membership (names and organization represented), location, dates and format (live or virtual), including any issues/concerns with support, funding, security, etc.

- Certification and Training (RMCT) and experience of Team Leaders and Acquisition POC(s)

- Proposed Plan of Action & Milestone (POAM) with a timeline for completion of the ICD

- Expected timeframe/date when the Sponsor expects to submit the document for initial staffing

- Projected follow-on requirements oversight/reviews and interaction with stakeholders from the Joint Staff, other Services and OSD (if required)

- Specific recommendations for: proposed JSD, potential JPRs (if any) and proposed AF RDA

Step 2. Document Review & Formal Staffing. After the ICD is developed, the sponsoring MAJCOM/Agency POC submits the draft document and any supporting materials (via IRSS) for review by AF/A5/7DR and the AF/A5/7D SME for AFGK approval to initiate formal JCIDS staffing in IRSS and KM/DS.

- See **Sections 3.1 thru 3.3** for more detail on Initial Document Review and formal JCIDS staffing.
    - *For JCIDS documents designated "JCB Interest" or "JROC Interest", the document must strictly comply with JCIDS Manual format and content guidance. For documents designated "Joint Information", Sponsors should comply with JCIDS format to the max extent practical.*

- Following completion of comment resolution, Sponsors normally conduct an internal review (as required) before the document goes forward for final validation and approval (see **Section 3.4.**)

Step 3. Validation and Approval of the ICD. Following completion of sponsoring MAJCOM/Agency internal process, the Sponsor POC submits the updated, final validation-ready version of the document to AF/A5/7DR via IRSS to initiate eAFROC and validation staffing (see **section 3.5**.).

- *The eAFROC and Validation Staffing is not a commenting phase. The purpose is to route the document for final certifications/endorsements/attestations (as required) and for AF validation.*

The eAFROC review concludes with AF/A5/7D approval to: 1) forward the package to the designated AF RDA (as determined by AF/A5/7D) for AF validation/approval and 2) forward the document to the FCB to begin joint validation, when required.

- *In an effort to expedite the process, AF documents may be submitted to the Joint Staff for review by the FCB Working Group(s) and/or FCB immediately following the eAFROC and AF/A5/7D approval – i.e. FCB review may be concurrent with AF validation staffing to the AF RDA.*

AF Validation Staffing. Decisions are documented in writing via requirements decision memo (RDM) signed by the designated Requirements Decision Authority (RDA), as determined by AF/A5/7D.

- *AF validation and approval includes both the AF decision/direction regarding validation of the document and the approval to forward to JCB and/or JROC, when applicable -- i.e. a decision memo, signed by the RDA is required prior to releasing the document beyond the FCB level.*

Validation Criteria. During final review and validation, Sponsors need to be prepared to discuss:

- Summary of the operational context for understanding the need and the solution trade space. This summary should include: desired operational outcomes, desired effects to achieve outcomes, and an overview of how capabilities are envisioned to be employed, including enabling capabilities.

- Description of the capability gap(s).

- The methodology/rationale used to determine the operational attributes and initial objective values for each gap identified in the ICD with reference to the key supporting analysis.

- The initial affordability assessment within the context of the appropriate portfolio.

- Proposed recommendation(s) for the type of approach(s) to mitigate the capability gap(s) along with supporting rationale and analysis including recommendation regarding the degree to which each gap needs to be closed (all, or only partial), considering risk, affordability and timeframe.

- An assessment of analysis accomplished to date (CBA, study, business case analysis, etc.) and a determination of readiness to proceed with development of draft AoA Study Guidance and AoA study planning, and/or necessity for additional follow-on analysis, systems engineering or development planning, as appropriate.

Completion/Exit Criteria for the ICD. A copy of the final document with validation page, i.e. the signed memo (AF RDM and/or JROCM), posted in IRSS and submitted to Joint Staff for archiving in KM/DS.

- *The ICD must be reviewed/validated through AF/A5/7D (as a minimum) prior to submitting the associated draft AoA Study Guidance for review by AF/A5/7D. The ICD must be validated and approved (completed) prior to submitting the associated AoA Study Plan for approval by AF/A5/7 or DCAPE for ACAT 1D programs.*

AoA (ANALYSIS OF MATERIEL SOLUTION ALTERNATIVES)

The AoA is conducted during the Materiel Solution Analysis Phase of acquisition following the materiel development decision by the MDA. It is an analytical comparison of the operational effectiveness, suitability, risk, and life cycle costs of alternatives under consideration to satisfy validated capability needs.

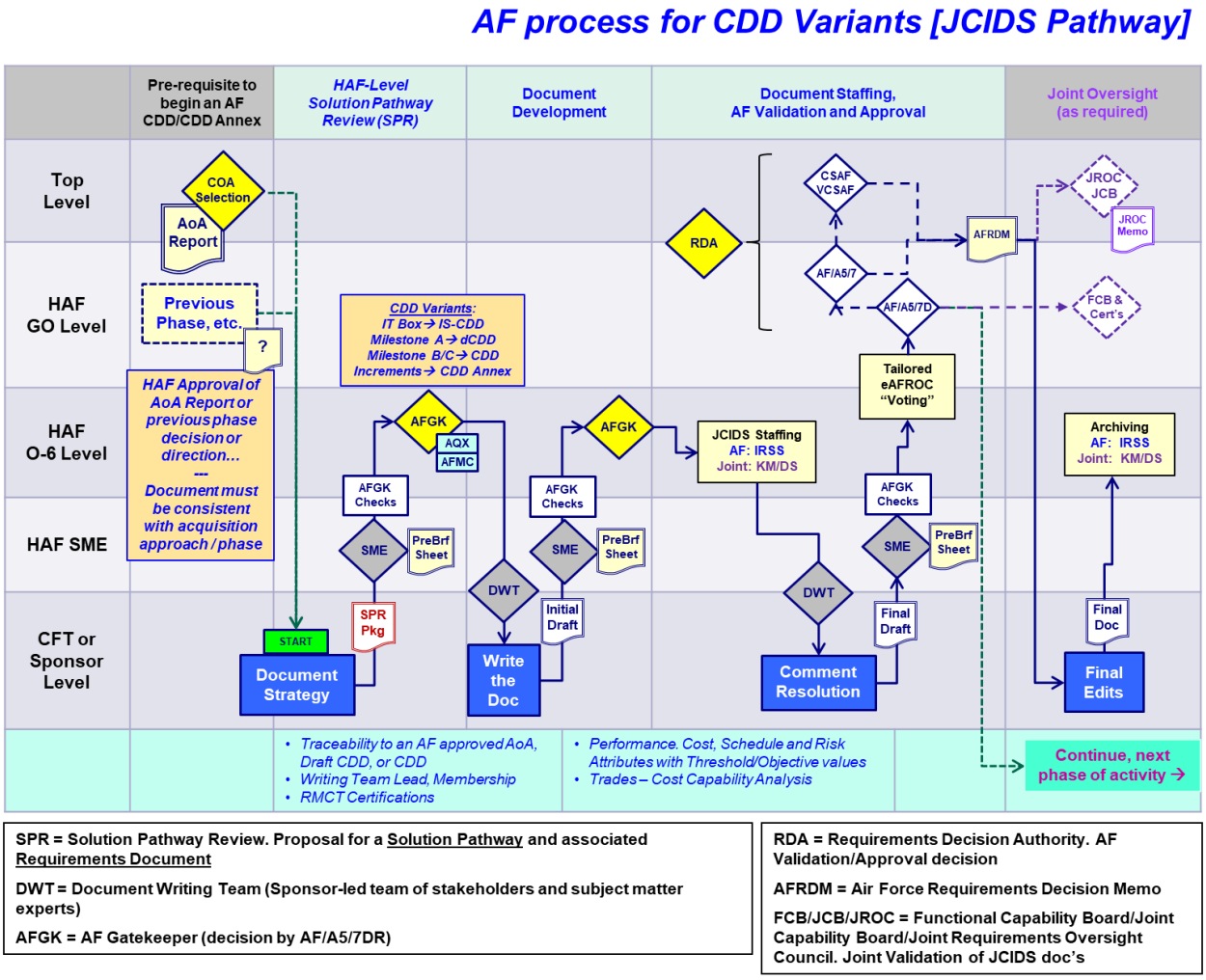
A properly conducted AoA provides decision-makers trade space for materiel solutions that may satisfy an operational capability need usually described in a validated ICD. The AoA provides the analytic basis for the performance attributes documented in follow-on JCIDS documents. The AoA is not a source selection where a particular materiel solution is identified, but rather refines the scope of potential alternatives and helps refine the requirements attributes.

A complete guide to the AoA process in is Annex A of this Guidebook.

Capability Development Documents (CDD and Variants)

2.3. CDDs and Variants

Figure 2.3 CDD Process -- Overview



Solution Pathway Review (SPR) *– an AFGK review, formerly known as the Requirements Strategy Review (RSR). Sponsors (working through their AF/A5D SME) submit an* SPR Worksheet *(available on the AF/A5/7DR Portal Page) to obtain AFGK approval prior to convening a document writing team for any requirements document writing event. The goal of the SPR is to ensure the Sponsor is on the correct pathway for development of the right document at the right time, with the right people involved…*

2.3.1 Draft (Preliminary) Capability Development Document ("Draft CDD" or "dCDD") for Milestone A

Applicability of the Draft CDD. The Draft CDD outlines the minimum essential information for technology maturation and preliminary design for development of a materiel solution, or capability increment. A validated Draft CDD is an entrance criterion for development of the Request for Proposals (RFP) for the Technology Maturation and Risk Reduction (TMRR) phase of acquisition and for the Milestone A acquisition decision.

- ***A Draft CDD is limited in scope/content to support the Milestone A decision and TMRR Phase as a stand-alone JCIDS document; the Draft (Preliminary) CDD should not be confused with a draft version of the full CDD required later in the JCIDS process.***

- ***A "Draft CDD Annex" may be developed for an incremental program as a precursor to a CDD Annex to a previously-validated CDD. This strategy might be appropriate to support a Milestone A decision for entry into the TMRR phase of activity for a follow-on increment, block updgrade or other subsequent development/production based on a previously validated CDD.***

Entry Criteria (Prerequisites) for development of the Draft CDD. Prior to submitting an SPR Request for development of the Draft CDD, the following are both required: 1) A validated ICD and 2) An AoA Final Report approved by the designated AoA approval authority (see Annex A of this Guidebook), along with a signed Capability Decision Memorandum indicating the selected way forward (i.e., Milestone A)

- *The requirements document must be consistent with acquisition decision/direction to proceed to Milestone A for entry into the Technology Maturation and Risk Reduction phase of acquisition and other guidance or direction in the acquisition decision memo (ADM).*

- *In cases where an AF Sponsor proposes to use a Non-AF ICD or Non-AF AoA (or alternative analysis) to initiate the Draft CDD, the documents must be reviewed (and approved for use) by AFGK prior to submitting the SPR package for the associated Draft CDD.*

START. Pathway Proposal for the Draft CDD. Sponsors are expected to establish effective dialog with key stakeholders to fully develop the requirements document strategy and document writing team membership. Ideally, the Draft CDD Team evolves from the ICD Team and AoA Study Team membership.

Step 1. Solution Pathway Review (SPR) followed by a Document Writing Event. HAF-level review and AFA5/7D approval of the SPR Worksheet (in consultation with SAF/AQX) followed by a Sponsor-led document writing event is required for development of any AF-sponsored Draft CDD.

- The Sponsor (working through their IRSS POC and the AF/A5/7D SME) submits an SPR Worksheet via IRSS not later than 21 days prior to the start of the proposed document writing event. Refer to **AF/A5/7 Capability Development Guidebook Vol 2A** for details on the SPR.

During the review of the SPR Worksheet for a Draft CDD, Sponsors need to be prepared to discuss the document preparation and document writing team membership to include the following:

- Justification as to why an alternative agile/rapid process would not be more appropriate (e.g. MTA-804, Section 800 Software Pathway, AF Form 1067 Modification Proposal, etc.)

- Ensure entry criteria (pre-requisites) are met as described above

- Proposed title of a Draft CDD should reflect the particular system/solution approach

- Results of the AoA (or similar study) and preferred concept/alternative(s) for the solution.

- Specific gaps which are to be addressed in the Draft CDD.

- Status of technology readiness for identified critical technology elements
- Potential interdependencies with other AF or joint systems/solutions or other enablers.
- Intelligence supportability requirements and Critical Intel Parameters (CIPs).
- Affordability and schedule goals for the technology maturation phase of acquisition.
- Proposed document writing team membership (names and organization represented), location, dates and format (live or virtual), including any issues/concerns with support, funding, security, etc.
- Certification and Training (RMCT) and experience of Team Leaders and Acquisition POC(s)
- Proposed Plan of Action & Milestone (POAM) for the Draft CDD
- Expected timeframe/date when the Sponsor expects to submit the document for initial staffing
- Projected follow-on requirements oversight/reviews and interaction with stakeholders from the Joint Staff, other Services and OSD (if required)
- Specific recommendations for: proposed JSD, potential JPRs (if any) and proposed AF RDA

FORMAT. The Draft CDD contains the following sections (as a minimum, to comply with JCIDS format and content guidance), refer to the JCIDS Manual for additional detail on each section:

- Operational Context (CDD Section 1), with focus on the summary of the Service and joint concepts and/or CONOPS.
- Capability Discussion (CDD Section 3), with focus on the summary of the previously validated capability requirements being addressed in the Draft CDD.
- Program Summary (CDD Section 4), with focus on the synchronization of System of Systems (SoS) efforts across other CDDs, CPDs, and DCRs, and identification of dependencies on any legacy or future enabling capabilities.
- Development KPPs, KSAs, and APAs (CDD Section 5), with focus on the initial/draft performance attribute(s) resulting from the AoA or similar studies. Initial/draft attributes for the mandatory attributes, or justification for why they are not applicable, must also be provided.
- Other System Attributes (CDD Section 6), with focus on attributes which require significant efforts during the TMRR phase of acquisition.
- Joint interoperability (CDD section 7), with a focus on how the individual system will interoperate within the joint environment including any physical or net-ready interoperability effects on joint operations or operations with allies and partners. Additionally, Sponsors should include information that may enhance innovation

- Technology Readiness (CDD Section 11), with focus on identifying the critical technologies which need to be matured during the TMRR phase of acquisition. In cases where the acquisition strategy describes multiple increments of a capability solution, this section must describe the critical technologies to be matured for each increment.

Step 2. Document Review & Formal Staffing. After the Draft CDD is developed, the sponsoring MAJCOM/Agency POC submits the draft version of the document and supporting materials (via IRSS) for review by AF/A5/7DR and the AF/A5/7D SME followed by AFGK approval to initiate formal AF staffing via IRSS.

- See **Sections 3.1 thru 3.3** for more detail on Initial Document Review and formal JCIDS staffing.
    - *A Draft CDD is not normally required to be submitted to the Joint Staff for staffing.*
- Following completion of comment resolution, Sponsors normally conduct an internal review (as required) before the document goes forward for final validation and approval (see **Section 3.4.**)

Step 3. Validation and Approval of the Draft CDD. Following completion of sponsoring MAJCOM/Agency internal process, the Sponsor POC submits the updated, final validation-ready version of the document via IRSS to initiate eAFROC and validation staffing (see **section 3.5.**)

- *The eAFROC and Validation Staffing is not a commenting phase. The purpose is to route the document for final certifications/endorsements/attestations (as required) and for AF validation.*

The eAFROC review concludes with AF/A5/7D approval to 1) forward the package to the designated RDA (as determined by AF/A5/7D) for AF validation and 2) forward the document to the FCB to begin joint validation, when required.

- *A Draft CDD is not normally required to be submitted to the Joint Staff for FCB review.*

AF Validation Staffing. Decisions are documented in writing via a requirements decision memo (RDM) signed by the designated RDA, as determined by AF/A5/7D.

- *A Draft CDD is not normally required to be submitted to the Joint Staff for joint validation.*

Validation Criteria. During final review and validation, Sponsors need to be prepared to discuss:

- Mission area/portfolio overview to include: CONOPs, threats, and current versus required capabilities.
- Technology readiness with focus on the critical technology elements (CTEs) which need to be matured during the TMRR phase of acquisition
- Intelligence supportability requirements and Critical Intel Parameters (CIPs).

- Initial Technology Maturation KPPs, KSAs and APAs (including initial attributes for the mandatory attributes or justification for why they are not applicable) with supporting methodology, rationale and analysis for initial threshold (T) and objective (O) values.

- Sponsor should be able to identify which attributes (KPPs, KSAs, and APAs) are the primary drivers of cost, and technology/schedule risk and describe how affordability and risk reduction tradeoffs were considered as threshold/objective values were developed.

Completion/Exit Criteria for the Draft CDD. A copy of the final version of the Draft CDD with validation page, i.e. signed validation memo (AF RDM and/or JROCM, when required), posted in IRSS for archiving.

2.3.2. Capability Development Document (CDD) and CDD Annex

Applicability of the CDD. A CDD (or CDD Annex, as required) is used to outline an affordable increment(s) of militarily useful, logistically supportable, and technically mature capability and identifies the operational requirements necessary for design, production, fielding and sustainment the proposed system, or capability increment. The CDD or CDD Annex contains a carefully selected minimum set of prioritized system level performance attributes (KPPs, KSAs, and APAs), each of which have to be balanced against the constraints of cost, schedule, and risk.

- A validated CDD or CDD Annex is an entrance criterion necessary for the Development RFP Release Decision Point in support of the engineering & manufacturing development (EMD) phase of acquisition and the Milestone B decision as well as the subsequent Milestone C production decision and initial operational test and evaluation (IOT&E).

- **The CDD Annex is a streamlined document used to support development of a follow-on increment, block updgrade or other subsequent development/production based on a previously validated CDD. A CDD Annex allows Sponsors to provide documentation specific to what is different from the parent CDD.**

Entry Criteria (Prerequisites) for development of a CDD. Prior to submitting an SPR Request for development of a CDD, the following is required: 1) An AoA Final Report approved by the designated AoA approval authority (see Annex A of this Guidebook), along with a signed Capability Decision Memorandum indicating the selected way forward (i.e., Milestone B), or 2) a previously validated Draft CDD (if applicable, i.e. when proceeding from Milestone A/TMRR Phase)

- *In cases where an AF Sponsor proposes to use a Non-AF ICD and/or Non-AF AoA (or alternative analysis) to initiate the CDD, the documents must be reviewed (and approved for use) by AFGK prior to submitting the SPR package for the associated AF-sponsored CDD.*

- *The sponsoring MAJCOM/Agency must also show evidence that acquisition activities (e.g. technology development, preliminary design, etc.) are sufficiently complete to enable the document writing team to accurately determine requirements attributes for inclusion in the CDD.*

START. Pathway Proposal for the CDD. Sponsors are expected to establish effective dialog with key stakeholders to fully develop the requirements document strategy and document writing team membership. Ideally, the CDD Team evolves from the ICD Team and the AoA Study Team membership.

Step 1. Solution Pathway Review (SPR) followed by a Document Writing Event. HAF-level review and AF/A5/7 approval of the SPR Worksheet (in consultation with SAF/AQX) followed by a Sponsor-led document writing event is required for development of any AF-sponsored CDD.

- The Sponsor (working through their IRSS POC and the AF/A5/7D SME) submits an SPR Worksheet to AF/A5/7DR via IRSS not later than 21 days prior to the start of the proposed document writing event. Refer to **AF/A5/7 Capability Development Guidebook Vol 2A** for details on the SPR.

During the review of the SPR Worksheet for the CDD (or CDD Annex), Sponsors need to be prepared to discuss the document preparation and document writing team membership to include the following:

- Justification as to why an alternative agile/rapid process would not be more appropriate (e.g. MTA-804, Section 800 Software Pathway, AF Form 1067 Modification Proposal, etc.)
- Ensure entry criteria (pre-requisites) are met as described above
- Proposed nomenclature; the title of a CDD should reflect the particular system/solution and increment (if applicable), for example:
    - *B-2 EHF SATCOM and Computer Upgrade CDD* (for a modernization program)
    - *T-X CDD, KC-X CDD* (for a recapitalization or replacement program)
- Results of the AoA (or similar study) and preferred concept for the solution.
- The scope for the proposed strategy/solution (e.g. single increment, multiple increments), and which gaps are to be mitigated in the CDD/increment.
- Potential interdependencies with other AF or joint systems/solutions or other enablers.
- Current/projected Technology Readiness and Manufacturing Readiness levels.
- Timeframe for capability fielding (IOC/FOC) and how it is to be sustained.
- Intelligence supportability requirements and Critical Intel Parameters (CIPs).
- Proposed document writing team (names and organization represented), location, dates and format (live or virtual), including any issues/concerns with support, funding, security, etc.
- Certification and Training (RMCT) and experience of Team Leaders and Acquisition POC(s)
- Proposed Plan of Action & Milestone (POAM) for completion of the CDD or CDD Annex
- Expected timeframe/date when the Sponsor expects to submit the document for initial staffing
- Projected follow-on requirements oversight/reviews and interaction with stakeholders from the Joint Staff, other Services and OSD (if required)
- Specific recommendations for: proposed JSD, potential JPRs (if any) and proposed AF RDA

Step 2. Document Review & Formal Staffing. After the CDD or CDD Annex is developed, the sponsoring MAJCOM/Agency POC submits the draft version of the document and supporting materials (via IRSS) for review by AF/A5/7DR and the AF/A5/7D SME followed by AFGK approval to initiate formal JCIDS staffing via IRSS and KM/DS.

- See **Sections 3.1 thru 3.3** for more detail on Initial Document Review and formal JCIDS staffing.
    - *For JCIDS documents designated by the Joint Staff Gatekeeper as "JCB Interest" or "JROC Interest", the document must strictly comply with JCIDS Manual format and content guidance. For JCIDS documents designated as "Joint Information", Sponsors should comply with JCIDS format to the max extent practical, but strict compliance is not necessary or mandatory.*

- Following completion of comment resolution, Sponsors normally conduct an internal review (as required) before the document goes forward for final validation and approval (see **Section 3.4.**)

Step 3. Validation and Approval of the CDD or CDD Annex. Following completion of sponsoring MAJCOM/Agency internal process, the Sponsor POC submits the updated, final validation-ready version of the document to AF/A5/7DR via IRSS to initiate eAFROC and validation staffing (see **section 3.5.**)

- *The eAFROC and Validation Staffing is not a commenting phase. The purpose is to route the document for final certifications/endorsements/attestations (as required) and for AF validation.*
- Specific AF supporting materials for a CDD or CDD Annex:
    - Testability Memo. The Sponsor ensures that the appropriate Lead Operational Test Organization (e.g. AFOTEC or Lead Command OTO, etc.) provides evidence (via official memo to AF/A5D) that capability requirements and proposed system level performance attributes as described in the document have been reviewed and determined to be testable and measurable (i.e. for determining suitability and effectiveness).

    - Feasibility Review. The Sponsor works with the appropriate acquisition program representative such as AFMC/A5R (for programs under AFLCMC or AFNWC); SAF/SP and USSF/A55 (for programs under SMC); or a Joint Program Office, Executive Steering Board, etc. (for other programs), etc. to provide written evidence (e.g. official memo, copy of eSSS, meeting minutes, etc.) indicating the capability requirements and proposed system level performance attributes as described in the document have been reviewed by the acquisition community and determined to be feasible (i.e. technically achievable and executable within the estimated schedule and cost).

        - *"Feasibility" is supposed to present the viewpoint of the Program Manager (PM) who will be responsible for executing the program; dissenting viewpoints of the PM and/or PEO need to be included and explained, as applicable. Any adverse comments regarding feasibility need to be adjudicated prior to submitting the document for final validation and approval by the requirements decision authority.*

        - *Subsequent to the feasibility review, any changes/revisions to the substance of the final document (e.g. changes approved during eAFROC, or JCB/JROC review) that alter the substance of the system attributes, cost, schedule or quantity, require an updated feasibility review, prior to final validation.*

The eAFROC review concludes with AF/A5/7D approval to 1) forward the package to the RDA (as determined by AF/A5/7D) for AF validation/approval and 2) forward the document to the FCB to begin joint validation, when required.

- *In an effort to expedite the validation process, AF documents may be submitted to the Joint Staff for review by the FCB Working Group(s) and/or FCB immediately following the eAFROC and AF/A5/7D approval – i.e. FCB review may be concurrent with AF validation staffing to the AF RDA.*

AF Validation Staffing. Decisions are documented in writing via a requirements decision memo (RDM) signed by the designated RDA, as determined by AF/A5/7D.

- *AF validation and approval includes both the AF decision/direction regarding validation of the document and the approval to forward to JCB and/or JROC for Joint Validation, when applicable -- i.e. a decision memo, signed by the RDA is required prior to releasing the document beyond the FCB level for final joint validation by the JCB and/or JROC.*

Validation Criteria. During final review and validation, Sponsors need to be prepared to discuss:

- Mission area/portfolio overview to include threat and current capabilities versus required capabilities.
- CONOPS, OV-1 and key linkages to other enabling capabilities and program dependencies.
- Program description - outline what gaps are to be mitigated, by increment (if applicable)
- Portfolio affordability review to include development, procurement and operations and sustainment cost goals/caps and current funding.
- Intelligence supportability requirements and Critical Intel Parameters (CIPs), as required.
- Energy Supportability Analysis, if required.
- KPPs, KSAs, APAs (including mandatory KPPs/KSAs or justification for why they are not applicable) with supporting rationale and analysis for threshold (T) and objective (O) values.
- Sponsor should be able to identify which attributes (KPPs, KSAs, and APAs) are the primary drivers of cost, and technology/schedule risk and describe how affordability and risk reduction tradeoffs were considered as threshold/objective values were developed.
- Joint interoperability and effects on joint operations or operations with allies and partners
- Technology and Manufacturing readiness levels.
- Status of required AF or Joint Certifications and Endorsements.
- Proposed schedule (IOC and FOC details) and planned operational quantities.

Completion/Exit Criteria for the CDD. A copy of the final version of the document with validation page, i.e. the signed validation memo (AF RDM and/or JROCM, when required), posted in IRSS and submitted to the Joint Staff for archiving in KM/DS.

2.3.3. CDD Update

Scenario 1. Program Changes and Trades, "Tripwire", etc. A CDD update/revalidation is required if a change to KPP(s) is necessary after validation, the program experiences a 10% or greater growth over their current baseline or 25% over their original baseline as defined in the Acquisition Program Baseline (APB), a 10% or greater reduction in operational inventory quantities from the previously stated CDD procurement numbers, or a 12-month or greater schedule slip of IOC or FOC from the previously stated CDD schedule (IOC or FOC) date.

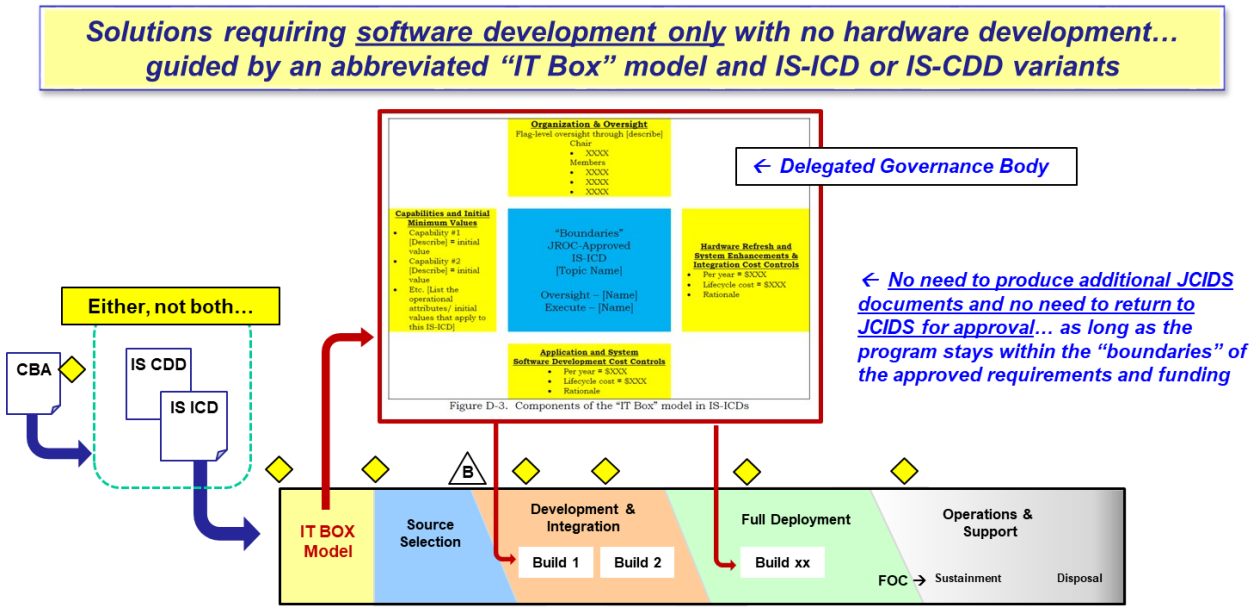
Scenario 2. Program Updates for Milestone C, Production Phase. A previously validated and approved CDD or a an updated and revalidated CDD is an entrance criterion necessary for the RFP release in support of the production phase of acquisition and the Milestone C decision. If changes to a previously validated CDD are necessary to support the Milestone C decision and entry into the production phase, an updated CDD may be developed and staffed to obtain re-validation of refined requirements and system level attributes (KPPs, KSAs, APAs and other attributes).

- *For any proposed changes to a previously validated CDD, the Sponsor must contact AF/A5/7DR to determine the appropriate level of AF review and approval.*
- *Proposed changes to KPPs, KSAs, APAs and/or other attributes must be accompanied by a funding strategy and schedule that have been coordinated with the appropriate program office.*
- *Any document update and revalidation must also include an updated feasibility and testability review, as described above.*

JCIDS VARIATIONS FOR INFORMATION SYSTEMS

2.4. Information Systems Variants of JCIDS Documents (IS-ICD and IS-CDD)

Figure 2.4 IT Box Model -- Overview



Applicability of the IT-Box Model. The IT-Box Model, as described in the JCIDS manual, provides IS programs greater flexibility to incorporate evolving technologies and achieve faster responses from requirements validation processes by calling for fewer iterations through the JCIDS process. The IS variants allowed by the IT-Box Model (i.e. IS-ICD and IS-CDD) are narrowly focused on software development efforts and are not appropriate for hardware development or for capturing overarching capability requirements. See the JCIDS Manual for additional detail.

- *To comply with JCIDS guidance, when a program is designated as either a "MAIS" or "MDAP", a regular ICD followed by an IS-CDD or a regular CDD must be used.*

- *A Defense Business System is an Information System that is not part of a weapon system, or directly involved in the fulfillment of military or intelligence missions. Defense Business Systems are not subject to JCIDS and are not normally reviewed by AF/A5/7D.*

The IS-ICD and IS-CDD are variants of the regular ICD and CDD implementing the IT Box Model used to document capability requirements and associated capability gaps where the intended capability solution approach involves research, development, and acquisition of applications system software, and the projected lifecycle costs exceed $15M.

- *All hardware associated with the IT Box Model must be COTS/GOTS and hardware modification is restricted to that necessary for system integration and enhancements to meet requirements specified in the IS-ICD or IS-CDD or for hardware refresh due to obsolescence.*

Entry Criteria (Prerequisites) for development of an IS-ICD or IS-CDD. Prior to submitting an SPR Request for development of an AF-sponsored IS-ICD or IS-CDD, the following is required: 1) A CBA or equivalent study (for an IS-ICD) or AoA (for IS-CDD) approved by the designated approval authority (see Vol 2C for CBA guidance and Annex A of this Guidebook for AoA guidance), with official AF recommendation on the way forward indicating approval for IS-ICD or IS-CDD development) or 2) AF/A5/7D approval to use any non-AF study (CBA or similar study, or AoA)

- *In cases where an AF Sponsor proposes to use a Non-AF CBA (or similar study) to initiate the solution development, the CBA/study must be reviewed (and approved for use) by AF/A5/7D prior to submitting the SPR package for the associated AF-sponsored IS-ICD or ICD-CDD.*

- *The CBA/analysis must also provide rationale and analysis to justify gap mitigation via an information systems solution.*

START. Pathway Proposal for an IS-ICD or IS-CDD. AF Sponsors are encouraged to use the "IT-Box" Model for all programs that meet the criteria. For capability requirements likely to be addressed by a mix of IS and non-IS solutions, Sponsors must use the regular ICD format and consider an IS-CDD after ICD validation to streamline the IS portion of solution development.

- *Per the JICDS Manual, the key difference in usage of IS-ICDs and IS-CDDs is whether the AoA takes place before or after delegating authorities under the IT Box. Another option would be to develop an "ICD Annex" on the previously validated ICD to include the IT-Box Model (in lieu of developing an IS-CDD), contact AF/A5/7DR if considering this option.*

- For an IS-ICD to be appropriate, it must be very clear from the CBA/study that an IS solution is the only viable approach to be considered for the particular gap(s). Any AoA-type analysis after delegating authorities under the IT Box would therefore only need to consider IS alternatives.
- An IS-CDD is more appropriate when an IS solution is not presumed at the time the ICD is validated, or when other materiel and/or non-materiel solution(s) are expected to be necessary along with the IS solution. The IS-CDD is a result of the AoA conducted in the MSA phase and represents an IS solution for part or all of the capability requirements validated in the ICD.

Step 1. Solution Pathway Review (SPR) followed by a Document Writing Event. HAF-level review and AF/A5/7D approval of the SPR Worksheet (in consultation with SAF/AQX) followed by a Sponsor-led document writing event is required for development of any AF-sponsored IS-ICD or IS-CDD.

- The Sponsor (working through their IRSS POC and the AF/A5/7D SME) submits an SPR Worksheet to AF/A5/7DR via IRSS not later than 21 days prior to the start of the proposed document writing event. Refer to **AF/A5/7 Capability Development Guidebook Vol 2A** for details on the SPR.

During the review of the SPR Worksheet for the IS-ICD or IS-CDD, Sponsors need to be prepared to discuss the document preparation and document writing team membership to include the following:

- Justification as to why an alternative agile/rapid process would not be more appropriate (e.g. Section 800 Software Pathway, AF Form 1067 Modification Proposal, etc.)

- Ensure entry criteria (pre-requisites) are met as described above

- Review proposed nomenclature; the title should reflect the particular system/solution, e.g.:

- *TAC-P Close Air Support (CAS) IS-ICD* (for a IS follow-on to a platform upgrade program)
- *JSpoC Mission System (JMS) Inc III IS-CDD* (for an incremental MAIS program)

- Specific gaps which are to be mitigated in the IS-ICD or IS-CDD.
- Possible interdependencies with other AF or joint systems/solutions or other enablers
- Timeframe when the capability needs to be delivered (IOC/FOC)
- Intelligence supportability requirements and Critical Intel Parameters (CIPs).
- Proposed document writing team (names and organization represented), location, dates and format (live or virtual), including any issues/concerns with support, funding, security, etc.
- Certification and Training (RMCT) and experience of Team Leaders and Acquisition POC(s)
- Proposed Plan of Action & Milestone (POAM) with a timeline for the IS-ICD or IS-CDD
- Expected timeframe/date when the Sponsor expects to submit the document for initial staffing
- Projected follow-on requirements oversight/reviews and interaction with stakeholders from the Joint Staff, other Services and OSD (if required)
- Specific recommendations for: proposed JSD, potential JPRs (if any) and proposed AF RDA

Step 2. Document Review & Formal Staffing. After the document is developed, the sponsoring MAJCOM/Agency POC submits the draft version of the document and supporting materials (via IRSS) for review by AF/A5/7DR and the AF/A5/7D SME followed by AFGK approval to initiate formal JCIDS staffing via IRSS and KM/DS. See **Sections 3.1 thru 3.3** for more detail on Initial Document Review and formal JCIDS staffing.

- Following completion of comment resolution, Sponsors normally conduct an internal review (as required) before the document goes forward for final validation and approval (see **Section 3.4.**)

Step 3. Validation and Approval of the IS-ICD or IS-CDD. Following completion of sponsoring MAJCOM/Agency internal process, the Sponsor POC submits the updated, final validation-ready version of the document to AF/A5/7DR via IRSS to initiate eAFROC and validation staffing (see **section 3.5.**)

- *The eAFROC and Validation Staffing is not a commenting phase. The purpose is to route the document for final certifications/endorsements/attestations (as required) and for AF validation.*

The eAFROC review concludes with AF/A5/7D approval to 1) forward the package to the designated RDA (as determined by AF/A5/7D) for AF validation/approval and 2) forward the document to the FCB to begin joint validation, when required.

- *In an effort to expedite the validation process, AF documents may be submitted to the Joint Staff for review by the FCB Working Group(s) and/or FCB immediately following the eAFROC and AF/A5/7D approval – i.e. FCB review may be concurrent with AF validation staffing to the RDA.*

AF Validation Staffing. Decisions are documented in writing via a requirements decision memo (RDM) signed by the designated RDA, as determined by AF/A5/7D.

- *AF validation and approval includes both the AF decision/direction regarding validation of the document and the approval to forward to JCB and/or JROC for Joint Validation, when applicable -- i.e. a decision memo, signed by the AF RDA is required prior to releasing the document beyond the FCB level for final joint validation by the JCB and/or JROC.*

Validation Criteria. During final review and validation, Sponsors need to be prepared to discuss:

- The proposed/approved governance structure (copy of organizational charter).
- The methodology/rationale for the initial minimum values for each capability requirement identified in the document with reference to the key supporting analysis.
- Review of costs, funding and schedule.
- CONOPS Summary that provides the operational context for understanding the need and the solution trade space. This summary should include: desired operational outcomes, effects produced to achieve outcome, intelligence support needs, how capability complements Joint Forces and enabling capabilities, as required.
- Description of the capability gap(s).

Completion/Exit Criteria for the IS-ICD or IS-CDD. A copy of the final version of the document with validation page, i.e. the signed validation memo (AF RDM and/or JROCM, when required), posted in IRSS and submitted to J8 for archiving in KM/DS.

- *The status of programs using the IT-Box Model is normally reviewed by the Lead FCB every two years. Sponsors submit the topic for AF/A5/7D review prior to FCB review.*

IS-ICD or IS-CDD Revalidation. An IS-ICD or IS-CDD requires revalidation in the following situations:

- If any new capability requirements need to be added beyond the scope of the previously validated document, per the original validation memo.
- If program development and integration or sustainment funding increases by 10% or more than what is identified in the document, per the original validation memo.

SECTION 3. STAFFING PROCEDURES for JCIDS DOCUMENTS (not for CBA or AoA)

Purpose/Scope. This section provides a general description of the document staffing procedures and guidance common to all JCIDS documents. Air Force procedures implement, but does not replace, the over-arching JCIDS process guidance. Document-specific details are located in ***Section 2***.

3.1. Initial JCIDS Document Review [by AFGK]

Following the document writing event, the Sponsor (working through their IRSS POC and the AF/A5/7D SME) submits the draft version of the document via IRSS for review by the AF/A5/7D SME and AF/A5/7DR followed by AFGK approval to enter into formal staffing via IRSS and KM/DS. AFGK decision is documented in writing (e.g., memo, email, staff summary, etc.) and archived in IRSS.

- *For JCIDS documents with the potential to be designated by the Joint Staff Gatekeeper as "JCB Interest" or "JROC Interest", the document must strictly comply with JCIDS Manual format and content guidance. For JCIDS documents likely to be designated as "Joint Information", Sponsors should comply with JCIDS format to the max extent practical, but strict compliance is not necessary or mandatory. The focus should be to make sure the documents capture the necessary information at the appropriate level of detail to support decision making and stakeholder coordination.*

Document submission is accompanied by a memo signed by the Sponsor's requirements policy office (O-6 level) verifying the document has been reviewed at the MAJCOM (or equivalent) level for compliance with initial review criteria listed below:

- Denial of entry into formal staffing is based primarily on failure to meet the Joint Staff Gatekeeper initial review criteria, as described in the JCIDS Manual. This includes the following:
    - CBA, Studies or other supporting data missing or not provided in IRSS and KM/DS
        - *IRSS POCs should link to the supporting documents via IRSS or upload the supporting files to the document record.*
    - Predecessor document missing or not provided in IRSS and KM/DS
        - *IRSS POCs should link to the predecessor documents via IRSS or upload the supporting files to the document record.*
    - Exceeding the allowable page count – or achieving page count by not using 12 pitch Times New Roman font and 1" margins
    - Missing or incomplete DoDAF Architecture Views
        - *The appropriate AF and Joint Staff document reviewers need to be granted access to ALL architecture views.*
    - Incomplete or unclear representation of capability gaps.
        - *Except in rare cases, the capability requirement is not the same as the capability gap. In most cases, there is some level of legacy capability, and the gap must be presented as the difference between the legacy capabilities and the capability requirements, along with the operational impact or risk.*
    - Values specified as "TBD" or unquantified descriptions in the definition of operational attributes (in the ICD) or KPPs/KSAs/APAs (in the CDD/CDD Annex).

        - *Sufficient analysis must be available to support all proposed initial objective values (in ICDs) and proposed threshold/objective values (in CDDs/CDD Annexes)*
    - Omission of any of the mandatory KPPs without appropriate justification.
    - Incomplete or missing life cycle cost data
    - Unclear or omitted discussion of interdependencies between the proposed capability and enabling capabilities, or other capabilities within System of Systems approach.

- *The AFGK is the approval authority for entry into formal staffing, but the decision may be delegated to the AF/A5/7DR Branch Chief level, unless critical issues or concerns require O-6 level intervention and resolution prior to submission or acceptance by the Joint Staff Gatekeeper.*

- *Document rejection prevents initiation of the joint staffing process until corrective actions are taken, and the revised document is accepted by the Joint Staff Gatekeeper.*

3.2. Formal JCIDS Staffing [in IRSS and KM/DS]

Following AFGK initial document review, the Sponsor updates the document as required/directed and submits a staffing-ready draft version of the document to AF/A5/7DR via IRSS to initiate formal JCIDS staffing. AF/A5/7DR assigns a formal tasking in IRSS for formal AF staffing/commenting and forwards the document to the Joint Staff Gatekeeper via KM/DS for initial review and formal (joint) document review and commenting.

Regardless of potential Acquisition Category (ACAT) or proposed requirements validation authority, AF-sponsored JCIDS documents are submitted to the Joint Staff Gatekeeper to determine the appropriate staffing process and validation authority.

- *Document Checklists (based on JCIDS Manual format and content) are maintained on the AF/A5/7DR Portal page and in IRSS, to assist document developers and document reviewers. Other specific criteria for document review and approval is specified in **Section 2** of this Guidebook.*

Joint Certifications/ Endorsements. Depending on the nature of the requirement(s) (e.g., mandatory KPPs, intelligence supportability, etc.), Sponsors may need to secure additional joint certifications/endorsements during the staffing process. Refer to the JCIDS Manual for additional guidance on the joint certification/endorsement process.

Sponsors are encouraged to work through the HAF functional (e.g., AF/A2 (Threat and Intel), AF/A3T (Operational Training Infrastructure), AF/A6 (Net Ready attribute), SAF/IEN (Energy KPP), etc.), along with the AF/A5/7D SME and FCB reps to engage JCIDS process stakeholders at any time prior to formal staffing to help ensure documents are developed in a way that does not require significant rework during staffing. This is particularly important when a Sponsor intends to request a waiver or exemption for any certifications/endorsements (e.g., Sponsors proposing exemptions to any of the mandatory attributes)

- *The JCIDS Manual contains separate sections (Annexes to Enclosure D) which provide content guidance to Sponsors for each of the mandatory attributes, intelligence supportability, and weapons safety as part of document development (i.e. writing guides).*

- *The JCIDS Manual contains separate sections (Annexes to Enclosure F) which provide certification/endorsement guidance for review of mandatory attributes, intelligence supportability, weapons safety, and DOTMLPF-P as part of document staffing (i.e. reviewer guides).*

Document Commenting Phase. AF reviewers submit comments per the IRSS tasking instructions. Identify comments as "critical," "substantive," or "administrative" as described below. Proper justification for critical or substantive comments must be provided in the CRM.

- *In order for data to upload properly, comments must be submitted using the Comment Resolution Matrix (CRM) template as provided (i.e. no alterations or deletions to the template).*

- Critical. A critical comment indicates a "non-concur" position on the document until the comment is satisfactorily resolved. Critical comments should be restricted to critical issues regarding KPPs and KSAs, concepts of operations, violation of policies and directives, and other fundamental issues concerning cost, schedule or performance that would bring into question the rationale for the document to be approved.

    - *Per JCIDS Guidance, critical comments may also address text or issues which would otherwise be considered Substantive, but if not corrected would prevent the document from serving its intended purpose, lead to the withholding of a mandatory certification or endorsement, or result in disapproval by the validation authority.*

    - *To comply with JCIDS guidance, any organization submitting a critical comment must obtain GO/SES endorsement from their organization prior to submitting comments in IRSS. The name of the GO/SES endorser is required in the IRSS task response and is captured in the IRSS coordination report.*

- Substantive. A substantive comment indicates a "Concur, with comment" response to the staffing, but scope and quantity of several substantive comments may also lead to a "Non-concur" response to the staffing until satisfactorily adjudicated. A substantive comment addresses minor or moderate changes to correct or clarify minor factual inaccuracies, information that is incorrect, misleading, confusing, or inconsistent with other sections.

- Administrative. An administrative comment addresses typographical, formatting, or grammatical errors or changes to writing style to make the document easier to read and understand without substantively changing the content of the document.

3.3. Comment Resolution [led by the Sponsor]

At the completion of the formal staffing phase, AF/A5/7DR consolidates all comments for AF-sponsored documents into two CRMs; one CRM contains comments from AF review and the second CRM contains comments from the Joint review. Sponsors use the CRMs to record adjudication action taken in response to each comment. The Sponsor must show the rationale for not fully accepting a critical or substantive comment.

Timing/Suspense: Per the JCIDS Manual procedures, the Sponsor has 30 calendar days to adjudicate comments. Upon completion of comment adjudication (or at the end of the 30 days), the Sponsor is expected to submit the updated draft version of the document for validation and approval, along with disposition of all comments and status of any unresolved comments.

- *Comments against AF-sponsored documents designated as JROC interest or JCB Interest must be adjudicated to the final satisfaction of the FCB Chair (on behalf of the JCB/JROC) and the Joint Staff certifying or endorsing organizations (e.g., for mandatory attributes, Intel, etc.)*

- *Comments against AF-sponsored documents designated as Joint Information must be adjudicated to the final satisfaction of the validation authority (i.e., designated AF RDA).*

3.4. MAJCOM/Agency Sponsor Internal Approval/Endorsement

Following completion of comment resolution, MAJCOM/Agency Sponsors conduct an internal review (as required) to approve the document before it goes forward for final HAF-level review and validation staffing.

MAJCOM/Agency Sponsor Endorsement. Documents submitted for formal validation and approval are accompanied by a transmittal letter signed by:

  - Commander (CC) for documents designated for CSAF approval
  - Director of Requirements (5/8/9) for all other documents

- *In an effort to expedite the staffing process, Sponsors may submit documents to AF/A5/7DR to request initiation of validation and approval (i.e., proceed with the eAFROC) concurrently with staffing required to obtain the MAJCOM/Sponsor endorsement memo.*

- *The MAJCOM/Sponsor endorsement/transmittal letter must be obtained prior to initiating the AF validation staffing portion, i.e., the package will not be submitted to AF/A5/7D for approval to move forward until all eAFROC items (listed below) are complete.*

3.5. Validation and Approval [AF and Joint level]

Following completion of internal MAJCOM/Agency Sponsor process, the Sponsor POC submits the updated, final validation-ready version of the document to AF/A5/7DR via IRSS to initiate eAFROC and validation staffing.

- *The eAFROC and Validation Staffing is not a commenting phase. The purpose is to route the document for final certifications/endorsements/attestations (as required) and for AF validation.*

- *Validation and Approval criteria are tailored to support the document. See **Section 2** for further detail on the specific approval and/or validation criteria for each type of document.*

eAFROC Review: AF validation and approval begins with stakeholder review (conducted as an eAFROC in IRSS). The eAFROC affords a final review by all stakeholders to "vote" on whether they agree the document is ready to go forward for final AF and/or joint validation, including:

- Ensure comments have been properly adjudicated, or proper justification to proceed with unresolved comments (e.g., appeal to the validation authority, adjudicate at FCB/JCB, etc.)

- Ensure comment adjudication has not created secondary issues that would preclude validation

- Provide and/or ensure any required certifications, endorsements or attestations (or waivers) are obtained prior to validation

- *To comply with JCIDS, for documents designated as "Joint Integration", Joint Staff certifications, endorsements (or waivers) must be obtained prior to AF validation. This includes proper adjudication of comments made my Joint Staff certifiers/endorsers during staffing.*

- Ensure MAJCOM/Agency Sponsor endorsement is obtained prior to initiating AF validation staffing

The eAFROC review concludes with AF/A5/7D approval to 1) forward the package to the designated AF RDA (as determined by AF/A5/7D) for AF validation staffing and 2) forward the document to the FCB to begin joint validation, when required.

- *In an effort to expedite the validation process, AF documents may be submitted to the Joint Staff for review by the FCB Working Group(s) and/or FCB immediately following the eAFROC and AF/A5/7D approval – i.e. FCB review may be concurrent with AF validation staffing to the AF RDA.*

AF Validation Staffing. Formal decisions are documented in writing (i.e., requirements decision memo, RDM) and approved by the CSAF (for documents associated with any program designated as a Major Defense Acquisition Program "MDAP") or the designated RDA (for all other documents), as determined by AF/A5/7D.

- *AF validation and approval includes both the AF decision/direction regarding validation of the document and the approval to forward to JCB and/or JROC for Joint Validation, when applicable. AF approval (i.e., a decision memo, signed by the AF RDA) is required prior to releasing the document beyond the FCB level for final joint validation by the JCB and/or JROC.*

JCIDS Document Completion. After AF validation and approval (and joint validation, when required) the Sponsor provides a copy of the final version of the document via IRSS. AF/A5/7DR ensures the final document (with signed validation/decision memo attached) along with all supporting material is posted in IRSS. AF/A5/7DR also forwards a copy to the Joint Staff Gatekeeper for archiving in KM/DS (required by JCIDS, regardless of ACAT or JSD).

- *Completion (exit) criteria are tailored to support the document. See **Section 2** for further detail on the specific completion criteria for each type of document.*

- *The document is the official document of record and must be updated to reflect any changes made during formal validation and review.*

APPENDIX 1 - GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

HAF MD 1-7, *Deputy Chief of Staff for Strategy, Integration and Requirements (AF/A5)*

AFI 63-101/20-101, *Integrated Life Cycle Management [Acquisition and Sustainment]*

AFI 99-103, *Capabilities-Based Test and Evaluation*

AFPD 10-9, *Lead Command Designation and Responsibilities for Weapon Systems*

CJCSI 5123, *Charter of the Joint Requirements Oversight Council* [JROC] *and Implementation of JCIDS*

Manual for the Operation of Joint Capabilities Integration and Development System

DoDD 5000.01, *Defense Acquisition System (DAS) [under revision]*

DoDI 5000.02, *Adaptive Acquisition Framework*

DoDI 5000.02T, *Operation of the Defense Acquisition System ["Transitional" - under revision]*

AF/A5/7 Capability Development Guidebook, Vol 2C CBA

AF/A5/7 Capability Development Guidebook, Vol 2D, Annex A (AoA)

AF/A5/7DR Requirements Page on the AF Portal (*requires AF Portal sign-on to gain access)*:
https://www.my.af.mil; navigate via "Organizations", then type in "A5DR Requirements".

JCIDS Manual (requires CAC for access): **https://www.intelink.gov/wiki/JCIDS Manual**

Terms

The purpose of this glossary is to help the reader understand the terms listed as used in this publication. It is not intended to encompass all terms. See pertinent Joint and AF specific publications for standardized terms and definitions for DoD and AF use.

Affordability – The degree to which the life-cycle cost of an acquisition program is in consonance with the long-range modernization, force structure, and manpower plans of the individual DoD Components (military departments and defense agencies), as well as for the Department as a whole. Affordability constraints force prioritization of requirements, drive performance and cost trades, and ensure that unaffordable programs do not enter the acquisition process.

Capability - The ability to complete a task or execute a course of action under specified conditions and level of performance through combinations of means and ways across the doctrine, organization, training, materiel, leadership and education, personnel, facilities, and policy (DOTMLPF-P) to perform a set of tasks to execute a specified course of action.

Capability Gap - The inability to meet or exceed a capability requirement, resulting in an associated operational risk until closed or mitigated. The gap may be the result of no fielded capability, lack of proficiency or sufficiency in a fielded capability solution, or the need to replace a fielded capability solution to prevent a future gap. [CJCSI 5123]

Capability Requirement (or Requirement, Need) - A capability which is required to meet an organization's roles, functions, and missions in current or future operations. To the greatest extent possible, capability requirements are described in relation to tasks, standards and conditions in accordance with the Universal Joint Task List or equivalent DoD Component Task List. [CJCSI 5123]

Capability Solution - A materiel solution or non-materiel solution to satisfy one or more capability requirements (or needs) and reduce or eliminate one or more capability gaps

Cost-Capability Analysis (CCA) – A process that helps define the trade space between cost, schedule/technology risk and performance and how it relates to the "value to the warfighter."

DOTMLPF-P – Doctrine, Organization, Training, Materiel, Leadership and Education, Personnel, Facilities, and Policy. Occasionally, the Materiel area is shown as a "little m" to indicate a non-developmental material approach or use of existing materiel in a new way.

Feasible - A requirement that is technically achievable and executable within the estimated schedule and budgeted life cycle cost.

Full Operational Capability (FOC) - Full attainment of the capability to effectively employ a weapon, item of equipment or system of approved specific characteristics, which is manned and operated by a trained, equipped and supported military force or unit. The specifics for any particular system FOC are defined in that system's Capability Development Document and Capability Production Document.

Initial Operational Capability (IOC) - That first attainment of the capability to employ effectively a weapon, item of equipment, or system of approved specific characteristics with the appropriate number, type, and mix of trained and equipped personnel necessary to operate, maintain, and support the system. It is normally defined in the CDD

Lead Command - Lead command designation establishes advocacy for weapon systems during their life cycle and clarifies responsibilities for all using and supporting organizations. The designated lead command provides a primary input into the process of developing and maintaining a force structure with a balance of complementary capabilities. Lead command designation is not exclusive to major commands (MAJCOMs); Field Operating Agencies (FOAs) and Direct Reporting Unites (DRUs) may also be designated as Lead Commands. [Governed by AFPD 10-9]

Materiel Development Decision (MDD) - The MDD review is the formal entry point into the acquisition management system and is mandatory for all programs. The MDD is based on a validated requirements document (an ICD or equivalent requirements document) and the completion of the Analysis of Alternatives (AoA) Study Guidance and the AoA Study Plan. This decision directs execution of the AoA, and authorizes entry into the Materiel Solution Analysis Phase of acquisition.

Materiel Capability Solution - Correction of a deficiency, satisfaction of a capability gap, or incorporation of new technology that results in the development, acquisition, procurement, or fielding of a new item (including ships, tanks, self-propelled weapons, aircraft, and related software & data, spares, repair parts,

and support equipment, but excluding real property, installations, and utilities). In the case of family of systems and system of systems approaches, an individual materiel solution may not fully satisfy a necessary capability gap on its own. [CJCSI 5123]

Non-Materiel Solution - Changes to doctrine, organization, training, (previously fielded) materiel, leadership and education, personnel, facilities, or policy implemented to satisfy one or more capability requirements (or needs) and reduce or eliminate one or more gaps, without the need to develop or purchase new materiel capability solutions. The "materiel" portion is restricted to existing equipment, by use of existing materiel in alternate applications as an adaptation or repurposing not originally envisioned.

Objective Value - The objective value is only applicable when a higher level of performance (above the threshold value) represents a significant increase in operational utility. Context must be provided to articulate what specific operational impact or risk is further mitigated if the performance were to reach the objective value. If applicable, the objective value must be feasible and achievable but may involve higher risk in life cycle cost, schedule or technology. Performance above the objective value does not warrant additional expenditure. [JCIDS Manual]

Threshold Value - A minimum acceptable operationally effective or suitable value below which the utility of the system becomes questionable. The threshold value for a performance attribute (KPP, KSA or APA) must also be considered achievable within the projected life cycle cost, schedule and technology at low to moderate risk. [JCIDS Manual]

Validation – The review and approval of capability requirement documents by a designated validation authority. The JROC is the ultimate validation authority for capability requirements unless otherwise delegated to a subordinate board or to a designated validation authority in a Service, CCMD, or other DOD Component. [CJCSI 5123]

Abbreviations and Acronyms

ACAT—Acquisition Category

ADM—Acquisition Decision Memorandum

AFGK—AF Gatekeeper

AoA—Analysis of Alternatives

CBA—Capabilities-Based Assessment

CDD—Capability Development Document

COTS—Commercial off the Shelf

CPD—Capability Production Document

CRM—Comment Resolution Matrix

DCR—DOTmLPF-P Change Recommendation

DP – Development Planning

EMD—Engineering & Manufacturing Development

FCB—Functional Capabilities Board

GOTS—Government off the Shelf

ICD—Initial Capabilities Document

IRSS—Information & Resource Support System

JCB—Joint Capabilities Board

JROC—Joint Requirements Oversight Council

JROCM—JROC Memorandum

JSD—Joint Staffing Designator

KM/DS—Knowledge Management & Decision Support (system)

KPP—Key Performance Parameter

KSA—Key System Attribute

LRIP—Low-Rate Initial Production

MDA—Milestone Decision Authority

OAS—Office of Aerospace Studies

OT&E—Operational Test and Evaluation

PM—Program Manager

RFP—Request for Proposal

SPR—Solution Pathway Review

S&T – Science & Technology

T&E—Test and Evaluation