AF/A5/7
CAPABILITY DEVELOPMENT GUIDEBOOK

Volume 2I

Software Acquisition Pathway Requirements Development

February 2024

Air Force Futures, Center 2, Requirements Oversight Team

AF/A5DR, Pentagon 5C858

PREFACE

This Guidebook is one in a series of AF/A5DR developed guides describing the Air Force process for validation of operational capability requirements in support of overarching Capability Development efforts. This guidebook describes the specific actions that support requirements document development to enable rapid Software Development. Two acquisition pathways exist: The DoDI 5000.87 governed Software Acquisition pathway which is exempt from the Joint Capability Integration and Development System (JCIDS) and discussed in this Guidebook, and the Software-Initial Capabilities Document governed by JCIDS and discussed in the AF/A5/7 Capability Development Guidebook, Volume 2D, JCIDS Document Development.

In accordance with HAFMD 1-57, AF/A5/7 prepares requirements development policies and issues guidebooks to ensure implementation of those policies. The AF/A5/7 Capability Development Guidebooks are how-to guides for use by all stakeholders participating in the USAF requirements process. They represent official guidance and recommended standard procedures to ensure compliance with and implementation of overarching Requirements and Acquisition policies. Although the Guidebooks are not statutory or regulatory in nature, they follow the procedural guidance and other requirements-related processes described in the Joint Capabilities Integration and Development System (JCIDS) Manual. Any guidance in this Guidebook not prescribed in the JCIDS Manual is not directive but following the described procedures is highly encouraged. Requirements sponsors should coordinate with AF/A5D through the AF/A5DR Requirements Oversight Enabling Team for case-by-case tailoring.

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

Additional guidance and information to supplement this Guidebook is located on the AF/A5DR Requirements Policy & Integration Portal Page:

- Go to https://www.my.af.mil
- Navigate to "BASE, ORG & FUNCTIONAL AREA", select, Organizations A-Z
- On the "Organizations A-Z ribbon, select, "HAF"
- Scroll down and select AF/A5/7 -Air Force Futures
- On the left ribbon, select "SUB-ORGANIZATIONS," then, "AF/A5DR – Requirements Policy & Integration"

If you have questions regarding the Volume 2-series Capability Development Guidebooks or if you have suggestions for improvements, please contact:

AF Gatekeeper: Mr. Richard "Bullet" Tobasco, richard.tobasco.2@us.af.mil, (703)692-4197, DSN 222

Guidebook OPR: Mr. Jeff "Shredder" Hackman, jeffrey.hackman.1@us.af.mil, (703)692-1087, DSN 222

CHANGE SUMMARY

Change Summary	Date
This document captures updated organizations, roles, responsibilities, DoD and DAF guidance for software requirements development and must be reviewed in its entirety. Portions of this guidebook were derived from the AF/A5R Requirements Guidebook Volume 6 (24 June 2020, Version 1.02), which is rescinded and replaced by this Capability Development Guidebook Volume 2I.	N/A
Admin Changes	September 2023
Emphasized transition to Software-ICD and guidance in Guidebook Vol 2D if Joint Equities exist. Changes are indicated by RED text.	January 2024
Clarified Guidebook authorities. Changes are in RED. Admin Changes	February 2024

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SECTION 1. SOFTWARE ACQUISITION PATHWAYS

1.1. Overview and Background

The increasing prevalence of software-based capabilities on current and future battlefields has driven recent updates to the processes and authorities the Department of Defense (DoD) uses to define and pursue software solutions. Within the Adaptive Acquisition Framework, there are two software acquisition pathways available to requirements sponsors. These pathways are shown in Figure 1.1.
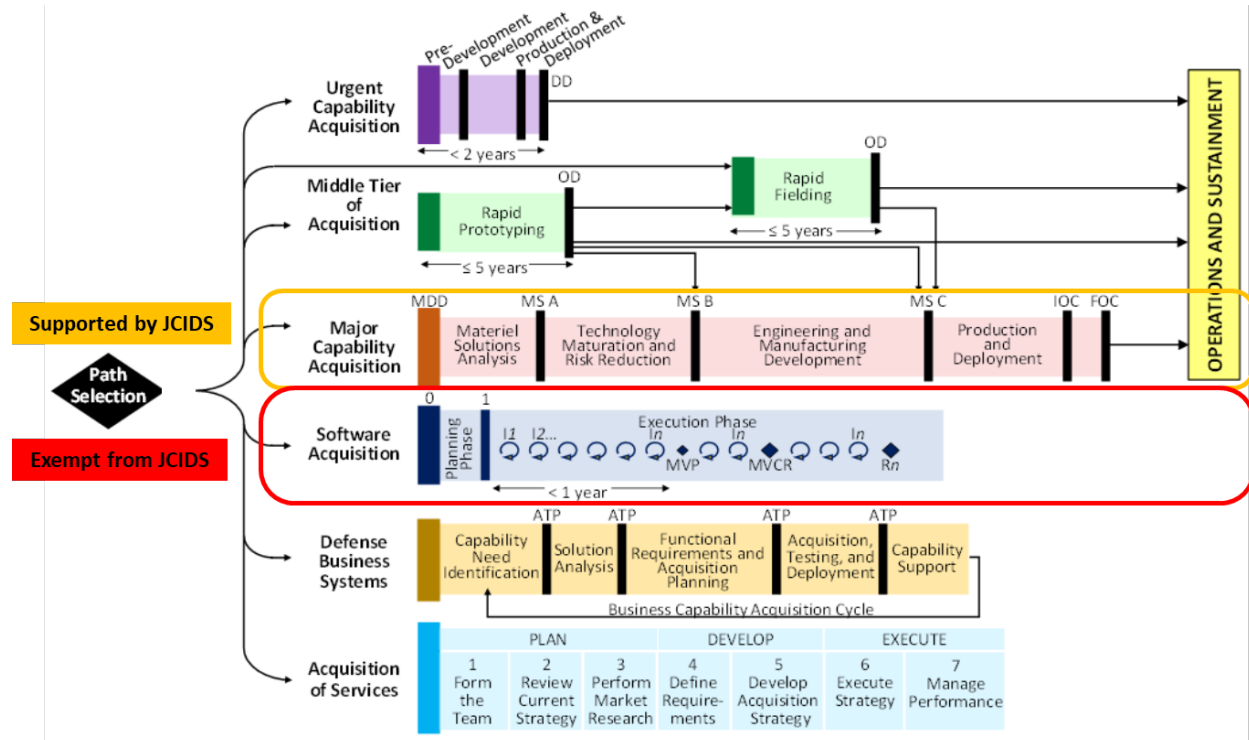
Figure 1.1. Software Acquisition Pathways

These software acquisition pathways are appropriate for software-intensive systems, where software is the system such as:

- Systems where software represents the largest segment of development cost, time, risk, or system functionality.

- Dedicated mission or functional application software embedded in the platform. This does not include software dedicated to controlling the platform.

- Custom developed software, but not for commercial off-the-shelf business systems

The use of the software acquisition pathways must:

- Be approved by the program's Acquisition Decision Authority (DA).

- Demonstrate the viability and effectiveness of software capabilities for operational use by the warfighter within one year after funds are first obligated.

A software capability sponsor's ability to choose between these two pathways is limited by statutory limitations and departmental guidance which may constrain the Acquisition DA's options and limit the requirement pathway options.

The Software-ICD (SW-ICD) within the Major Capability Pathway is governed by the Joint Capabilities Integration & Development System (JCIDS) and is covered in the AF/A5/7 Capability Development Guidebook, Volume 2D, JCIDS Document Development.

The Software Acquisition pathway in Figure 1.1. facilitates efficient and timely software development efforts by using an expedited process to enable modern software development practices and rapidly deliver mission impactful software. It uses a Capability Needs Statement (CNS) as the requirements basis and is implemented as shown in Figure 1.2.

- The planning phase is guided by a draft CNS developed by the sponsor. The CNS will be validated before the execution phase starts.

- The execution phase rapidly and iteratively designs, develops, integrates, tests, delivers, and operates resilient and reliable software capabilities that meet the users' priority needs. DoDI 5000.87 provides guidance on the definitions of the Minimum Viable Product (MVP) and the Minimum Viable Capability Release.
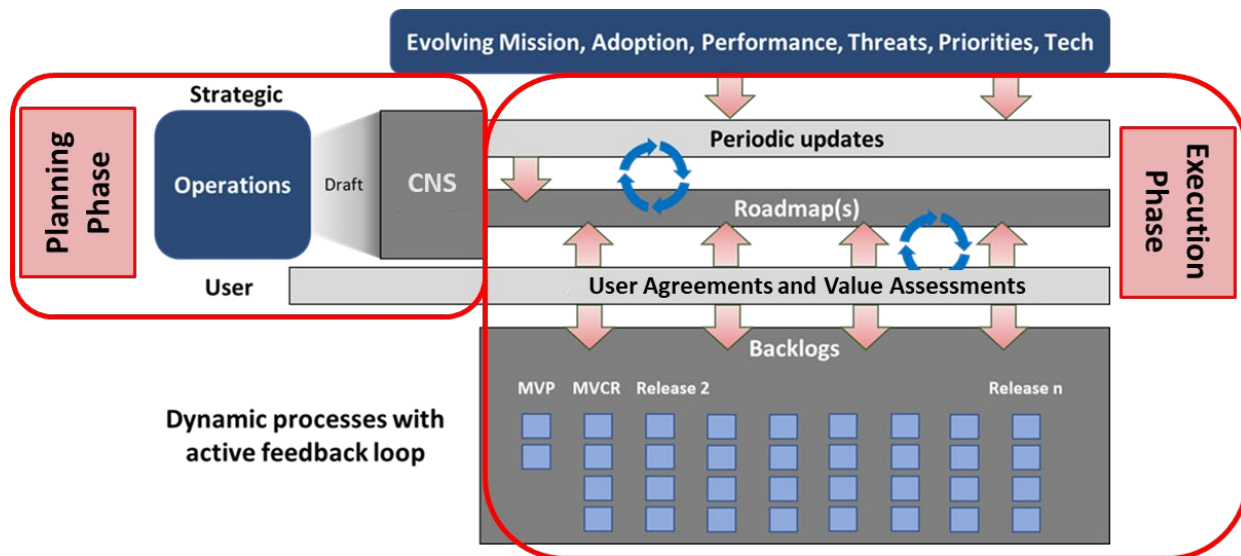

Figure 1.2. Software Acquisition Implementation

Responsible Artificial Intelligence (RAI) is a Deputy Secretary of Defense (DepSecDef) special interest item and will be considered for all Artificial Intelligence (AI) enabled capabilities. Sponsors will consider AI Ethical Principles in all acquisition pathways as soon as an AI-enabled capability is identified. See Appendix 3 for definitions of the five AI Ethical Principles, recommendations on how to document RAI efforts early in the development process, and a list of additional items for consideration. Contact AF/A5DQ, AI Capability Development Team, for the most current guidance.

1.2. Software Acquisition Pathway.

Congress directed the DoD to establish a separate and distinct Software Acquisition Pathway in the FY20 National Defense Authorization Act, also known as Section 800 authorities. DoDI 5000.87_DAFI63-150 implement the Software Acquisition Pathway. The Software Acquisition Pathway is only available for service-centric efforts that can be developed and fielded within one year after funds are first obligated and do not impact the Joint Force. This policy exempted this pathway from JCIDS and established the CNS and the User Agreement (UA) as the initial high-level requirements documents. The CNS and UA function together to enable modern software development processes and techniques. Refer to Section 2 of this

Guidebook for more detail on CNS and UA content and format. Note that if a SW-ICD is required, document development, staffing, and validation is covered in A5/7 Capability Development Guidebook, Vol 2D.

1.2.1. Capability Needs Statement. The CNS captures the high-level needs that provide enough information to define the software solution space considering the overall threat environment but avoids strictly prescribing or limiting the software solution(s). It dynamically and iteratively defines the scope and requirements of the software system and describes the planned capabilities over the next few releases and/or years. It identifies mission deficiencies, required enhancements to existing operational capabilities, features, interoperability needs, legacy interfaces, and other attributes required for new software-intensive systems or sub-systems, or upgrades to existing systems or sub-systems.

The CNS is flexible and may be updated as necessary to reflect the required baseline. The approval authority for changes and updates to the CNS is determined by the HAF-level Requirements DA and will be provided in the Air Force Requirements Decision Memorandum (AFRDM). There is no requirement for an annual revalidation of the CNS. However, an update and revalidation will be initiated if a Value Assessment, the AF/A5D-led Capability Portfolio Management Review, or any acquisition-led review of the software program assesses that an update and revalidation is warranted.

DoDI 5000.87 specifies that programs executing under the Software Acquisition Pathway are not subject to JCIDS and will not be treated as major defense acquisition programs, even if exceeding the thresholds contained in Section 2430 of Title 10. The Vice Chairman of the Joint Chiefs of Staff, in consultation with Under Secretary of Defense for Acquisition and Sustainment and each service acquisition executive, have authority to specify the handling of these programs apart from JCIDS.

1.2.2. User Agreement. The UA acts as a contract between software developers and end users to ensure the CNS-defined needs are updated, refined, and adjusted as needed during software development. The UA is an agreement between the operational and acquisition communities to gain agreement to continuous user involvement and assign decision-making authority in the development and delivery of software capability releases. It also provides for the management of operational tradeoffs among software features, cadence of deliveries, and management of the requirements backlog. The UA ensures proper resourcing in support of operational user involvement, which should occur as frequently as necessary to support the development process.

The UA is meant to be a flexible, periodically updated product. UA approval authority is shared between the Program Manager and the Sponsor as the user representative. HAF-level review and approval of the UA is not required however the most current UA will be provided to the HAF for record keeping purposes.

1.2.3. Value Assessment. The Value Assessment is an outcome-based assessment of mission improvements and efficiencies realized from the delivered software capabilities, and a determination of whether the outcomes have been worth the investment. The sponsor and user community perform the value assessment from the warfighter's perspective at least annually. More frequent Value Assessments are encouraged to coincide with software development events such as releases or milestones. The intent of the Value Assessment is to determine what needs to change, stop, or continue within the program's targets and scope. The Value Assessment is also an opportunity to assess if the threat and/or environment has significantly changed and is reducing the software's value to the warfighter.

Sponsors provide a summary of the annual Value Assessment results and recommendations to the program office, AF/A5D, AF/A5DR, AF/A5DY-OAS, and SAF/AQX. The summary should contain the following information:

- Summary of original capability fielding goals and objectives, and status as being met, partially met, or not met.

- Summary of the capability fielded to the end user, including an assessment of the mitigation of the validated gaps. Include any findings not directly related to the original gaps.

- Assess changes to the threat environment that affect value to the warfighter.

- Warfighter analysis of the software's operational value with recommendations for further development, modifications, or culmination.

- Recommendation may be to update or create a new CNS to replace the existing CNS. If the new document makes significant changes, particularly if the recommendations or the current operational environment may affect the determination of joint equities, the Air Force Gatekeeper (AFGK) must be consulted to determine necessary actions.

AF/A5D will review the Value Assessment results and, in coordination with the affected AF/A5/7 Subject Matter Expert (SME), AF/A5DR, AF/A5DY-OAS, and SAF/AQX, will make an assessment for continuation of software capability development efforts consistent with the affected Capability Development Plan (CDP)/System Development Plan (SDP), CNS/UA, and force design guidance. While an update and revalidation may not be necessary, a periodic review of the CNS is part of the Value Assessment process and should be accomplished.

1.3. Pathway Selection.

Written approval from SAF/AQ or the designated Acquisition DA is required to use the Software Acquisition Pathway and associated acquisition authorities. Approval is documented in an Acquisition Decision Memorandum.

It is vital for sponsors to select the appropriate pathway for their software development effort as soon as possible. Sponsors should engage with the AF/A5DR Requirements Team and the Joint Staff Gatekeeper (JSGK) early in the process. The AFGK will review possible Joint equities at the Solution Pathway Review (SPR) using the sponsor developed Software Equities Summary (SES). The SES is an informal document that captures the high-level description of the software context, capability needs, and key interactions. It supports informed engagement and early assessment of Joint Equities by the AFGK and JSGK and enables the earliest determination of Software Development Pathway options. Guidance for producing the SES is in Appendix 2A.

Joint equities may exist if the software:

- Redefines or implements additional interoperability standards for data, information, materiel, and services to or from existing and reasonably expected joint systems, units, or forces.

- Completely fulfills or duplicates a declared capability gap of more than one armed force, Defense Agency, or other entity of the DoD.

- Impacts the joint force in ways such as redefining cybersecurity and/or Net-Ready standards.

- Requires collaborative and/or overlapping development with other software development activities in another armed force, Defense Agency, or other entity of the DoD.

If the JSGK review of a CNS/UA determines that Joint Equities exist, the Sponsor is obligated under the Title 10 authority of the Joint Staff to create a SW-ICD and use the JCIDS Software pathway with Joint Staff staffing, validation, and biennial reviews by the Joint Capabilities Board.

Sponsors are permitted to use a SW-ICD document format in lieu of a CNS for the non-JCIDS Software Acquisition Pathway, but a UA must accompany either document. If the SW-ICD format is used in this way, Sponsors should comply with the JCIDS format to the maximum extent, but strict compliance is not

required. SW-ICD content, staffing, and validation procedures are contained in AF/A5/7 Capability Development Guidebook, Vol 2D.

SECTION 2. AF SOFTWARE ACQUISITION PATHWAY REQUIREMENTS DEVELOPMENT PROCESS

2.1. Requirements Process Overview

The processes to establish software requirements in support of the Software Acquisition Pathway is streamlined to support a rapid, agile, and iterative capability development and fielding process based on early engagement between the Sponsor, the Program Manager or Program Office, and the Warfighter/ End User. The requirements sponsor acts on behalf of the Warfighter/End User.

This Guidebook is not intended to replace the DoD or DAF acquisition policies and procedures as described in DoDI 5000.87_DAFI63-150. Sponsors must read these instructions and consult with the acquisition community to obtain an appropriate understanding of this pathway. This Guidebook only describes the AF's requirements creation and validation processes to support use of this pathway.

The Air Force Information and Resource Support System (IRSS) system is used as an oversight and staffing tool. This system is mentioned throughout this guidebook. The specifics of registration and use are contained in AF/A5/7 Capability Development Guidebook, Volume 2A, Capability Development Overview and Operational Capability Requirements Governance.

IRSS is at the SECRET level. Documents at higher classification will use the appropriate system for collaboration, staffing, and storage. All participants are responsible for following security procedures.

2.2. Key Tenets of Agile Software Requirements Development

The key to agile software development is to form a collaborative cross-functional team with a focus on involvement from the customer/end-user of the system. Software development necessitates a unique approach that is drastically different from traditional materiel solution development for hardware systems. While hardware development requires explicit requirements up front to drive the system design and development, the software pathway should not. Agile software development works best with flexible requirements up front, without the rigid specificity and detailed documentation that is typical of the material solution requirements process.

The core of the software development pathway is solution development with an emphasis on end users over process. Early delivery of capability is followed by iterative and evolutionary updates for continual improvement to the product based on user needs and continuous feedback that is responsive to the user, rather than adhering to plans and milestones. The primary metric is delivery of useable solutions, not documentation. The team should encourage the evolution of requirements to avoid obsolescence.

The Agile Software Acquisition Pathway requires a team of competent, dynamic, and effective participants and stakeholders. The entire team needs to work as one toward a shared vision. A project plan or roadmap is useful and necessary, but it must not be seen as a rigid set of milestones or limitations – the metric of success is not simply to lay out a plan and follow it relentlessly. The metric is to produce value for the warfighter. Traditional or linear approaches to program plans and roadmaps cannot replace the need for flexibility and adaptability to get things done, which may include abandoning the previous plan. This type of approach requires close and continuous collaboration and trust relationships between all the team members in the Planning and Execution Phases.

The Sponsor and the AF/A5/7 SME must engage with the appropriate Acquisition Program Office, SAF/AQX, SAF/FMB, AF/A8P, and AF/A8X to determine the timing and scale of resources required for the Document Writing Team (DWT) and overall software development effort. The Sponsor and the AF/A5/7 SME must also engage with SAF/AQR, SAF/AQX, and other relevant acquisition stakeholders to build consensus on the appropriate software acquisition pathway.

2.3. Software Development and the Capability Development Plan/System Development Plan

Agile software development efforts must be derived from a Capability Based Assessment (CBA) or similar study, or a CDP and associated SDP.

The CBA or similar study provides a robust assessment of a mission area, or similar bounded set of activities, to assess the capability and capacity of the joint force to successfully complete the mission or activities. It provides an analytic basis to identify capabilities and associated capability gaps. CBA guidance is in AF/A5/7 Capability Development Guidebook Volume 2C.

The CDP describes a plan of action to attain the capabilities needed to address strategic mission gaps and describes the specific activities that will be pursued as synchronized and prioritized Lines of Effort (LOE). Each LOE generates an SDP that is a detailed plan of the ways and means to acquire the specific solution system. CDP and SDP guidance is in AF/A5/7 Capability Development Guidebook Volume 2B.

For any capability development effort, there may be several combinations of LOEs that require software development. An LOE may be software only, may have software as one component, or a software development effort may support more than one LOE. The need for a cohesive and coordinated team is apparent and is ensured by AF/A5D approval and periodic review of the CDP. The approved CDP also:

- Ensures the proposed software development effort aligns with overarching AF strategy, the Force Design, and resourcing plans.

- Determines what capability analysis and documentation exists or needs to be developed to support proceeding to the appropriate software development effort.

- Identifies affiliated capability development efforts and key stakeholders.

The CDP and SDPs may provide the insight needed to discover Joint Equities that will determine the software acquisition pathway. The Sponsor and the AF/A5/7 SME will coordinate with AF/A5DR to solicit assessments of Joint Equities via the SES.

2.4. The Software Requirements Development Process.

The software requirements development and validation process is shown in Figure 2.1. The validation process uses rapid staffing to expedite the approval and validation process by combining initial staffing and the electronic Air Force Requirements Oversight Council (eAFROC) into one round of staffing. Staffing details are in section 2.4.5.

The staffing and review period may be modified to suit the specific effort and will be conducted using standard IRSS tasking procedures on SIPRNET. The typical timing in calendar days is provided in Figure 2.1.

While the CNS requires HAF validation, The UA does not. The CNS and UA are complementary documents and each CNS will be staffed with either a draft or approved UA. UA approval authority is shared between the Program Manager and the Sponsor as the user representative and is exempt from comments during the staffing process.
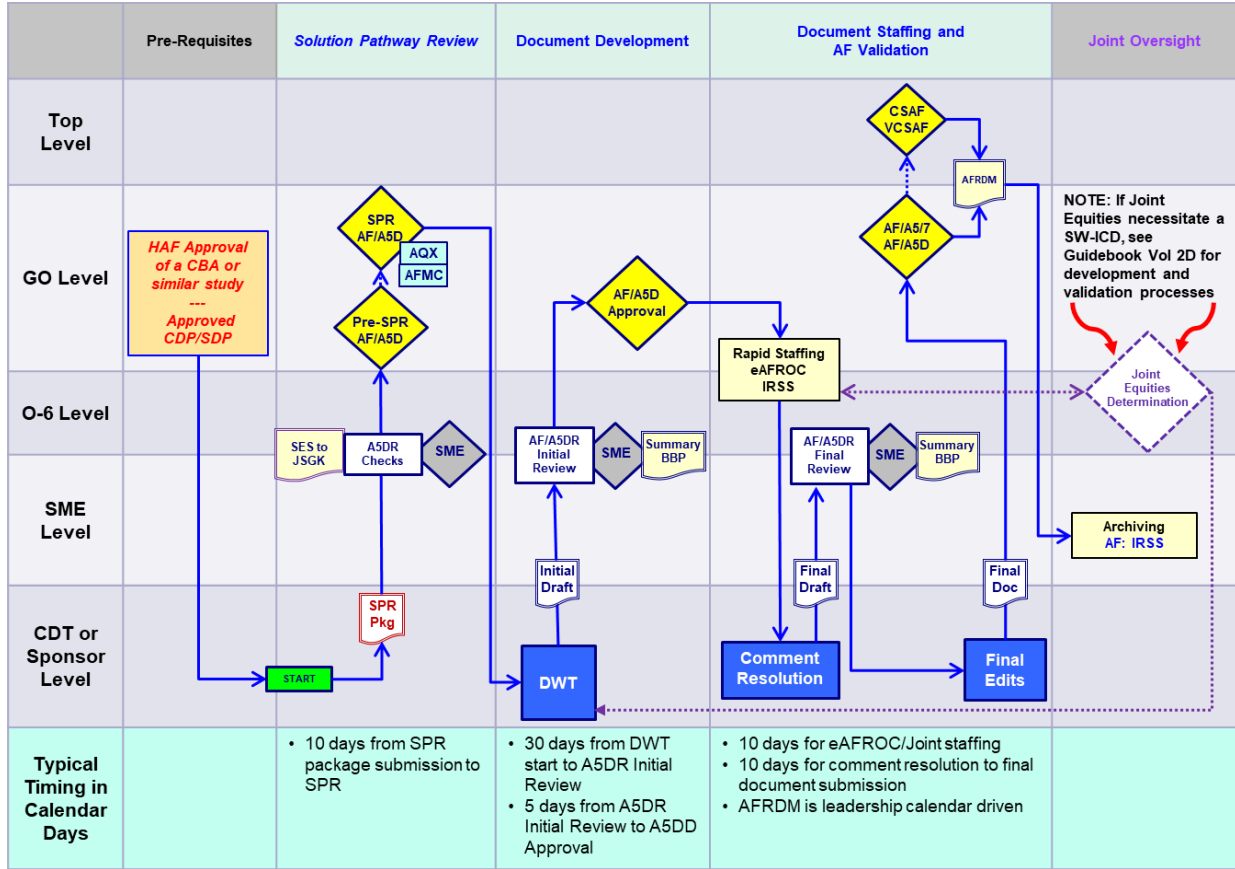
	Pre-Requisites	Solution Pathway Review	Document Development	Document Staffing and AF Validation	Joint Oversight
Top Level				CSAF VCSAF / AFRDM	
GO Level	HAF Approval of a CBA or similar study --- Approved CDP/SDP	SPR AF/A5D / AQX / AFMC / Pre-SPR AF/A5D	AF/A5D Approval	AF/A5/7 AF/A5D / Rapid Staffing eAFROC IRSS	NOTE: If Joint Equities necessitate a SW-ICD, see Guidebook Vol 2D for development and validation processes / Joint Equities Determination
O-6 Level		SES to JSGK / A5DR Checks / SME	AF/A5DR Initial Review / SME / Summary BBP	AF/A5DR Final Review / SME / Summary BBP	
SME Level					Archiving AF: IRSS
CDT or Sponsor Level		SPR Pkg / START	Initial Draft / DWT	Final Draft / Comment Resolution / Final Doc / Final Edits	
Typical Timing in Calendar Days		• 10 days from SPR package submission to SPR	• 30 days from DWT start to A5DR Initial Review • 5 days from A5DR Initial Review to A5DD Approval	• 10 days for eAFROC/Joint staffing • 10 days for comment resolution to final document submission • AFRDM is leadership calendar driven	

Figure 2.1. Software Requirements Development and Validation

2.4.1. Entry Criteria. The results from a CBA or similar study are the basis of the CNS. The CBA/study must provide the rationale and analysis to justify gap mitigation via a software-only materiel development approach. Use of analysis other than an approved CBA will be approved at the SPR. There is risk 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 the USAF. Although the mission may be the same or similar, the gaps or needs may necessitate a different solution pathway.

An approved CDP and associated SDP(s) are required to provide the basic elements of the acquisition strategy, determine the proposed delivery schedule, and prioritize and deconflict other similar efforts,

The solution pathway selection requires extensive and close collaboration with key stakeholders and other process owners to ensure the requirements document strategy is consistent with the solution approach and identify Joint Equities. Sponsors are expected to establish effective dialog with key stakeholders to fully develop the solution approach and DWT membership.

2.4.2. Solution Pathway Review. The SPR will ensure the Sponsor develops the right document, at the right time, with the right people involved. Refer to AF/A5/7 Capability Development Guidebook, Vol 2A for details on SPR conduct and expectations.

Sponsors, in collaboration with the AF/A5D SME, will complete a SPR Worksheet, a Plan of Action and Milestones (POAM) that reflects the anticipated approval and validation date of the document, the SES, and any additional supporting material. The Sponsor's IRSS Point of Contact (POC) will create a Document Record in IRSS, change the Status to "Solution Pathway Review", and send AF/A5DR a "Solution Pathway

Review Request" task, followed by an email notification from their Requirements Policy Shop's O-6 to the AFGK. The email can be sent via NIPRNET or SIPRNET and must include the completed SPR Worksheet and POAM. Notification must be sent not later than 21 days prior to the start of the proposed document writing event.

Prior to the SPR, the sponsor will develop the SES and the IRSS POC will load it into IRSS. AF/A5DR will forward the SES to the JSGK and the AFGK for a preliminary review of joint equities. The final determination of Joint equities and the need for a SW-ICD will be made when the JSGK reviews the final CNS.

The SPR package should address:

- Justification for use of a CNS rather than an alternative agile/rapid process such as Middle Tier of Acquisition, AF Form 1067 Modification Proposal, etc.

- Ensure entry criteria are met as described above.

- Proposed nomenclature that reflects the proposed type of approach associated with the core mission or gap area being addressed. For example:

  o *TAC-P Software Modernization* describes a CNS recommending a modernization approach.

  o *Tanker Recapitalization Software* describes a CNS recommending a Software-only solution as part of a larger recapitalization approach.

- Potential interdependencies with other AF or joint systems/solutions or other enablers.

- Proposed DWT members, location, and dates, including any issues/concerns with support, funding, security, etc. TBDs are not permitted.

- Training status and experience of Team Leadership and Acquisition POC(s).

- Proposed POAM with a timeline for completion of the CNS and the UA.

- Proposed first software release date and follow-on releases.

- Any requested waivers to mandatory document content.

- When required, projected follow-on requirements oversight/reviews, and interaction with stakeholders from the Joint Staff, other Services and Office of the Secretary of Defense organizations.

- Proposed AF Requirements DA and proposed Acquisition DA.

- The SES with AF and JS Gatekeeper preliminary coordination. A preliminary Joint Staff assessment of no Joint Equities is required to pursue the CNS pathway.

Any changes to the above after SPR approval to proceed must be submitted to AF/A5DR for approval.

2.4.3. Document Writing Event. An AF/A5D SPR Decision Memorandum documents the approval of the SPR package and allows the sponsor to convene a DWT. The document sponsor assembles the DWT as planned and writes the initial draft of the CNS. Formal approval by the acquisition DA to use the Software Acquisition Pathway and an initial determination by the AFGK/JSGK of no "Joint Equities" are necessary before a DWT may be convened. If the SPR directed document delivery date is exceeded by 30 days, the document sponsor must notify the AFGK and request an extension. The DWT will also produce a UA to accompany the CNS.

2.4.4. AF/A5DR Initial Review. Upon receipt of the CNS and UA from the DWT, the Sponsor's IRSS POC will use the Document Review Checklist to ensure the document meets the criteria for entering rapid staffing, check the spelling and grammar, and verify proper classification and portion markings. The document must comply with format and content guidance unless waived by the AFGK. The sponsor IRSS POC will then import the draft version of the document and supporting materials, create an eAFROC Request task to AF/A5DR, followed by a notification email from their Requirements Policy shop's O-6 to the AFGK. The IRSS POC will then update the Document Record Status to "Rapid Staffing – AFGK Review."

Following AF/A5DR document review, the Sponsor will update the document as necessary and import a staffing-ready draft version of the document into IRSS. The AFGK will present the staffing-ready version to the AF/A5D for approval to initiate rapid staffing. The UA will be provided for information but is not subject to review.

Denial of entry into rapid staffing is based primarily on the failure to meet the review criteria. The most common include:

- CBA, Studies, or other supporting data missing or not provided in IRSS.

    - Resolution: IRSS POCs link to the supporting documents via IRSS or upload the supporting files to the document record.

- Predecessor document missing or not provided in IRSS.

    - Resolution: 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.

    - Resolution: Reformat and reduce page count.

- Missing or incomplete DoD Architecture Framework (DoDAF) Architecture Views

    - Resolution: The appropriate AF document reviewers need to be granted access to ALL architecture views.

- Incomplete or unclear representation of capability gaps.

    - Resolution: 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 document.

    - Resolution: Provide sufficient analysis to support all proposed initial objective values.

- Unclear or omitted discussion of interdependencies between the proposed capability and enabling capabilities, or other capabilities within SoS approach.

    - Clarify or include interdependency discussion.

2.4.5. Rapid Staffing. Unlike traditional staffing, rapid staffing allows comments in addition to final certifications, endorsements, and attestations. The UA will accompany the parent document for information purposes only.

2.4.5.1. After AF/A5D approval to initiate rapid staffing, the AF/A5DR Team will create a rapid staffing task

to organizations on the eAFROC Coordination Distribution List in IRSS and update the Document Record Status to "Rapid Staffing." The AF/A5DR Team will forward the document, regardless of potential Acquisition Category or proposed requirements validation authority, to the JSGK for review and joint equities assessment. If joint equities exist, the JSGK will assign a Joint Staffing Designator and return the CNS for conversion to a SW-ICD. SW-ICD content, processes, and procedures are contained in AF/A5/7 Capability Development Guidebook, Vol 2D.

IRSS POCs for each tasked organization should forward the document to appropriate individuals in their organization for review. AFROC principal endorsement certifies that the Stakeholders agree that required certifications, endorsements, attestations, or waivers have been obtained prior to validation.

2.4.5.2. Document Commenting Phase. AF reviewers submit comments per the IRSS tasking instructions. Comments are identified as critical, substantive, or administrative as described below. Proper justification for critical or substantive comments must be provided in the CRM. For comments to upload properly, they must be submitted using the provided CRM template with no alterations.

- • 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 Key Performance Parameters and Key System Attributes, 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. 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.

- • Substantive. A substantive comment indicates a concur, with comment response. 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. The scope and quantity of several substantive comments may also lead to a non-concur response to the staffing until satisfactorily adjudicated.

- • 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.

After consolidating all comments, IRSS POCs will verify the Comment Resolution Matrix (CRM) has proper classification and portion markings, upload the CRM into IRSS, and close their IRSS rapid staffing task. A CRM with no critical comments will be considered as a Concur with Comment response to the tasker.

Any recommendations to not endorse validation of the document will be accompanied by critical comments and a rationale. IRSS POCs will consolidate endorsement recommendations and present the document and recommendations to their AFROC Principal for a document validation recommendation. IRSS POCs will submit their principal-approved recommendation via IRSS and close the rapid staffing task. The IRSS POC will enter full name and rank of their AFROC Principal must be in the Approval Authority section of the Task Details.

At the conclusion of rapid staffing, AF/A5DR closes the task in IRSS and creates a consolidated AF CRM. AF/A5DR then uploads the AF CRM to IRSS and creates a Comment Resolution task to the Sponsoring organization.

2.4.6. Comment Resolution. The Sponsor has 14 calendar days to resolve comments. Typically, the DWT is convened to resolve comments.

Sponsors must 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. Change recommendations must be properly coordinated with the commenters to ensure the changes do not adversely affect other areas of the document.

2.4.6.1. Following completion of comment resolution, Sponsors will conduct an internal review of the document before it goes forward for validation staffing. Documents submitted for formal approval and validation will be accompanied by a transmittal memorandum signed by the Commander for documents designated for Air Force Chief of Staff approval or the Sponsor's Director of Requirements (5/8/9) for all other documents.

2.4.6.2. Upon receipt of the updated document and CRM, the Sponsor IRSS POC will use the Document Review Checklist to ensure the document meets the criteria, check the spelling and grammar, and verify proper classification and portion markings. The IRSS POC then imports the updated version of the document, the adjudicated AF CRM, and supporting materials to IRSS. The IRSS POC will close their Comment Resolution task in IRSS.

2.4.7. Validation. The IRSS POC Requirements Policy shop's O-6 sends an email to the AFGK stating that all rapid staffing comments have been resolved and requests final validation of the document. This email will include the signed transmittal memorandum as an attachment.

In validating a software requirements document, the validation authority:

- Validates the capability requirements as being necessary to fulfill joint military capabilities in support of the National Defense Strategy and approves prioritization of associated capability gaps.

- Approves the document and supporting data, including the recommended approach(es) to address the validated capability requirements and eliminate or mitigate the capability gaps.

- Verifies all applicable certification, endorsements, and waivers have been granted.

The CNS may be approved with the understanding that the draft UA that accompanies it may still be in coordination. Staffing, review, and validation of the CNS must be accompanied by the most recent version of the UA, even if the UA is still pending final approval.

2.4.8. Completion. AF/A5DR drafts an AFRDM and staffs it for signature to the proper Requirements DA. Once signed, AF/A5DR creates a final version of the document by inserting the AFRDM after its title page. AF/A5DR will post a copy of the final CNS/UA with the validation page posted in IRSS and submit same to the Joint Staff for archiving to complete the process.

APPENDIX 1 – ACRONYMS AND REFERENCES

Acronyms

AFGK—Air Force Gatekeeper
AFRDM – Air Force Requirements Decision Memorandum
AI – Artificial Intelligence
CDP – Capability Development Plan
CNS – Capability Needs Statement
DA— Decision Authority
DepSecDef - Deputy Secretary of Defense
DoD – Department of Defense
DoDAF – DoD Architecture Framework
DWT - Document Writing Team
eAFROC – electronic Air Force Requirements Oversight Council
IRSS—Information & Resource Support System

JCIDS—Joint Capabilities Integration & Development System
JSGK – Joint Staff Gatekeeper
LOE – Line of Effort
MVP – Minimum Viable Product
POAM – Plan of Action and Milestones
RAI – Responsible Artificial Intelligence
SDP – System Development Plan
SES—Software Equities Summary
SME—Subject Matter Expert
SPR – Solution Pathway Review
SW-ICD—Software Initial Capabilities Document
UA – User Agreement

References

AF/A5/7 Capability Development Guidebook Library. On NIPRNET at AF Portal or SIPRNET at IRSS.

AFI10-601, *Operational Capability Requirements*

Defense Acquisition University SWP Artifact Templates. *https://aaf.dau.edu/aaf/software/templates/*

DoDI 5000.87_DAFI 63-150, *OPERATION OF THE SOFTWARE ACQUISITION PATHWAY*, 11 August 2021

HAFMD 1-57, *Deputy Chief of Staff, Air Force Futures (AF/A5/7)*

Manual for the Operation of the Joint Capabilities Integration and Development System

APPENDIX 2. SOFTWARE ACQUISITION PATHWAY DOCUMENT REVIEW CHECKLISTS

2.A. Software Equities Summary.

An SES is an informal document created by the sponsor that captures the high-level description of the software context, capability needs, and key interactions. The SES is a tool that allows AFGK and JSGK review of the proposed software for Joint Equities at the earliest possible time.

There is no standard format for the SES. It should be 1-3 pages and capture enough specificity to reveal potential areas of Joint Equity.

Key elements are the operational context for the proposed software, the most significant capability requirements and capability gaps that will be addressed, and any known or potential software interactions with data outside of the AF's purview.

DoDAF views are optional.

The SES is an assessment tool and will not be uploaded to IRSS for staffing and approval.

2.B. Capability Needs Statement

The CNS identifies mission deficiencies, required enhancements to existing operational capabilities, features, interoperability needs, legacy interfaces, and other attributes required for new software-intensive systems or sub-systems, or upgrades to existing systems or sub-systems. It is a high-level capture of need that defines the software solution space, considering the overall threat environment.

The CNS is a flexible product, periodically updated to reflect the necessary baseline. The approval authority for updates is designated by the HAF Requirements DA in the AFRDM.

Below is the recommended format. Though none are required, Sponsors may include any DoDAF views they consider useful.

Format:

☐   Comply with document formatting guidance in the JCIDS Manual, pages B-1, B-2.

☐   Classification markings IAW DoDM 5200.01 V2

Cover Page:

<div align="center">

[Classification]

Capability Needs Statement

To Support Software Acquisition Pathway Activity

for

[Program Title]

Document revision number: [version xx]

As of: [Date]

Acquisition Decision Authority: [Office/Title]

Requirements Decision Authority: [Office/Title]

Primary and secondary POCs for the document sponsor. [Include name, title/rank, phone and both NIPRNET and SIPRNET email addresses.]

Primary and secondary POCs for the acquisition program office. [Include name, title/rank, phone and both NIPRNET and SIPRNET email addresses.]

</div>

Validation Page: Placeholder for decision memorandum.

☐   While in draft, a placeholder page will be included, with a statement of: "This document (include revision numbering) has not yet been validated and shall not be considered an authoritative source for the content herein. This document may be considered authoritative only when this page is replaced by a signed validation memorandum from the appropriate validation authority."

☐   Once validated, the placeholder page will be replaced by the signed validation memorandum.

Executive Summary: No more than 1 page

☐   **Explain** why this effort is a candidate for the Software Acquisition Pathway.

☐   Briefly discuss the **schedule** to achieve an operational capability and a **description of the criteria** to declare a successful demonstration of the software solution.

☐ Identify the key **stakeholders** and end **users** of the system, and their **roles/authorities** regarding key decisions, systems fielding, operations, support, and sustainment, etc.

☐ Summarize the high-level **goals and scope** of the development effort. Describe the expected or necessary **outcomes**.

Body:

Section 1. Operational Context, Scope, and Anticipated Threats.

☐ Summarize the **operational context** and scope of the effort or challenge to be addressed. Explain how the software solution will contribute to the **missions and activities** of the Air Force or meet an identified **operational challenge** within the context of the anticipated **threat** environment.

☐ Describe the **timeframe** under consideration and the overall operational **risk and priority**.

☐ Cite the latest **DIE or Service-approved** threat products used.

Section 2. Capability Requirements and Gaps/Opportunities.

☐ Describe the high-level **mission needs** and associated **gaps**, **challenges**, or **opportunities** to be addressed. Describe the results of related **analyses** or studies conducted to determine the mission needs and gaps or opportunities and derive the required system-level performance attributes.

Section 3. Required Features/Functions and Constraints.

☐ Outline the high-level **features**, mission **tasks**, or **goals** that are necessary or which are otherwise critical or essential to achieve mission goals and objectives.

☐ **Avoid** over specification or inclusion of system level technical specifications.

☐ Highlight any **legal**, **regulatory**, or other **constraints** or compliance items.

Section 4. Interoperability & Supportability

☐ Specify **system operations** in the Joint environment, including physical or net-ready **interoperability** effects. Include factors that impact both AF internal and outside agencies and programs.

☐ Necessary **interoperability** or interfaces with **legacy** systems

☐ Requirements for **intelligence supportability**.

☐ Include information or attributes for modular open system approach (**MOSA**) or **exportability** that may impact future development decisions, fielding, follow-on production, joint training, etc.

☐ Outline non-materiel (**DOTmLPF-P**) changes that need to be made to field the capability. Address both changes that enable **implementation, operations, and support** of the system, and changes that must be made to support integration of the system with other fielded capabilities.

Section 5. Resourcing and Schedule.

☐ Outline the overall **resourcing** plan and **schedule** of activities to provide the capability solution and highlight any challenges or risks to the planned timelines.

☐ Highlight any **challenges** that may impact the **feasibility** of meeting the timelines or providing a usable capability within the timeline.

Glossary – Terms and Definitions

☐ **Highlight** any unique terms, definitions, acronyms, or other references.

Appendix 2.C. User Agreement (UA).

The UA captures the agreement between the operational and acquisition communities to commit to continuous user involvement and assigns decision-making authority in the development and delivery of software capability releases. It also documents operational tradeoffs among software features, cadence of deliveries, and management of the requirements backlog. The UA ensures proper resourcing for operational user involvement.

The UA is a flexible product and periodically updated. Approval authority is shared between the Program Manager and the Sponsor, acting as the user's representative. HAF-level review and approval of the UA is not required however the most current UA will be shared with the HAF for record keeping purposes.

There is no required format for the UA; the detail and sufficiency of the document is at the discretion of the operational and acquisition community participants and signatories. The Defense Acquisition University has published a detailed UA template at https://aaf.dau.edu/aaf/software/templates/. Since the UA will accompany the CNS, an abbreviated template containing the core recommended information and eliminating the redundant CNS information is shown below.

Format:

□   Comply with document formatting guidance in the JCIDS Manual, pages B-1, B-2.

□   Classification markings IAW DoDM 5200.01 V2

Cover Page:

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[Classification]

User Agreement

for

[Program Title]

Document revision number: [version xx]

As of: [Date]

To Accompany Capability Needs Statement

for

[Program Title]

</div>

Program Manager: [Program Office Signatory and Office Symbol]

Requirements Sponsor: [User Rep Signatory and Office Symbol]

Primary and secondary POCs for the document sponsor. [Include name, title/rank, phone and both NIPRNET and SIPRNET email addresses.]

Primary and secondary POCs for the acquisition program office. [Include name, title/rank, phone and both NIPRNET and SIPRNET email addresses.]

Validation Page: Placeholder for decision memorandum.

◻ Once validated, the placeholder page will be replaced by the signed approval memorandum.

Document Body:

Section 1. User Involvement.

◻ Describe the **agreement** between the operational and acquisition communities and clearly delineate the **responsibilities** of the Program Manager and the sponsor.

◻ Explain the plan to ensure proper **resourcing** of operational user engagement events and activities. These will occur as frequently as necessary to support the development process.

Section 2. Summarize the **Stakeholder roles and responsibilities**. Below are examples for consideration.

◻ Operational Sponsor – Senior operational champion.

◻ Product Owner – Requirements management, long-term vision, removes obstacles, manages product backlog.

◻ Acquisition DA – Oversees the acquisition program.

◻ Program Manager – Acquisition strategy, organizes MVP and user testing, delivery planning and reviews.

◻ Team Leads – Establishes productive team environment, day-to-day execution.

APPENDIX 2D. Value Assessment.

The Value Assessment is an outcome-based assessment of mission improvements and efficiencies realized from the delivered software capabilities, and a return-on-investment determination. The return-on-investment will inform Acquisition DA and Program Manager decisions.

Value assessments will be performed at least annually after the software is fielded. More frequent value assessments are encouraged if practical.

There is no required format for a Value Assessment and the detail and sufficiency of the document is at the discretion of the operational and acquisition community participants and signatories. The Defense Acquisition University has published a detailed value assessment guide and template at https://aaf.dau.edu/aaf/software/templates/.

Format:

□ Comply with document formatting guidance in the JCIDS Manual, pages B-1, B-2.

□ Classification markings IAW DoDM 5200.01 V2

<div align="center">

□ **Cover Page:**

[Classification]

Value Assessment

for

[Program Title]

Document revision number: [version xx]

As of: [Date]

</div>

Program Manager: [Program Office Signatory and Office Symbol]

Requirements Sponsor: [User Rep Signatory and Office Symbol]

Primary and secondary POCs for the document sponsor. [Include name, title/rank, phone and both NIPRNET and SIPRNET email addresses.]

Primary and secondary POCs for the acquisition program office. [Include name, title/rank, phone and both NIPRNET and SIPRNET email addresses.]

Validation Page: Placeholder for decision memorandum.

□ Once validated, the placeholder page will be replaced by the signed approval memorandum.

Executive Summary

□ Summarize the **key value takeaways** the program delivered and how it **impacted** operations. Identify the overall **rating** that the user community gave for the overall effort. Capture **specific feedback** the user community would like the acquisition team to consider for the next cycle.

Document Body.

Section 1. Value Assessment Narrative.

☐ **Summarize** the results of the value assessment in one or two paragraphs.

Section 2. Assessment Summary.

☐ Established **measures** in terms of improvement goals, expected performance, and usability improvements.

☐ Assessment **period**.

☐ **Funding** expended.

☐ Program **deliveries**. Number of releases, key capabilities, and cost.

☐ Contributing **stakeholders**.

☐ **Objective** value assessment based on performance measurements compared to goals.

☐ **Subjective** value assessment based on user's perspective.

☐ **Overall** value assessment rating.

Section 3. Recommended program changes.

☐ Based on the assessment, user recommendations to the program manager for **priorities, sequencing, release frequency**, etc.

APPENDIX 3. RESPONSIBLE ARTIFICIAL INTELLIGENCE PRIMER

Artificial Intelligence enabled capabilities are changing the nature of warfare. They can significantly enhance warfighting capability and deliver performance improvements to existing and future Air Force systems. However, AI is evolving rapidly, has unique characteristics, creates new ethical challenges, and increases the risk of unintended consequences if not properly implemented. To address these concerns, DepSecDef issued a memorandum in May 2021 that established the DoD's holistic, integrated, and disciplined approach to RAI. The memo introduced five DoD AI Ethical Principles (Responsible, Equitable, Traceable, Reliable and Governable). It is important to note that the DoD AI Ethical Principles apply to all DoD AI capabilities, of any scale, including AI-enabled autonomous systems, for warfighting and business applications. Sponsors will consider the AI Ethical Principles in all acquisition pathways as soon as an AI-enabled capability has been identified as a potential solution.

The DepSecDef memo also presented six tenets to guide the implementation of RAI across DoD. The RAI Requirements Validation tenet is of particular interest to AFF and is the driver for including RAI information in our guidebooks. The RAI Requirements Validation tenet is defined as:

- Incorporate RAI into all applicable AI requirements, including joint performance requirements established and approved by the Joint Requirements Oversight Council, to ensure RAI inclusion in appropriate DoD AI capabilities.

To support RAI implementation across the Air Force, we anticipate more specific policy guidance and digital tools will be provided by DoD Chief Digital and AI Office (CDAO) in the coming years. In the absence of explicit policy guidance and digital tools, prior to Solution Pathway Review, if possible, sponsors should attempt to document any efforts to comply with the RAI Requirements Validation tenet and each of the DoD RAI Ethical Principles. We encourage interested parties to consult SAF/CND matter experts for guidance on the other five tenets.

AI-enabled capabilities continue to mature and offer unique solutions to military capability gaps that have previously been unattainable. The Air Force must integrate these offerings responsibly. RAI allows us to guard against AI-enabled capabilities that are applied unethically or irresponsibly. With this approach developers and users will have appropriate levels of trust in AI systems thus enabling rapid adoption and operationalization to strengthen our competitive edge.

An RAI Check List is provided below with additional items to consider when AI offers a viable solution to your military problem. For questions and/or assistance regarding RAI and AI-enabled capabilities please contact AF/A5DQ (AI Capability Development Team):

- Responsible: DoD personnel will exercise appropriate levels of judgement and care, while remaining responsible for the development, deployment, and use of AI capabilities.

  Recommendation: Ensure an accurate and data-informed description of why AI is an appropriate solution for the problem is captured. Clearly document relevant design choices and considerations. Thoroughly describe the intended system functions and the conditions they can expect to be met, with consideration for level of human interaction and reliance on machines.

- Equitable: The Department will take deliberate steps to minimize unintended bias in AI capabilities.

  Recommendation: Ensure an equitable approach to AI-enabled capabilities is described. Stakeholders should ensure a broad and diverse group of data is considered to prevent cognitive bias. Ensure training data represents ALL options and is distributed fairly, the system is tested in a variety of contexts and evaluate whether the system disproportionally weights input to optimize for specific scenarios that may unjustly skew the outcome.

- Traceable: The Department's AI capabilities will be developed and deployed such that relevant personnel possess an appropriate understanding of technology, development processes, and operational methods applicable to AI capabilities, including transparent and auditable methodologies, data sources, and design procedures and documentation.

   Recommendation: Document efforts to trace AI-enabled system performance to design decisions and specifications. The system should log sufficient activity for audits, produce outputs for justification, provide confidence levels for decisions, leverage integration testing to show causal relationships, and deliver clear functionality without degrading performance.

- Reliable: The Department's AI capabilities will have explicit, well-defined uses, and the safety, security, and effectiveness of such capabilities will be subject to testing and assurance within those defined uses across AI capabilities' entire life cycle.

   Recommendation: Risk analysis of the intended system tasks should be performed. This should be well documented to ensure both common and edge cases are evaluated, and the system is designed to work well in both scenarios. Tests of the algorithms, system functions, and overall system under a variety of scenarios should be planned to characterize issues as they are discovered. Most importantly for AI-enabled systems, data processes must be completed in a disciplined manner and aligned with best practices.

- Governable: The Department will design and engineer AI capabilities to fulfill their intended functions while possessing the ability to detect and avoid unintended consequences, and the ability to disengage or deactivate deployed systems that demonstrate unintended behavior.

   Recommendation: Ensure intended functions of the AI-enabled capability are clearly documented. Describe how the behaviors of the system will be explained and mechanisms for de-activation if undesired or harmful behavior is observed. Include test plans designed to detect anomalies, ensure the system is working as planned, and allow testing of edge cases.

For questions and/or assistance regarding RAI and AI-enabled capabilities please contact AF/A5DQ (AI CDT).

RAI Checklists

The below are recommended items to consider for AI-enabled capability development. The ability to answer yes to these questions does not guarantee but increases the likelihood that the program will comply with anticipated RAI policy, governance, and oversight constraints.

Item #	Responsible	Yes/No
1	Have other alternatives to AI as a capability enabler been considered?	
2	Are there designated roles/persons with the power to make and certify necessary changes to AI-enabled capability?	
3	Are there clearly delineated organizations or entities responsible for overseeing AI system's phases: Data management, Model development, Model deployment, User employment, Post-deployment?	
4	Has the sponsor identified the intended range of tasks the AI system will perform autonomously and associated risk?	
5	Are there clearly defined tasks to be performed by the AI vs. the human?	
6	Will the AI system replace human decision-making?	
7	Will AI system make ethical, legal, or moral decisions that a human would make?	
8	Will the AI system be used in coordination with Allies & partners (A&P)?	
9	Is the AI system to be used in coordination with A&P consistent with their norms and shared values?	
10	Have the system functions, data needs, and operational conditions been defined?	
11	Is there a plan for disciplined AI/ML DevSecOps?	
12	Is there a plan to prevent the intentional or unintentional manipulation of the data or trained model?	
13	Has the entity responsible for the plan specified in item # 12 been identified?	
14	Has DODI 3000.09 approval process been considered if involving lethal effect?	
15	Is the AI solution registered in DoD Chief Digital and AI Office (CDAO) repository? *Note:* currently not available, in development with anticipated delivery ~2 years.	N/A

Item #	Equitable	Yes/No
1	Have domain experts been consulted to articulate potential biases in the domain where the AI system will be used?	
2	Have a variety of historical and cultural contexts been considered?	
3	Have data analytics been used to fully understand the dataset distribution?	
4	Is there a plan to assess AI system likelihood and magnitude of potential harm from unintended bias?	
5	Does the dataset perpetuate an unreasoned and unfair distortion of judgment in favor of or against a person or a thing?	
6	Is the dataset specific information from item # 5 understood and available to decision makers?	
7	Has it been considered to what extent the AI system may disproportionately weigh input features that unjustly skew outcomes? i.e., take the step to ensure you didn't start with a biased dataset that results in an unjust outcome.	

Item #	Traceable	Yes/No
1	Are the qualities and limitations of training data (including synthetic dataset) well-understood and appropriate for expected operating conditions?	
2	Is it possible to determine the causal chain between inputs and outputs of the AI system i.e., is it an explainable system or a "black box" system?	
3	Is the AI system able to explain causal relationships for outcomes to end users?	
4	Is the AI system able to provide the end user with the perceived confidence of the output?	
5	Is there a plan for the AI system to log sufficient activity in the right format to perform an audit?	
6	Is there a plan to leverage a simpler model architecture for the AI system, a more explainable trained model while still providing the needed capability?	
7	Is there an appropriate plan/interface to verify individual outputs of the system?	

Item #	Reliable	Yes/No
1	Has the sponsor identified the intended range of tasks the AI system will perform?	
2	Has the sponsor adequately conveyed to the end user the limitations of AI system's reliability?	
3	Is there a plan to assess data inputs qualitatively and quantitatively to protect against interference/manipulation?	
4	Is there a plan to document procedures and reporting processes of AI system's performance and post deployment monitoring?	
5	Has the responsible entity been identified for the plan specified in item #5?	
6	Have potential edge cases been identified?	
7	Has the risk of operations outside of the intended environment been adequately defined?	
8	Has the end user established clear performance metrics needed to deploy the AI system for the intended purpose?	
9	Is there a plan to align application of model with origin of models/packages, domain deployment, performance, and breadth of deployment?	
10	Is there a Test, Evaluation, Verification, and Validation (TEVV) plan for the AI system's intended functions under specified operating conditions?	
11	Is there a plan to validate the AI system's ability to detect unintended consequences?	

Item #	Governable	Yes/No
1	Is there a plan to monitor whether the AI system is being used for its intended function, and under the specified operating conditions?	
2	Is there a plan to rollback AI system malfunctions?	
3	Is there a plan to deactivate AI system as required?	
4	Is there a plan for AI system to identify performance deviation and present it to appropriate decision makers for correction?	
5	Will the decisions or actions made by AI system be apparent and provide sufficient explanation to end user(s)?	
6	Is there a plan to provide an account of how the AI system will resolve edge cases?	
7	Is there a plan to develop appropriate training and documentation to help end user understand AI system's function, risks, performance expectations, and potential harms?	
8	Is there a plan to document and clearly communicate data policies, risks, and testing results to the sponsor and end user?	
9	Is there a plan to catalogue sensitivity of training/deployment data?	
10	Is there a strategy in place to protect sensitive data?	

References:

1. Deputy Secretary of Defense Memorandum, 26 May 2021, Implementing Responsible Artificial Intelligence in the Department of Defense.

2. Edge case – in AI terms refers to rare events or extreme situations that may only be identified in real world situations.

3. Chief Digital and Artificial Intelligence Office. "U.S. Department of Defense Responsible Artificial Intelligence Strategy and Implementation Pathway." Chief Digital and Artificial Intelligence Office, Department of Defense, June 2022, www.ai.mil/docs/RAI_Strategy_and_Implementation_Pathway_6-21-22.pdf.