

AF/A5R REQUIREMENTS DEVELOPMENT GUIDEBOOK



Volume 5 Air Force Procedures: Middle Tier of Acquisition Requirements Validation Process 9 May 2019, version 3.0

Air Force Requirements Integration Division

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PREFACE

This Guidebook is fifth in a series of AF/A5R developed guides describing Air Force Operational Capability Requirements Development. This guidebook describes the requirements actions that must be completed in support of all Middle-Tier of Acquisition efforts.

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

This Guidebook is a “how to” guide for use by all stakeholders participating in the AF requirements process, and in some cases it includes the answer to the questions “why do we have to do it that way,” “where is that written” and “where do we find additional information.”

NOTE: The AF/A5R Requirements Development Guidebooks represent official guidance developed to ensure compliance with, and implementation of, overarching Joint Capabilities Integration and Development System (JCIDS) and Acquisition policies. It is AF Policy (per AF/A5R direction and authority under HAF Mission Directive 1-56) that, to the maximum extent practical, AF Sponsors are expected to comply with the guidance described in the A5R Guidebooks.

If you have questions regarding specific information in the guidebook(s), or if you have suggestions for improvements, please contact the OPR: Mr. Steve “Bulldog” Billingsley, 703-697-2276 (DSN 227)

AF/A5RP Portal Page. Additional guidance and information, to supplement this Guidebook is located on the AF Portal:

To access the A5RP Requirements Portal Page go to <https://www.my.af.mil>
Navigate to “Organizations A-Z”, then type in “A5RP”.

CHANGE SUMMARY

Change Summary	Date
Initial Release: Revised the Guidebook Volumes to align policy and guidance under new Vol 1, as the “Capstone Guidebook” and separate the procedural guidance and other best practices in subsequent guidebook volumes and handbooks <ul style="list-style-type: none"> ○ Vol 1, Policy and Guidelines (revised previous Vol 1, refined all policy info) ○ Vol 2, Urgent Needs (major updates, revised the transition review portion) ○ Vol 3, JCIDS Deliberate Process (split out from Vol 1, reorganized layout) ○ Vol 4, Modification Proposals (split out from Vol 1, minor edits) 	3 Oct 2017
Initial release: <ul style="list-style-type: none"> ○ Vol 5, Middle Tier of Acquisition, Requirements Validation Process 	11 Jan 2019 Ver 1.0
Admin Updates and Errata Changes (red line)	2 April 2019 ver 2.0
Updated guidance for cover page and Commander’s Intent of RPRD and RFRD	9 April 2019 Ver 2.01
<ul style="list-style-type: none"> ● <u>Updated content and format, added guidance to standardize the RPRD and RFRD</u> ● <u>Updated RPRD/RFRD staffing to include MAJCOMs (not just HAF)</u> 	<u>9 May 2019</u> <u>Ver 3.0</u>

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SECTION 1. INTRODUCTION

1.1. Overview and Background

This section outlines the requirements validation activities that support the Middle Tier of Acquisition process. The Middle Tier Requirements and Acquisition processes are optimized to advance Air Force capabilities against the challenges outlined in the National Defense Strategy (NDS) at a faster pace than the deliberate acquisition processes. The Middle Tier Requirements and Acquisition processes and timelines must align in order to:

- Adapt to developing threats as outlined in the NDS and Chairman's Net Assessment and National Air and Space Intelligence Center assessments
- Fully leverage advancing technologies from industry, allies, and sister Services
- Fully leverage additional authorities to prototype and experiment to learn, adapt and advance key technologies and capabilities

1.2. Description

Section 804 of the National Defense Authorization Act (NDAA) for Fiscal Year 2016 (Public Law 114-92), provides authority to the Department of Defense (DoD) to rapidly prototype and/or rapidly field capabilities under a new pathway, distinct from the traditional acquisition system.

Under the Middle Tier of Acquisition (MTA), programs subject to the guidance shall not be subject to the Joint Capability Integration and Development System, JCIDS Manual and DoD Directive 5000.01, "The Defense Acquisition System," except to the extent specifically provided in the implementing guidance.

Middle Tier of Acquisition is defined as an acquisition approach that focuses on delivering capability in a period of 2 to 5 years.

- For rapid prototyping, innovative technology will be used to rapidly develop fieldable prototypes to demonstrate new capabilities and meet emerging military needs. The objectives are: (1) field a prototype that can be demonstrated in an operational environment, and (2) provide a residual operational capability within 5 years.
- For rapid fielding, proven technologies will be used to field production quantities of new or upgraded systems with minimal development required. The objectives are: (1) begin production within 6 months, and (2) complete fielding within 5 years.

Air Force Guidelines for Middle Tier of Acquisition are established by AFI 63-146 (in draft as of March 2019), and the interim implementation guidance memorandum, AFGM2018-63-146-01 (13 Jun 2018).

SECTION 2. AF MIDDLE TIER OF ACQUISITION REQUIREMENTS PROCEDURES

2.1. General

The process to establish requirements in support of MTA activity is based on the normal requirements process in that it requires analysis to determine the most effective materiel or non-materiel solution based on a valid threat assessment or approved capability gap(s) and it requires proper documentation to deliver capability solutions to the warfighter quickly.

2.2. Initiation

By default, per SAF/AQ direction, all new capability development efforts will be reviewed for Middle-Tier of Acquisition applicability for capability development activities that can be accomplished within a 5 year timeframe.

- *NOTE: In situations where the use of the MTA authorities are directed by the SAE or the Milestone Decision Authority (MDA) (i.e., not initiated by the sponsor and coordinated through AF/A5R), AF/A5R will determine a capability sponsor and will formally assign the sponsor in an RDM. The sponsor will establish a partnership with AF/A5R and AF/A5A to initiate the process steps outlined here.*

The first step is to ensure that the new capability aligns with the guidelines of the annual Capability Development Guidance (CDG) and analysis or other documentation exists to support the justification for proceeding to MTA.

- The sponsor (Lead Command/Agent, MAJCOM or Headquarters Air Force (HAF) 2-letter as appointed by AF/A5) coordinates with AF/A5R to review all previously-accomplished analyses and documentation in support of the new effort using the Information Resource Support System (IRSS) database or other related methods.
- Once it is determined that adequate analysis exists or has been completed, the sponsor provides a presentation to AF/A5R that describes how the new Middle-Tier of Acquisition effort fits within an overall Capability Development Strategy (CDS).
 - *NOTE: The purpose of a CDS is to define the overall plan of action and milestones that will produce a materiel solution, and it may include incremental paths incorporating various processes including Middle-Tier of Acquisition, deliberate process, information systems development, modifications to fielded systems (AF Form 1067), and DOTmLPP-P changes.*
- The CDS will include priorities and tradeoffs, and it will be informed by available resources in coordination with AF/A8P to determine if funding is available for the new MTA effort.
- Once AF/A5R approves the path ahead, the sponsor, in coordination with AF/A5RP will determine the appropriate documentation to support the MTA activity.

2.3. Documentation

Following AF/A5R approval of the analysis and development of the CDS, the Sponsor, working with AF/A5RP identifies existing requirements documents and/or begins development of a new MTA requirements document to support Middle Tier of Acquisition.

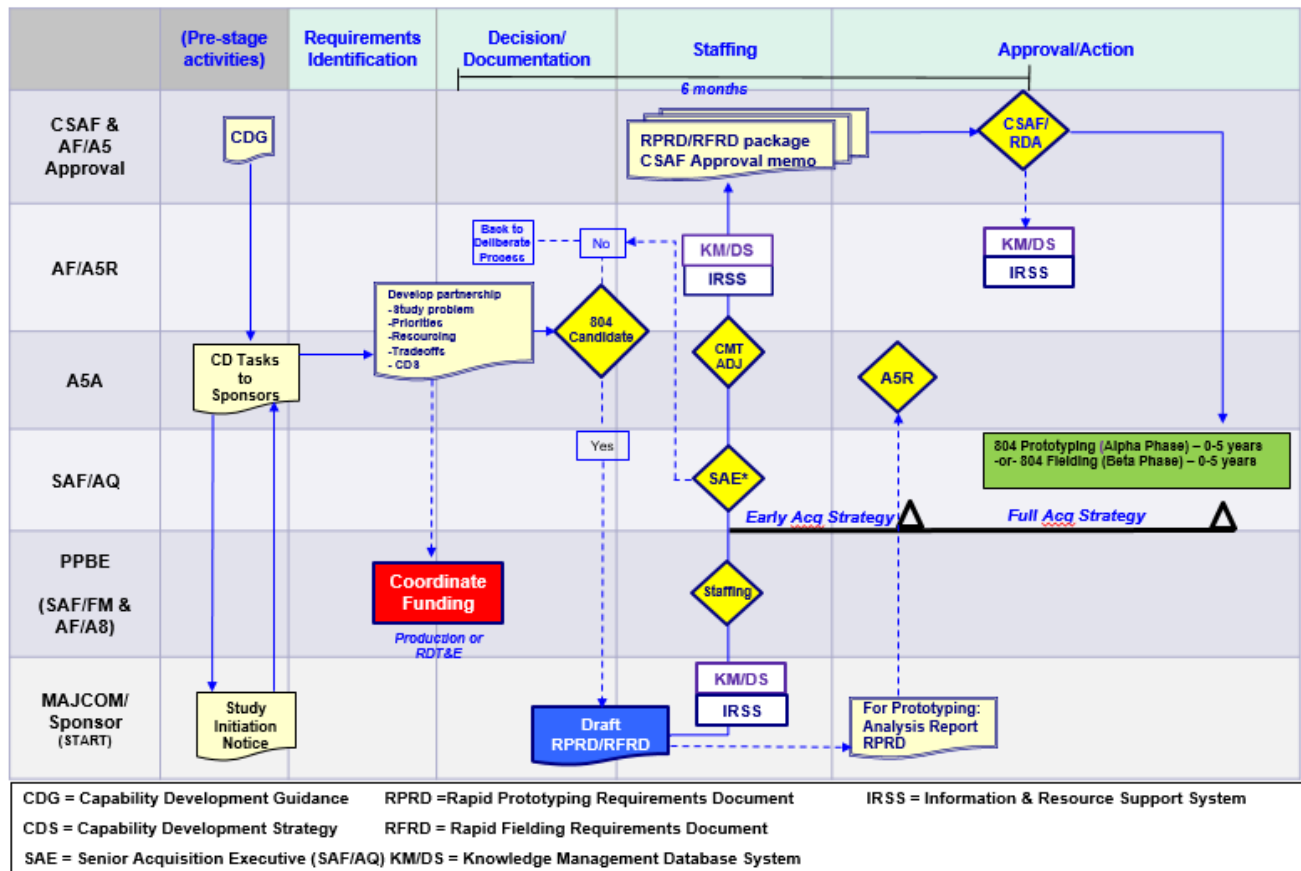
- Sponsors have the option to use a previously validated JCIDS document to support the Middle Tier of Acquisition process, or they can create a new MTA requirements document (as described below).

For MTA efforts, the sponsor may propose using a previously-validated JCIDS document. AF/A5R will determine the level of review and approval necessary to use a previously validated requirements document in support of MTA activity. All requirements decisions will be documented in writing (e.g. RDM). AF/A5RP notifies SAF/AQX directly of any decision to approve or deny the proposed use of previously validated JCIDS documents to support MTA activity.

If a previously-validated JCIDS document does not exist, a sponsor can create a new MTA Requirements document (as described in section 3 of this Guidebook).

2.4. Staffing and Validation

Section 804 Prototyping & Fielding Requirements Generation



* During the staffing process if the SAE disapproves the 804 request, the sponsor will move the document to the deliberate process.

Following development of the draft version of the RPRD or RFRD, and upon approval by the MAJCOM/Agency Director of Requirements (or higher), the sponsor will submit the document for staffing.

- A 10-day staffing period will be conducted utilizing IRSS tasking procedures on SIPRNET.

- During the staffing process, SAF/AQ acting as the Senior Acquisition Executive (SAE) determines if the new capability development effort should continue in the Middle Tier of Acquisition process.
- AF/A5RP will also forward the document to the J8 Gatekeeper for Joint Staff awareness. Should Joint Staff determine that Joint equity exists, the Sponsor may continue to proceed with MTA activities while Joint equities are being outlined and a Joint approach is developed, if required.

Following the 10-day staffing period, the Sponsor will have 14 days to complete comment adjudication and submit a final document via IRSS. AF/A5RP will prepare a staff package that will be submitted to the designated Requirements Decision Authority for AF validation and approval.

Following validation by the appropriate Requirements Decision Authority, AF/A5RP will upload the approved document to IRSS and forward it to the Sponsor and SAF/AQX.

2.5. Prototyping Analysis Report

Once the prototyping effort is complete, the sponsor will submit a summary report of the prototyping findings to AF/A5R and maintain a separate document with other program documentation in IRSS. The report will contain the following information:

- Summary of original prototyping phase goals/objectives.
- Validity of original capability gap(s).
- Verification that prototype still addresses original capability gap(s).
- Summary of any prior analysis performed by the Air Force that contributes to the capability.
- Summary of prototyping findings.
- Any additional findings identified in prototyping, but not directly related to original gap(s).
- Schedule summary (did the original schedule hold true?).
- Prototyping funding summary.
- Earned Value Management analysis.

AF/A5R, in coordination with SAF/AQX, will determine if it is viable to continue the program within the Middle Tier of Acquisition process based on performance, cost and fielding timelines.

SECTION 3. MTA REQUIREMENTS DOCUMENT FORMAT

3.1. Rapid Prototyping Requirements Document (RPRD)

Below is the format for the RPRD. Sponsors should refer to the CDD [format and content](#) guidelines found in the JCIDS Manual for additional information on how to develop each section of the RPRD.

- **Cover Page:**

Classification

Title starting with the phrase “Rapid Prototyping Requirements Document for...”

Date submitted by the sponsoring organization

Proposed MDA

Proposed RDA

Document revision number

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

- **Validation Page:** [placeholder for decision memo](#)

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 by the validation authority, the placeholder page will be replaced by the signed memorandum indicating validation of the document.

- **Commander’s Intent and Executive Summary:**

Sponsor’s explanation of why this effort is a candidate for rapid prototyping.

Briefly discuss the schedule to achieve a residual capability and a description and definition of what the successful demonstration of this new materiel solution will look like.

- **Document Body:**

Section 1: Operational Context, [Challenge and Anticipated Threats.](#)

Provide [a summary of the](#) operational context and [challenge to be addressed](#), explaining how the capability solution [will](#) contribute to the missions and activities of the Air Force [or meet an identified operational challenge within the context of the anticipate threat environment.](#)

[Describe the timeframe under consideration and the overall operational risk and](#) priority to the Air Force.

[Consider evolving threats to on-going and follow-on RDT&E, production, and O&M resulting from technology transfer, espionage, and other adversarial collection efforts.](#)

Summarize approved Critical Intelligence Parameters (CIPS), or information from Classified Information Compromise Assessment (CICA) which could critically impact the effectiveness and survivability of the proposed system.

Cite the latest DIA or Service-approved threat products used during the development of this document.

Section 2: Capability Requirements and Gaps/Opportunities.

The purpose of this section is to identify the mission needs/capability requirements and associated gaps, challenges or opportunities to be addressed by the proposed solution(s) and to outline the results of related analyses or studies conducted to determine the mission needs/required capabilities and gaps or opportunities and derive the required system-level performance attributes.

Section 3: Required System Attributes.

The purpose of this section is to outline the system level performance attributes that are necessary to address the capability requirements, gaps or opportunities or which are otherwise critical or essential to achieve mission goals and objectives.

System attributes must be assigned and have sufficient granularity to support contracting actions. Avoid over specification or inclusion of technical specifications.

Provide measures for each attribute in terms of threshold values or initial objective values as appropriate, to indicate the acceptable level of performance for the residual capability to be effective in an operational environment (as is required by MTA/804 authority).

Define other system attributes (as applicable). See the JCIDS Manual for examples.

Section 4: Interoperability & Supportability

The purpose of this section is to specify how the individual system will operate within the Joint environment, including any physical or net-ready interoperability effects on joint or allied operations. Include factors that impact both the Air Force internally as well as outside agencies and programs.

Include any requirements for electromagnetic (EM) spectrum and environmental effects controls.

Include any requirements for intelligence supportability.

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

Include requirements for Weapons Safety Assurance (as required for munitions systems)

Outline non-materiel (DOTMLPF-P) changes that need to be made in order to successfully implement fielding of the residual capability in an operational environment. Address both a) changes that enable implementation, operations and support of the system and b) changes that must be made to support integration of the system with other fielded capabilities.

Section 5: Resourcing and Schedule.

The purpose of this section is to identify 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 technology challenges that may impact the feasibility of meeting the timelines or providing a usable capability within the timeline.

Architecture Products (determined by the Program manager).

3.2. Rapid Fielding Requirements Document (RFRD).

Below is the format for the RFRD:

- **Cover Page:**

Classification

Title starting with the phrase “Rapid Fielding Requirements Document for...”

Date submitted by the sponsoring organization

Proposed MDA

Proposed RDA

Document revision number

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

- **Validation Page: placeholder for decision memo**

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Once validated by the validation authority, the placeholder page will be replaced by the signed memorandum indicating validation of the document.

- **Commander’s Intent and Executive Summary:**

Sponsor’s explanation of why this effort is a candidate for rapid fielding acquisition.

Briefly discuss the schedule to achieve a fielded capability and a description and definition of what the successful fielding and implementation of this new materiel solution will look like.

- **Document Body:**

Section 1: Operational Context, Challenge Anticipated Threats.

Provide a summary of the operational context and challenge to be addressed, explaining how the capability solution will contribute to the missions and activities of the Air Force or meet and identified operational challenge within the anticipated threat environment.

Describe the timeframe under consideration and the overall operational risk and priority to the Air Force.

Consider evolving threats to on-going and follow-on RDT&E, production, and O&M resulting from technology transfer, espionage, and other adversarial collection efforts.

Summarize approved Critical Intelligence Parameters (CIPS), or information from Classified Information Compromise Assessment (CICA) which could critically impact the effectiveness and survivability of the proposed system.

Cite the latest DIA or Service-approved threat products used during the development of this document.

Section 2: Capability Requirements and Gaps/Opportunities.

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System attributes must be assigned and have sufficient granularity to support contracting actions. Avoid over specification or inclusion of technical specifications.

Provide measures for each attribute in terms of threshold and objective values as appropriate, to indicate the acceptable level of performance for the solution to be effective in an operational environment.

Define other system attributes (as applicable). See the JCIDS Manual for examples.

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The purpose of this section is to specify how the individual system will operate within the Joint environment, including any physical or net-ready interoperability effects on Air Force, Joint or allied operations. Include factors that impact both the Air Force internally as well as outside agencies and programs.

Include any requirements for electromagnetic (EM) spectrum and environmental effects controls.

Include any requirements for intelligence supportability.

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

Include requirements for Weapons Safety Assurance (as required for munitions systems)

Outline non-materiel (DOTMLPF-P) changes that need to be made in order to successfully implement fielding of the residual capability in an operational environment. Address both a) changes that enable implementation, operations and support of the system and b) changes that must be made to support integration of the system with other fielded capabilities.

Section 5: Resourcing and Schedule

The purpose of this section is to identify the overall resourcing plan and schedule of activities to provide the capability solution and highlight any challenges or risks to the planned timelines.

Identify funding across the FYDP, to include life cycle costs.

If funding comes from other sources, be prepared to discuss operations and support funding.

Architecture Products (determined by the Program manager).

APPENDIX 1 - GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION***References***

HAF MD 1-56, *Deputy Chief of Staff for Strategic Plans and Requirements (AF/A5/8) (In Revision to reflect separate AF/A5 & AF/A8)*

[AFGM2018-63-146-01, 13 June 2018 – Interim](#) AFI 63-146, *Middle Tier of Acquisition (when published)*

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

AF/A5RP Requirements Page on the AF Portal (*requires AF Portal sign-on to gain access*):

<https://www.my.af.mil>; navigate via “Organizations A-Z”, then type in “A5RP”.