TRADOC

Capability Development Document (CDD) Writer's Guide

CDTM Compliant

Version 3.11

23 May 2012

The proponent for this guide is the U.S. Army Capabilities Integration Center (ARCIC) Operations, Plans and Policy Division (ATFC-O). This guide is one of a series of web-based publications available at https://www.us.army.mil/suite/kc/5232873 and the ARCIC Portal at https://cac.arcicportal.army.mil/ext/jcids/default.aspx. Users are encouraged to send comments using MS Word Track Changes approved by a COL or equivalent to stephen.dwyer@us.army.mil. Updates will be uploaded as changes become necessary.

Summary of Changes

Version 3.1 (12 Mar 12)

- Updated to reflect changes in CJCSI 3170.01H & JCIDS Manual
    - Modified CDD format and limits CDD to no more than 45 pages for the main body (paragraphs 1-16) + Appendix A
    - Energy and Training added as mandatory KPPs
- Updated CDTM guidance
- Added checklist of CDD revisions that must be made after exporting document from CDTM that addresses inconsistencies between JCIDS policy and CDTM. **It will remain in effect until CDTM is updated.**

Table of Contents

Table of Figures

Table of Inserts

Table of Tables

CDD Instructions and Template

NOTE: *This version of the CDD Writer's Guide is based upon the instructions outlined in the CJCSI 3170.01H, Joint Capabilities Integration and Development System,10 Jan 12; the online Manual for the Operation of the Joint Capabilities Integration and Development System, current as of 19 Jan 12* (JCIDS Manual)*; and applicable Army and TRADOC regulations. This is supplemental information and not intended to replace or replicate the JCIDS Manual in its entirety.*

I. Capability Development Tracking and Management (CDTM)

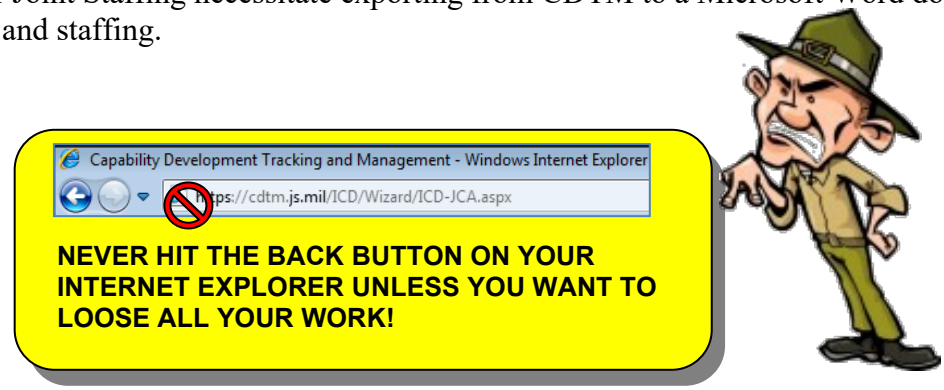
a. On 06 June 2011, the Joint Staff directed that by 30 June 2011, Capability Development Tracking and Management (CDTM) web-based tool will be required for all capability documents (ICD, CDD, CPD, and DCR/DICR), except above SECRET documents, entering into the Knowledge Management/Decision Support (KM/DS) database.

b. In 2010 the Vice Chairman Joint Chiefs of Staff (VCJCS) directed the transformation of Joint Capabilities Integration and Development System (JCIDS) capabilities document creation from a document-centric process to a data-centric process to enable data sharing and system interoperability. To accomplish this, the VCJCS directed the development of the CDTM tool.

c. The CDTM system supports the JCIDS goal of making the currently document-centric capability development process more data-centric. CDTM is a tool used by authors, editors and reviewers of capability documents. The software presents a series of "wizard" screens that guide the user through capability document creation, step-by-step. CDTM enables customized workflow and access control for documents in work, and does not allow users access to the data until the document owner grants permission. At any time, the software will automatically create a formatted Microsoft Word version of the capability document for review purposes.

d. When a document owner determines a CDD is ready for review and validation, CDTM automates transfer of a Microsoft Word version of the document to the KM/DS system for further processing. After document transfer, the document data is exposed to all CDTM users through search functionality.

e. CDTM is a document development environment. The ARCIC JCIDS Portal, Capabilities and AROC Management System (CAMS) and KM/DS remain the authoritative databases where all staffing occurs. Capability documents submitted to ARCIC for validation, HQDA for staffing (CAMS), or Joint Staffing necessitate exporting from CDTM to a Microsoft Word document for submission and staffing.



f. **CDTM takes us "Back to the Future." There are compatibility problems with KMDS that necessitate using Microsoft Office 97-2003 compliant files (i.e., .doc, .xls, .ppt vice docx, xlsx, and pptx). All exported and embedded files must be Microsoft Office 97-03 compliant. Ensure all files supporting an action are submitted in this format as well**. CDTM output also uses this construct.

g. CDTM is accessed through a web browser using the Non-secure Internet Protocol Router Network (NIPRNET) or SECRET Internet Protocol Router Network (SIPRNET).

(1) NIPRNet: https://cdtm.js.mil (will prompt you for a CAC)

(2) SIPRNet: https://cdtm.js.smil.mil

h. New CDTM users can request an account from the ***Request New Account*** link. **Note:** If you are a KM/DS user, you should not request a new CDTM account from CDTM. Instead, request a CDTM account from the KM/DS profile page. Doing this will link your CDTM and KM/DS accounts, eliminating the need to remember another password and will provide a more seamless user experience.

(1) Follow these steps to request your account *if you are not currently a KM/DS user*:

- Navigate to ***CDTM Home Page***
- Click ***Request Account*** link
- Fill out all fields in the ***Request New Account*** page
- Your password must be at least 14 characters, and must contain 2 upper case letters, 2 lower case letters, 2 special characters and 2 numeric characters
- Press ***Submit for Approval*** button

(2) An approval request is sent automatically to the CDTM administrator. Your CDTM administrator will review and approve the request. Once approved, an email will be sent to you with your username. You will be able to log into CDTM once your account is approved.

i. The CDTM tool will be updated to remain consistent with the JCIDS Manual. In the event of any discrepancies between the Manual and the CDTM tool, the JCIDS Manual is to be considered the authoritative source.

II. Considerations

a. A CDD is the primary means of proposing refined capability requirements, defines authoritative, measurable, and testable parameters across one or more increments of a materiel capability solution intended to wholly or partially satisfy validated capability requirements and close or mitigate associated capability gaps. The CDD does this by setting key performance parameters (KPPs), Key System Attributes (KSAs), and additional performance attributes necessary for the acquisition community to design and propose systems and to establish

programmatic baselines. CDD KPPs must be inserted verbatim into the performance section of the acquisition strategy and the Acquisition Program Baseline (APB).

(1) A single CDD may address a System of Systems (SoS), where a set of systems are integrated to deliver a unique capability solution.

(2) Separate CDDs are required for each system in a Family of Systems (FoS), where similar capabilities are provided through different approaches to achieve similar or complementary effects.

(3) A CDD is the typical transition document for capability solutions requiring further development of the rapidly fielded capability solution for long term use.

b. Resource Informed. In today's resource-constrained environment, the Army must exercise wise stewardship of every dollar it manages. A key element of that stewardship is to develop and use sound business practices throughout all requirement and resourcing processes. If there are not sufficient resources to execute the Engineering & Manufacturing Development (EMD) phase, or a viable strategy to get resourcing, then the CDD will not be approved.

(1) Determine if adequate resources are available to develop the capability as envisioned in the CDD prior to writing the document. There is no pot of "new money" waiting for a claimant. In fact, it is likely that some other approved effort or efforts will be decremented (or killed) as the result of your proposal. **Be prepared to discuss resource trades within YOUR capability portfolio**.

(2) The Anayslis of Alternatives (AoA) is not an adequate substitute for a cost-benefit analysis (C-BA). TRADOC requires a (C-BA) in addition to an AoA prior to CG, TRADOC validation of the CDD.

c. Considering and Conducting Trades. The main reason trades are considered is to ensure proposals are resource informed to achieve optimal warfighting capabilities, and integrated DOTMLPF and/or system performance attributes (outcomes) within relevant constraints and with acceptable operational risk.

(1) The most difficult thing for the capability developer to do is to understand all the things they should consider when making effective trades (refer to the CDD Trades Considerations Checklist for examples). The magnitude of effort required to accomplish beneficial and sound trades must not be minimized. Trades should be evaluated across the DOTMLPF domains to determine the tactical, operational, and strategic impacts of any trades in a holistic fashion. The effect of a change in one domain must be considered, as well as the second and third order effects on other domains, other interdependent systems, and other warfighting organizations, both Army and Joint. Trades must be analytically based, analytically sound and risk informed. Additionally, they must consider the integration of joint and other service capabilities.

(2) At the CDD phase, trades should focus on defining an increment of affordable, feasible, achievable, measureable, and testable capabilities needed by the warfighters to support the EMD phase of an acquisition program. When trading, consider: Organizational Impacts, Functional Impacts, Operational Risk (Internal – e.g., Army dependence on its own Service capabilities; External – e.g., Joint Integration and dependence on external capabilities (Joint, Intergovernmental, Interagency and Multinational)), Levels of Integration, Resource Availability (dollars, personnel, etc.), and Technical Feasibility (technical readiness), when trading Performance, Cost, and Schedule.

(3) CDD Trades Considerations Checklist. This checklist is not intended to be a step by step guide for developing and documenting trades, there are too many variables to adequately cover all possible situations. This checklist provides capability developers an illustrative list of things they should consider during the JCIDS process.

CDD Trades
Considerations Check

Insert 1: CDD Trades Considerations

III. CDD Format

a. The CDD format is mandated by the JCIDS Manual and is built into the CDTM online tool. CDTM is being updated to be consistent with the JCIDS Manual. In the event of any discrepancies between the Manual and the CDTM tool, the Manual is to be considered the authoritative source.

b. Each subparagraph should be numbered to facilitate correlation, traceability, and ease of identifying issues during staffing. Use scientific paragraph numbering. The use of conventional alpha-numeric numbering is not CDTM compliant.

Special Note: Sub-Paragraph Numbering within the CDTM Wizard.

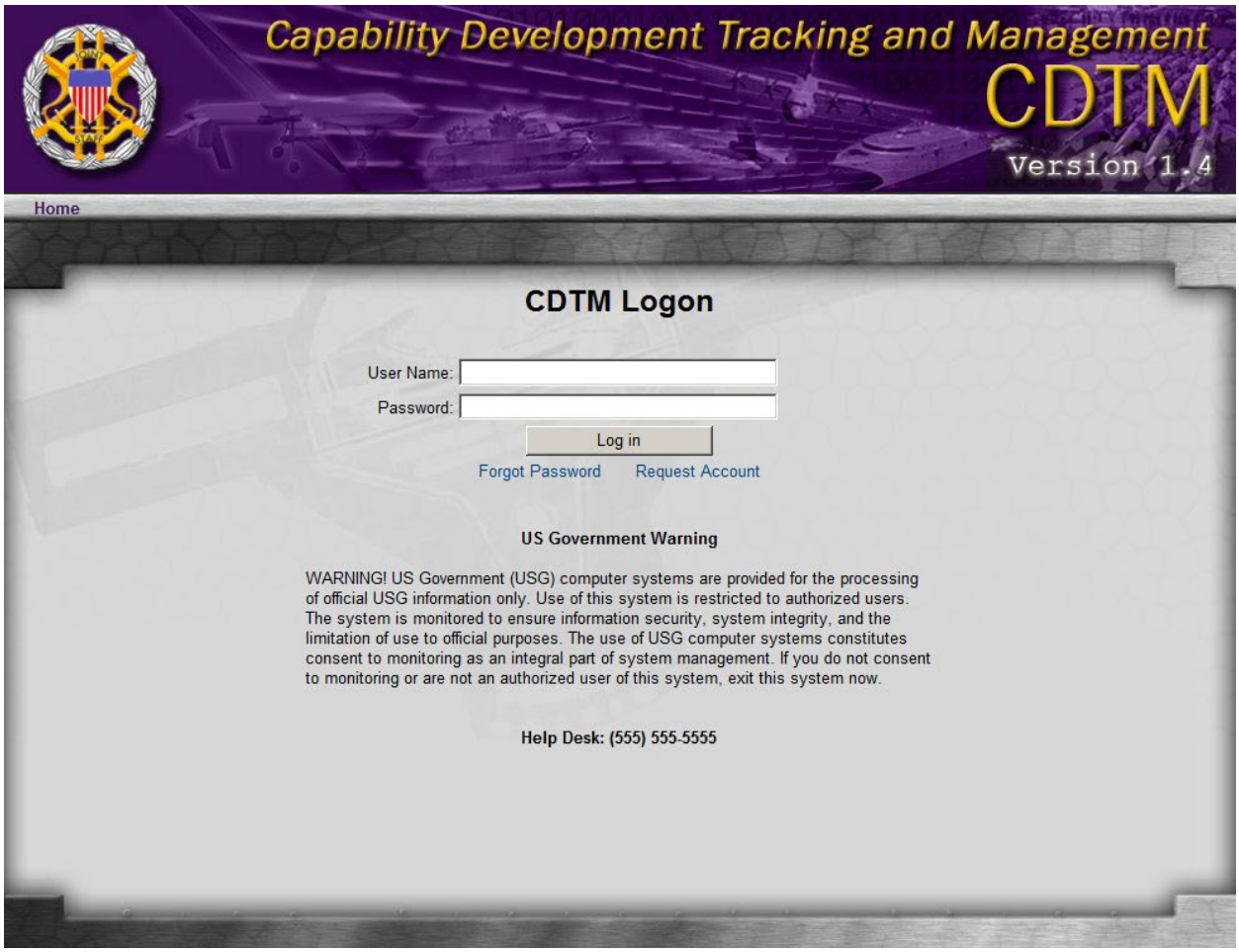
Within the CDTM Wizard environment, the system will automatically number each "paragraph" for your document. However, it will **NOT** number each sub-paragraph after the second level. You must MANUALLY number each sub-paragraph (Tier Level 3 and below) when you type in the narrative.

c. ***The CDD shall have the following 16 sections, followed by four appendices. The body of a CDD and Appendix A – shall be no more than 45 pages long.***

d. Log in.

(1) Navigate to CDTM (on either SIPR or NIPR) using one of the URLs provided above. In the ***User Name*** field, enter the username you received in your confirmation email. (Your username is not case-sensitive). In the Password field, enter your password exactly as you

set it when you requested an account, as it is case-sensitive. Click the ***Log in*** button. CDTM will automatically direct you to your Home Page.



(2) On the NIPR network, a user may utilize their CAC to automatically log into CDTM. In order to do so, their CAC credentials must first be synchronized with their CDTM account. To do this, first follow the instructions above to create and log into your CDTM account with a password. Then, you will need to synchronize your CAC by going to *My Profile* and then clicking the *CAC Synchronization* link. Click *Associate* and your CAC information will be associated with your CDTM username.

IV. CDD Preparation and CDTM Wizard

a. The CDD Wizard is similar to the ICD wizard, however the fields and flow are different as a CDD requires more information than an ICD. To access the CDD wizard, highlight ***New*** on the taskbar and select ***CDD***.

(1) In order to use data from an existing document, it must be in Legacy, Submitted, or Approved status. If you are importing information from an existing document, click ***Import***, and enter the source document number, all or part of the document title, and/or select the document

type from the drop-down list. Then click the "***Search***" button.. To import data from your selected source document, click the "Import" hyperlink associated to the document. CDTM will then present you a list of sections for import. All sections are checked by default. If you do NOT want to import certain sections, uncheck them. Click ***Import***. CDTM then launches the appropriate document wizard for the type of document you selected, all filled in with the selected data sections. This is a completely new copy of the data that you may edit. The original document that you imported from will remain unchanged.

(2) If you are not entering information from an existing document, click the ***Begin Wizard*** button. When you begin the Wizard process in CDD, you will automatically be directed to the General Information page.

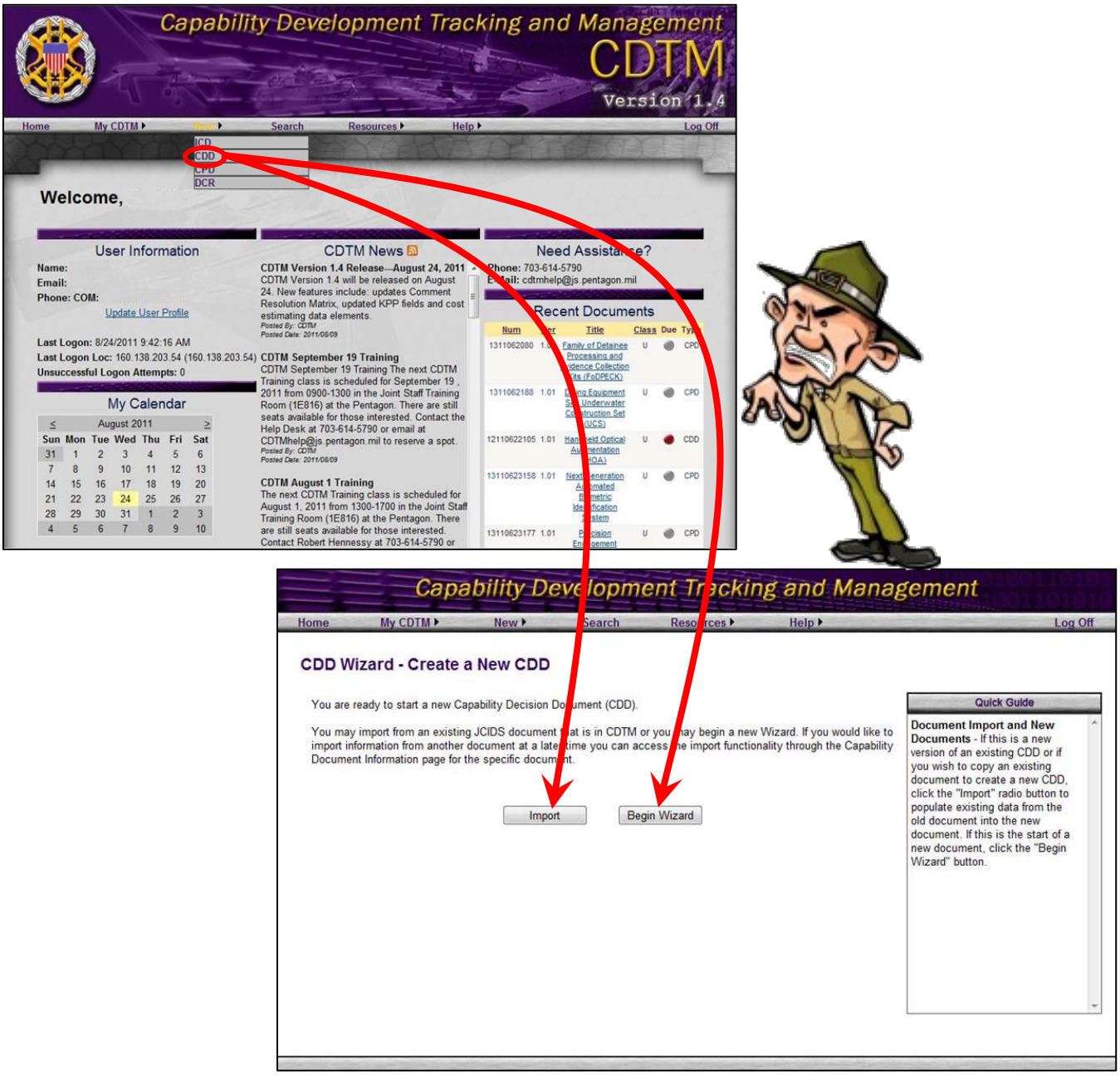
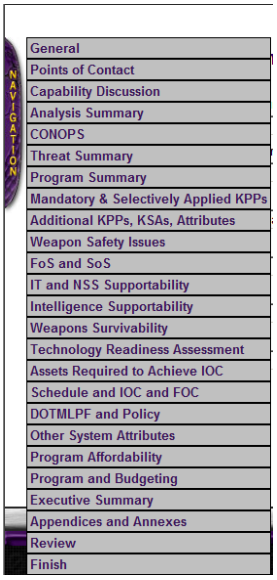


Figure 1: CDTM Create a New CDD



b. The CDTM Wizard has a "Wizard Side Navigation Bar" located on the left side of the screen to enable you to easily enter your documents and navigate to the different sections. A slim vertical purple Navigation bar appears on the left side of the screen throughout the wizards. Hover the mouse over this bar to show the section menu. Click a section to jump right to that section in the wizard. You may navigate and fill in the wizard screens in any order. CDTM will save your changes before leaving the screen you were on.

c. CDTM has simplified page-to-page navigation within the wizard's document creation process. Click on the title of the previous (or next) menu option at the bottom left and right corners of each page for immediate navigation to the previous (or next) page. There are also previous and next arrows (with no titles) at the top left and right of each wizard page.

Figure 2: CDD Wizard Navigation Bar

d. After you import or begin the wizard, at any time you can view and edit your document using the links from the CDTM Home Page and ***My Files***. Hypertext links are implemented within the CDTM application as standardized blue underlined words. Generally, links serve as a navigator to additional unique windows, pages or locations.

e. It is important to remember that per DOD requirements, an account login session will expire (or "timeout") after twenty minutes of inactivity. When a session is close to expiration, you will automatically be prompted with a message asking if you wish to extend your session. Selecting no, or not answering within one minute CDTM Login page will cause the session to end, and no work on that page will be saved. If a session management timeout occurs, all work conducted from the last save is permanently lost. ALWAYS SAVE YOUR WORK IF YOU ARE GOING TO LEAVE YOUR DESK.

f. To save, simply select the save button or use the Wizard Navigation Buttons when creating a wizard. Work is automatically saved as you move from page to page within the wizards. Note that work is NOT automatically saved if you use the Main Menu to leave the wizard.

g. The JCIDS Manual requires certain appendices for every JCIDS document: an Acronym List, a Reference List, a Glossary, and a list of attachments. CDTM automatically builds these appendices for you. You can add entries for these appendices in any order, at any time. Select any of the ***Wizard Add Options*** (Acronym, Glossary, Reference, Attachment) to add data for your appendices. To see a full list of the appendix items you have added and see how it is shaping up, refer to the ***Appendices and Annexes*** page of your CDD document wizard. This section will also allow you to edit or remove acronyms or references. Attachments can only be removed.

(1) The ***Acronym*** option allows you to add a new acronym to the document's acronym section. An acronym section is dynamically created at the end of the finished document. CDTM

provides a warning notice to ensure each finished document does not contain duplicate acronyms.

(2) The ***Glossary*** option allows you to add a glossary term and definition to the document's glossary section. Glossary terms may be added in any order and CDTM will alphabetize them for you.

(3) When selected, the ***Reference*** option will provide a process to include relevant references to the document's reference section. A reference section is dynamically created at the end of the finished document. The user can reorder Glossary entries using the up and down arrow icons next to each entry.

(4) The ***Attachment*** option gives you the ability to add attachments to the document's attachment section. An attachment section is dynamically created at the end of the finished document. Attachments are listed in the order that they have been attached. CDTM prohibits duplicate attachments in the same document. As a security consideration, attachments generally may not exceed 20MB in size (each attachment, not total). If you have a larger document to attach and need an exception, please call the CDTM help desk and they will temporarily lift the restriction so that you may upload your attachment. Attachments are not printed in the document output, but references to the documents are listed. When a CDD is submitted to KM/DS, all attachments are included with the submitted package as separate files.

h. Classification marking.

(1) All appropriate fields have a dropdown selection to allow you to select a classification for the data in that field. As a security feature, CDTM does not allow selection of a classification higher than the active domain. For example, you cannot select "Secret" when working on the NIPRNet domain. Per DoD portion marking standards, you should continue to enter portion markings in the paragraphs in addition to choosing a classification for the data element. For example, if you select "S" in the dropdown menu (for Secret) and you enter text into the field, you should place an (S) portion marking next to all paragraphs classified as Secret. The purpose of the dropdowns is to enable CDTM to determine overall classification of the document, not to automate the classification and portion markings at the paragraph level.

(2) Also available is the "+" icon next to every narrative field. This allows you to add Handling and Non-DoD Instructions such as //FOUO or //NOFORN//REL to a document. It also allows you to add External Network Location information when portions of the document are located on a different network.

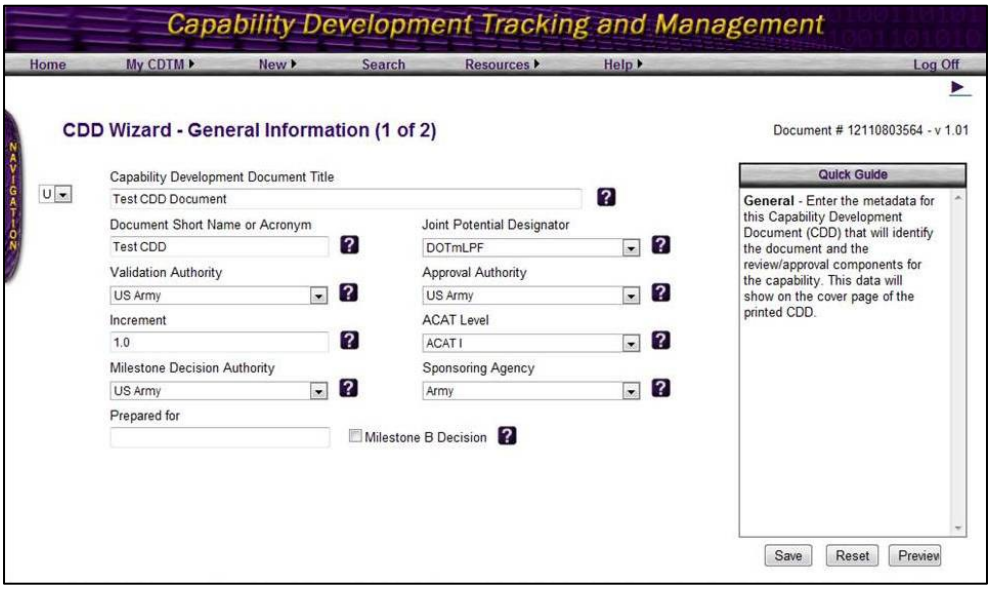
i. The Review function performs a check on all fields in the wizard and alerts you if anything appears to be missing or out of sync. Access the Review from the side Navigation menu. You can run the Review at any time, as many times as you desire. The review checks that the overall classification of the document equals the highest classification of any sub-section (SIPRnet only). Review also provides you a list of:

- Errors in your document (e.g. missing information in a mandatory field and the "NA" button has not been clicked).
- Warnings if there is no information in non-mandatory fields (e.g. Glossary, Appendices, Reference, Acronyms, etc).
- Validation pass notifications for all section that have no validation issues.
- Informational line item counts for Attachments, References, Glossary, and Acronyms.

j. To create a Microsoft Word, PDF or HTML version of your document, click ***Finish*** from the left Navigation menu. Change the desired document format if you wish (Microsoft Word is the default) and click the ***View Document*** button. You will get a green message "Document creation was successful" with a hyperlink below it that says "Click here for document: (document title)." Click the link. CDTM will prompt with the message "Do you want to open or save this file?" Click ***Open***. A fully formatted version of the document will open on your computer. Note that this document is dynamically assembled from data in the database,and is not saved on the server. You may run the document creation process at any time, as many times as you wish.

V. General Information (Page 1 of 2)

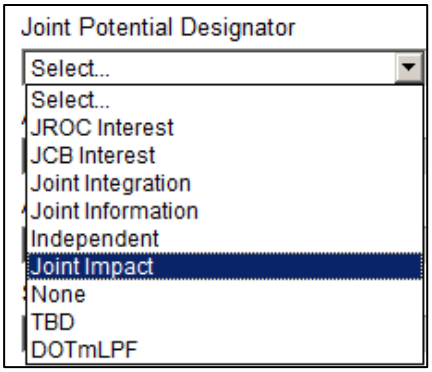
Cover Page



a. **Capability Development Document Title –** Create a unique title for the CDD, starting with the phrase "Capability Development Document for…".

b. **Document Short Name or Acronym –** Provide a short title or acronym that will provide a common reference for the CDD.

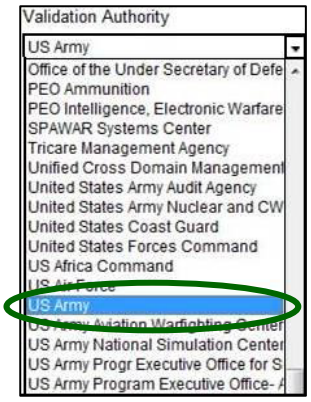
c. **Joint Potential Designator** (now called the Joint Staffing Designator (JSD) – Select the JSD as determined by the Gatekeeper from the drop-down list. The JSD is a designation assigned by the J8 Gatekeeper to specify JCIDS validation, approval and interoperability expectations. Appropriate validation authority entries correspond to JSD entries with JCID Manaul descriptions below:



- JROC Interest – **"JROC"** is the validation authority. Applied to all documents describing ACAT I/IA programs, Joint DCRs, and those that have a potentially significant impact on interoperability (interagency, allied/partner nation, coalition, etc.). All documents will be evaluated for Joint Staff endorsements during staffing. FCBs will review for Interagency/Allied/partner nation equity and perform Joint prioritization of the new capability requirements. The document will be made available via KM/DS staffing for comment. Comment adjudication for comments unrelated to joint endorsements or certifications must be completed to the satisfaction of the validation authority. Comments adjudication related to joint endorsements and certifications must be completed to the satisfaction of the endorsing or certifying organization.
- JCB Interest – **"Joint Capabilities Board"** is the validation authority. Applied to all documents describing ACAT II and below programs that have a potentially significant impact on interoperability (Interagency/Allied/partner nation, coalition, etc.). JCB Interest is the minimum JSD for any documents where (a) the Sponsor is a Combatant Command (CCMD), or (b) the document is an information system (IS) ICD. All documents will be evaluated for Joint Staff endorsements during staffing. FCBs will review for Interagency/Allied/partner nation equity and perform Joint prioritization of the new capability requirements. The document will be made available via KM/DS staffing for comment. Comment adjudication for comments unrelated to joint endorsements or certifications must be completed to the satisfaction of the validation authority. Comments adjudication related to joint endorsements and certifications must be completed to the satisfaction of the endorsing or certifying organization.
- Joint Integration – **"US Army"** is the validation authority. Applied to all documents describing ACAT II and below programs, which require one or more joint endorsements or certifications, but are below the level of JCB Interest. All weapons and munitions will be designated Joint Integration as a minimum. All documents will be evaluated for joint endorsements and certifications. FCBs will review for Interagency/Allied/partner nation equity and perform Joint prioritization of the new capability requirements. The document will be made available via KM/DS staffing for comment. Comment adjudication is at the discretion of the Sponsor for comments unrelated to joint endorsements or certifications. Comments adjudication related to joint endorsements and certifications must be completed to the satisfaction of the endorsing or certifying organization.

- Joint Information – **"US Army"** is the validation authority. Applied to all documents describing ACAT II and below programs, which do not need Joint Staff endorsements, and are below the level of JCB Interest. FCBs will review for Interagency/Allied/partner nation equity and perform Joint prioritization of the new capability requirements. The document will be made available via KM/DS staffing for comment. Comment adjudication is at the discretion of the Sponsor.
- Independent – **"US Army"** is the validation authority. Applied to documents describing all other programs. The documents are not staffed through the Joint community for comment, but FCBs will update Joint prioritization for any new capability requirements within their JCA portfolios. As Independent documents are not staffed to external organizations for comment, no comment adjudication is required.
- Joint Impact do not use as this is not an approved JSD.
- None is used when there will be no JSD designated.
- TBD can be used if current JSD has not been assigned.
- DOTmLPF do not use as this is not in the current approved JCIDS Manual.

d. **Validation Authority** – The Validation Authority is dependent upon the JSD assigned by the Joint Staff Gatekeeper during staffing. For a description of each designation see CJCSI 3170.01H, Joint Capabilities Integration and Development System. Appropriate validation authority entries correlate to JSD entries as shown below:



- JROC Interest - **"JROC"** is the validation authority
- JCB Interest - **"Joint Capabilities Board"** is the validation authority
- Joint Integration – **"US Army"** is the validation authority
- Joint Information – **"US Army"** is the validation authority
- Independent – **"US Army"** is the validation authority

e. **Approval Authority –** Fill in based on the JSD assigned. For additional information on approval authority see CJCSI 3170.01H. Once the approval authority has been determined, insert one of the following in the space provided:

- **"JROC"** – for ACAT I and programs designated as JROC Interest.
- **"Joint Capabilities Board"** – for ACAT II and below programs designated as JCB interest.
- **"US Army"** – for ACAT II and below programs that are not JROC or JCB Interest Programs.

f. **Increment –** "Increment: 1.0" is the correct entry unless you are working on a follow-on increment of a previously

developed capability.

g. **ACAT Level –** Insert the likely Acquisition Category (ACAT) based on the forecast cost of the system or previous milestone decisions. For a description of each category see AR 70-1, Army Acquisition Policy, table 3-1.

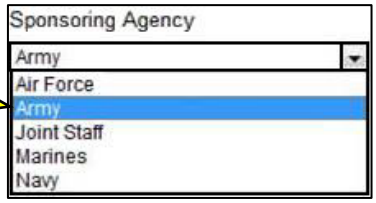
h. **Milestone Decision Authority (MDA) –** The MDA is dependent upon the ACAT. For additional information on MDA designation see DODI 5000.02, *Operation of the Defense Acquisition System*, Enclosure 3, table 1 or AR 70-1, *Army Acquisition Policy*, Chapter 3, Table 3-1. Select the Milestone Decision Authority (MDA) from the drop-down list.

(1) ACAT I - The MDA is either the Defense Acquisition Executive (DAE) who is dual-hatted as the Under Secretary of Defense for Acquisition, Technology and Logistics (USD AT&L) or the Army Acquisition Executive (AAE), also referred to as the Assistant Secretary of the Army for Acquisition, Technology and Logistics (ASA(ALT)).

(2) ACAT II & III – Generally, MDA is delegated by the AAE to the managing Program Executive Officer (PEO) unless the program has been designated "special interest". The AAE may delegate milestone decision authority to any of the PEOs listed below:

- US Army
- PEO Ammunition (AMMO)
- PEO Intelligence, Electronic Warfare and Sensors (IEWS)
- US Army PEO-Simulation, Training & Instrumentation (STRI)
- US Army Program Executive Office – Aviation (AVN)
- PEO Combat Support and Combat Service Support (CS&CSS)
- JPEO Chemical and Biological Defense (CBD)
- PEO Command, Control, and Communictaions Tactical (C3T)
- PEO Enterprise Information System (EIS)

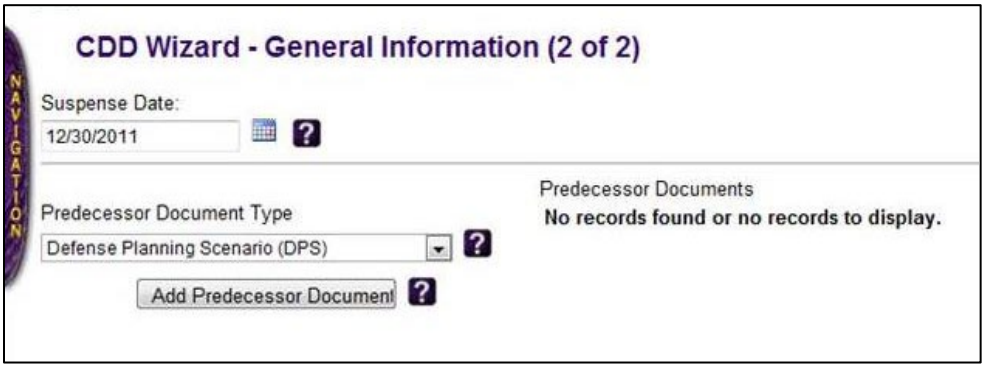
i. **Sponsoring Agency –** Always select **"Army"** as the sponsoring agency.



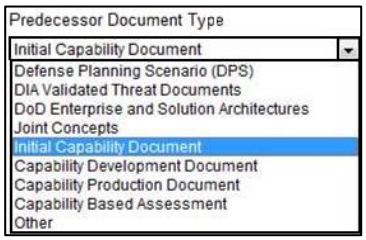
j. **Prepared for Milestone B Decision –** Check the Materiel Development Decision (MDD) if this capability document supports the MDD or enter the type of acquisition decision point this capability document addresses.

VI. General Information (Page 2 of 2)

Cover Page



a. **Suspense Date**. You may enter the date that that this document must be completed, but it has no impact on the processing of the document.



b. **Predecessor Document Type –** Select the document type from which this CDD is derived from the drop-down list. Then click the *"Add Predecessor Document"* to select a predecessor document. Only the CDTM-resident documents of the type selected will be visible to choose. You must repeat the procedure if other document types are identified as predecessor documents.

c. **[Add predecessor Document] Button –** Click this button to add predecessor document files. To select predecessor documents:

(1) Select the type of document on the "Predecessor Document Type" drop down list.

(2) If the document exists in CDTM, the file will be visible in the selection list. Click the "Link" icon adjacent to the title to add the document as a predecessor document.

(3) If linking to a document outside of CDTM, click the browse button, then select the document you wish to link to as a predecessor document. Be sure to indicate the document's classification.

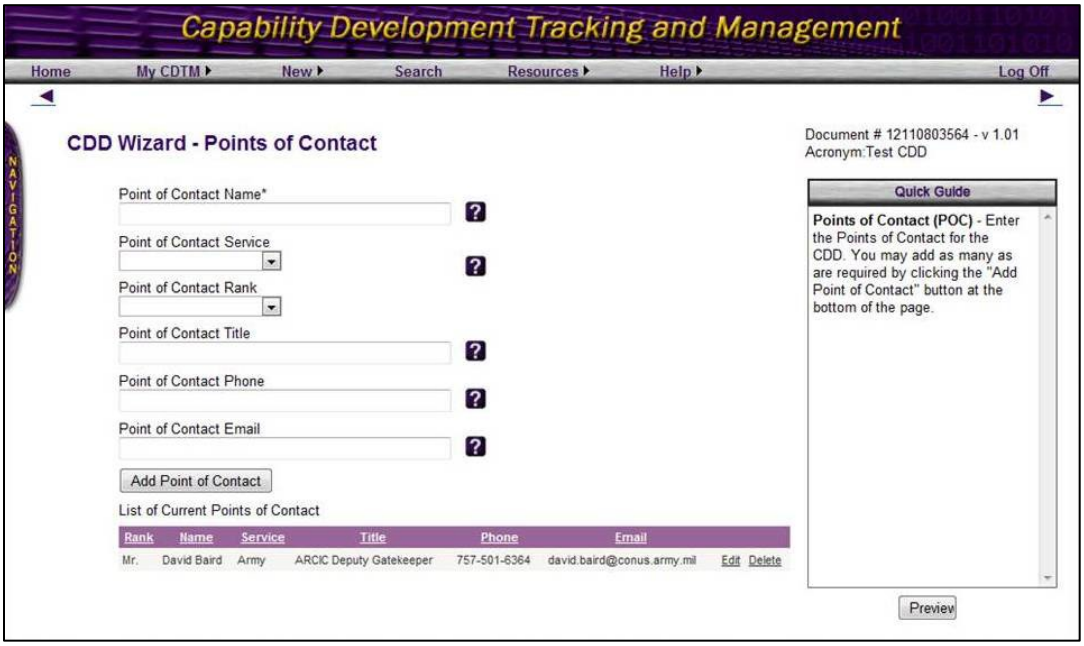
(4) If the document is not available, enter the document's title in the "Title" field.

Special Note: Draft Version Number in CDTM.

Every document automatically receives a unique identifier or "Version Number" in CDTM. You do not have to manually input this number. Use the unique number to identify your file name.

VII. Points of Contact.

POC Listing



a. POCs should cover the primary writer/editor at the proponent, ARCIC lead action officer, and a Program Manager representative if available/appropriate.

b. **Ensure at least two proponent level POCs are listed**.

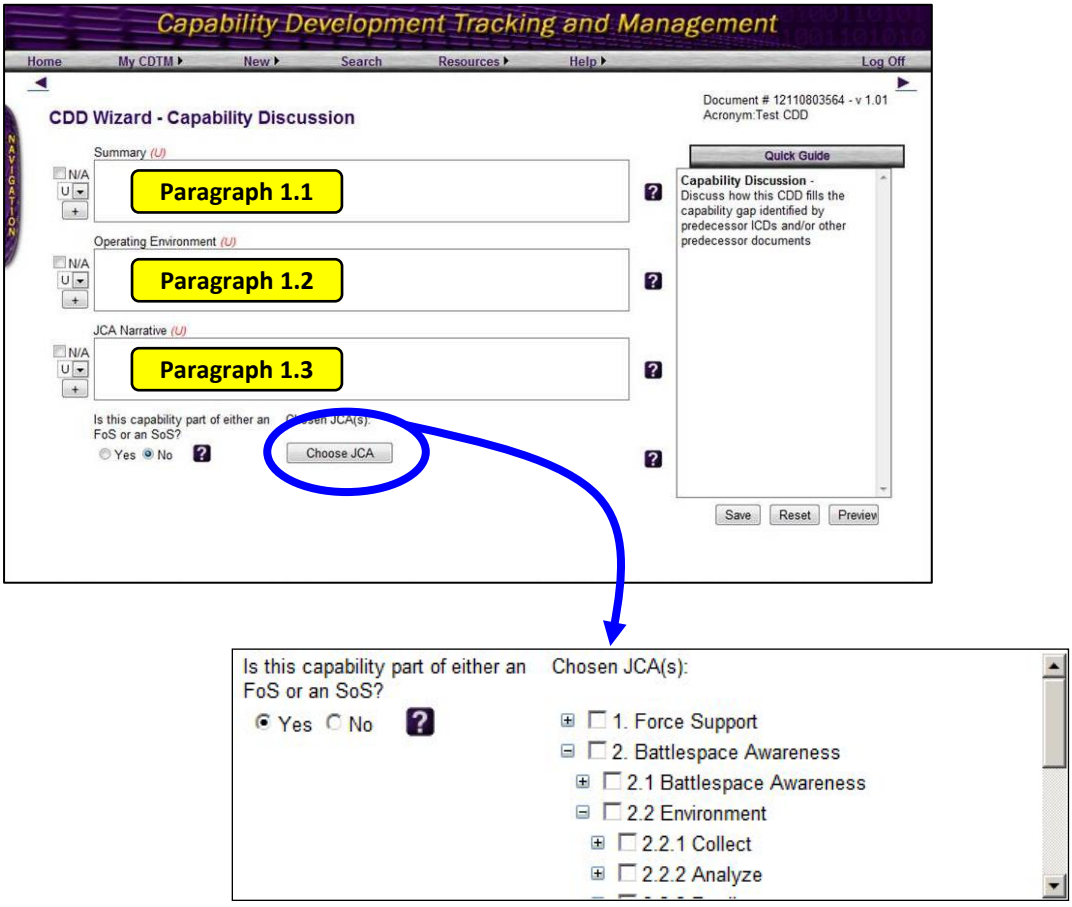
c. Each POC must be added individually. There is no mass "cut and paste" option.

d. **Include both NIPRNET and SIPRNET addressees** for POCs. CDTM does not prompt you to put both the NIPR and SIPR email addresses in the same box. Just separate the two within the date field with a semi-colon and label them as follows:

NIPR: joe.tentpeg@us.army.mil; SIPR: joe.tentpeg@us.army.smil.mil

1. Capability Discussion

1.0 Capability Discussion.



At the bottom-middle of the page, a button allows selection of an appropriate JCA. Clicking the button will open a menu where the user can select the appropriate JCA(s) for their document.

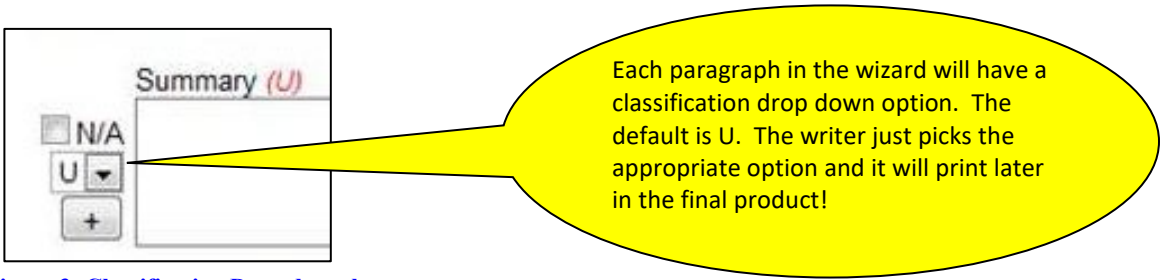


Figure 3: Classification Drop down box

1.1 Summary.

a. Cite the applicable ICDs and/or applicable source documents (e.g., military utility assessments (MUAs)) and provide an overview of the capability requirements and associated capability gaps in terms of relevant range of military operations and the timeframe under consideration. It is critical to "list" direct predecessor documents that support the CDD. If the capability development effort preceded the implementation of JCIDS, list the requirements document that supports and underpins the CDD, i.e. the Operational Requirements Document (ORD).

b. If the CDD is part of an FoS or SoS solution, identify the source ICD and related CDDs and CPDs. Discuss any integrating DOTmLPF-P changes or required synchronization for SoS solutions in Section 7.

c. Update the ICD description of the expected joint and multinational mission enviroments. Describe the system capability and how it relates to the capability defined in the ICD, Concept of Operations (CONOPS), and the DOD Enterprise Architecture, and the solution architecture.

d. The capability must be defined using the same lexicon used to describe the capability requirements and capability gaps in the ICD. Discuss how the capaibility increment(s) defined in this CDD contribute to satisfying the validated capability requirements and closing associated capability gaps.

1.2 Operating Environment.

Operating Environment - Discuss the operating environment of the system. Address how the capability solution will be employed on the battlefield and where it will be employed and/or based.

1.3 Related JCAs.

JCA Narrative - Provide a short narrative as to how this CDD applies to this JCA Tier.

a. You may incorporate multiple JCAs per capability discussion. Click the Choose JCA button to display the JCA picker. Place a check next to all applicable JCAs and click Update JCA to save the selections. This option will automatically print out the JCAs in Paragraph **1.3 (U) Related JCAs** as a list. (See example below)

1.3 (U) Related JCAs

The related JCAs are:

2. Battlespace Awareness
   2.3 Processing / Exploitation
3. Force Application
   3.1 Maneuver
5. Command and Control
   5.2 Understand
   5.6 Monitor
6. Net-Centric
   6.2 Enterprise Services (ES)
7. Protection
   7.1 Prevent
   7.2 Mitigate
8. Building Partnerships
   8.2 Shape

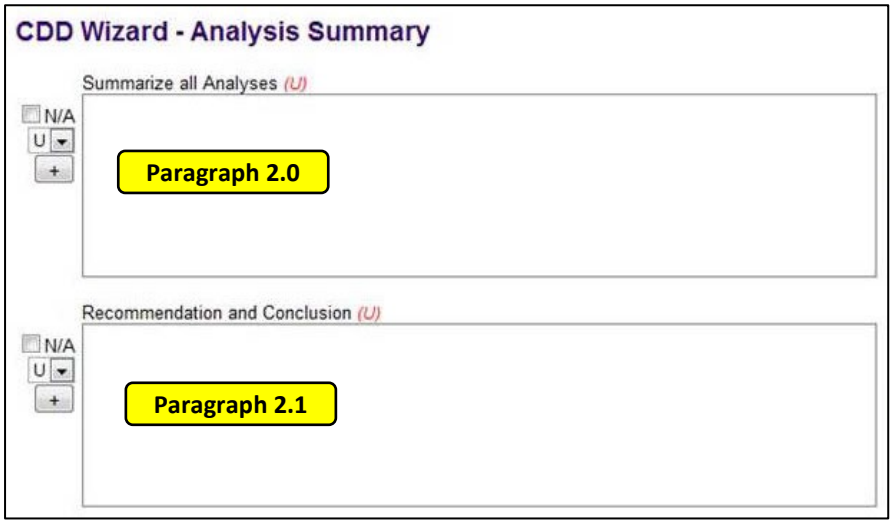
Figure 4: Paragraph 1.3 Example

SPECIAL NOTE

The Related JCAs are automatically formatted and listed as above for you by CDTM. Do not use the old JCA table. **Only select Tier 1 & 2 JCAs as mandated by the JCIDS manual.** CDTM has a flaw in Tier 3-5 JCAs that makes your document inaccessible if selected. Any JCA with a special symbol "&" should be avoided.

b. Identify the JCAs (Tier 1 and 2) in which the capabilities being delivered through the CDD directly contribute. "List" only the applicable JCAs, there is no requirement to provide rationale for their inclusion. However, there should be a high correlation to the capability advocated for production and the JCA Lexicon at http://jcams.penbaymedia.com.

2. Analysis Summary



Paragraph 2.0 – Analysis Summary

Summarize all Analyses - Summarize all analyses performed (i.e., AoA and/or other support analysis) conducted to determine the system attributes and to identify the key performance parameters (KPPs) and Key System Attributes (KSA). Include the alternatives, objective, criteria, and assumptions. ***Keep the summary to no more than two pages***, attach the complete C-BA or AoA as an appendix. You must cover the **alternatives considered, objective, criteria and assumptions.**

2.1 Recommendation and Conclusion.

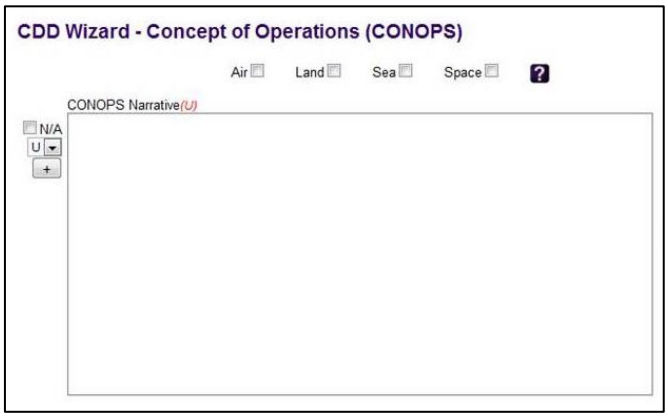
Recommendation and Conclusion - Cite the recommendations and conclusions that are derived from the analyses.

3. CONOPS Summary

3.0 CONOPS

The information is this paragraph should serve as the basis for operational mode summary/mission profile (OMS/MP) development.

Click the appropriate check box(es) as to whether this concept of operations pertains to the air, land, sea, cyber and/or space battlespace.

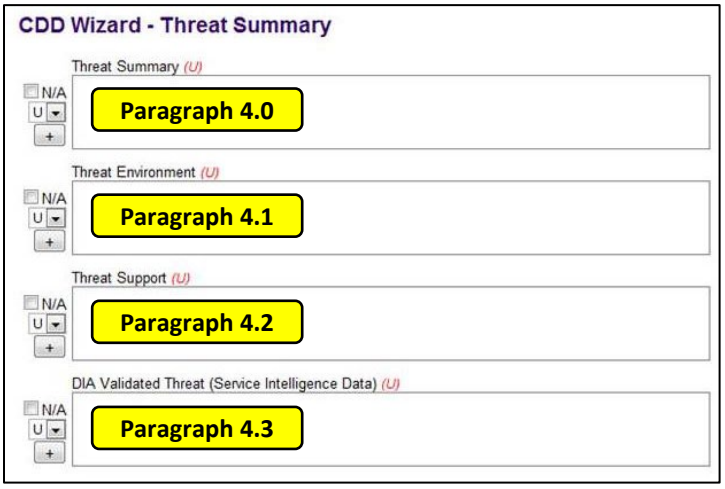


Describe the relevant part of the Joint Concepts, CONOPS, and/or Unified Command Plan-assigned mission to which the capability solution contributes, what operational outcomes it provides, what effects it must produce to achieve those outcomes, how it complements the integrated joint warfighting force, and what enabling capabilities or capability solutions are required to achieve its desired operational outcomes along with any interdependencies between existing and planned capability solutions.

> **Note:** To create subparagraphs in this section you must manually enter them. (example: 3.0.1, 3.0.2, etc…)

4. Threat Summary

The Threat Summary page is populated programmatically from the predecessor ICD document, if one exists. The text can be edited as necessary. The text boxes in the wizard (see below) will print out in order and automatically number the paragraphs as follows:



If you don't use a paragraph you must select the "N/A" option box on the left side of the wizard page. It will still print the paragraph number with a place holder that says, "This section is intentionally left blank".

During staffing, documents with JSDs of JROC Interest, JCB Interest, and Joint Integration will be subject to Defense Warning Office (DWO) threat validation.

4.0 Threat Summary

Threat Summary section is an overview and generalization of the threat facing the capabilities. Use the threat summary from the predecessor ICD document, if one exists.

4.1 Threat Environment

Threat Environment. Summarize the projected threat environment and the specific threat capabilities to be countered to ensure the capability gap can be mitigated. Include the nature of the threat, threat tactics, and projected threat capabilities (both lethal and nonlethal) over time.

4.2 Threat Support

Threat Support. The organizational resources that provided threat support (kinetic and non-kinetic) to capability development efforts.

4.3 DIA Validated Threat

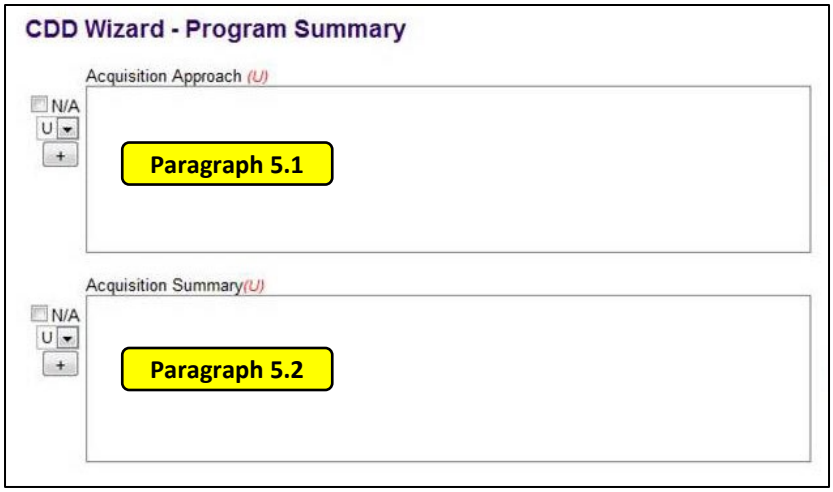
DIA Validated Threat (Service Intelligence Data). Programs designated as ACAT I/ID (or potential ACAT I/ID) must incorporate DIA-validated threat references. All other programs may use DOD Component intelligence center-approved products and data. Summarize the organizational resources that provided threat support to capability development efforts.

Note: For assistance in framing the threat against a specific capability, contact your local threat office or the TRADOC G-2 for assistance or you can contact the DIA Defense Warning Office, Acquisition Support Division for assistance at DSN 428-0788; SIPRNET: http://www.dia/smil/mil/admin/di/dwo/dwo3.html.

5. Program Summary.

Paragraph 5.0 – Program Summary

Detail the acquisition plan for this and future increments for this capability development. Provide a "summary" of the overall program strategy for reaching full capability and the relationship between the production increment described in the CDD and any other increments planned for the program.



5.1 Acquisition Approach.

Acquisition Approach. Carefully address the considerations (e.g., technologies to be developed, other systems in an FoS or SoS, inactivation of legacy systems) that are driving the incremental delivery plan. For follow-on increments, discuss any updates to the program strategy to reflect lessons learned from previous increments, changes in Joint Concepts, CONOPS, or the DOD Enterprise Architecture and the solution architecture or other pertinent information. Identify known external dependencies and associated risks. In addition, provide an update on the acquisition status of previous increments. For IS that do not have an IS ICD, identify the organization or body that will provide oversight and management of the delivery of the capabilities. (Limit to 4000 characters)

5.2 Acquisition Summary.

Acquisition Summary. Provide a summary of the overall program strategy for reaching full capability and the relationship between the increments addressed by the current CDD and any other increments of the program. The timing of delivery of each increment is important. (Limit to 4000 characters)

6. Development KPPs, KSAs, and additional performance attributes.

Paragraph 6.1 – Mandatory KPPs and Selectively Applied KPPs

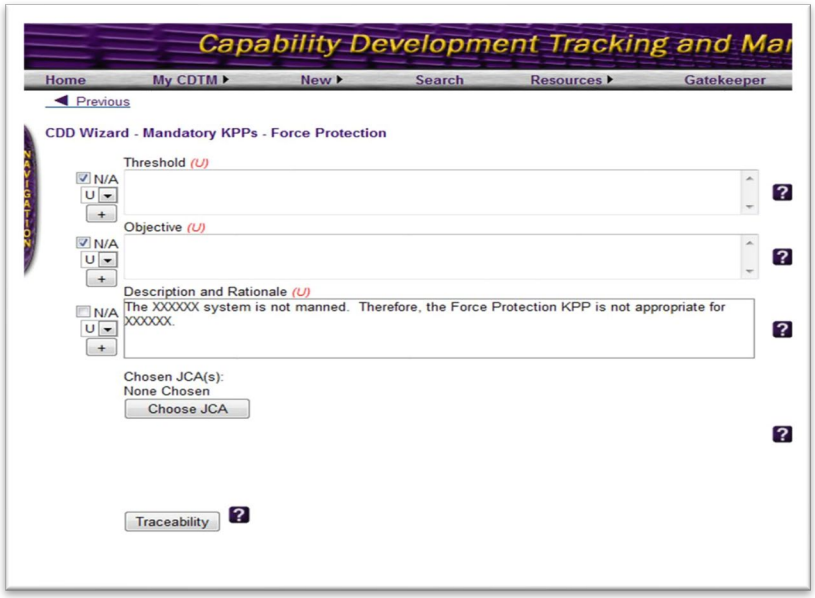
The Mandatory & Selectively Applied KPPs page prompts for all KPPs that may be required for the CDD. This paragraph will automatically publish in the printed form of the document from CDTM. It is divided into 2 sub-paragraphs:

- 6.1 – Mandatory KPPs and selectively applied KPPs
- 6.2 – Additional KPPs, KSA, or Attributes.

There are six "required" or "mandatory" KPPs identified in the ***JCIDS Manual (Appendix A to Enclosure B, paragraph 3)*** and they MUST be addressed regardless of your determination of applicability to this CDD. They are:

- Force Protection
- Survivability
- Sustainment
- Net-Ready
- Training
- Energy

In cases where a "mandatory" KPP is not appropriate, you must justify why the KPP is not appropriate for your CDD. Inside the CDTM wizard check the "**NA**" block for the Threshold and Objective, then provide your rationale for excluding it in the "Description and Rationale block as shown below. Do not select JCAs for KPPs that are not applicable to the capability you are developing.



a. **Development of KPPs and KSAs**. You will designate appropriate attributes as KPPs and KSAs. For JROC Interest and JCB Interest documents, the JCB/JROC may designate additional attributes as KPP or KSA on the recommendation of the FCBs.

(1) The following questions should be answered in the affirmative before a performance attribute is selected as a KPP for the increment being defined:

(a) Is the attribute a necessary component of one of the six "mandatory" KPPs listed above, or is it essential for providing the required capabilities?

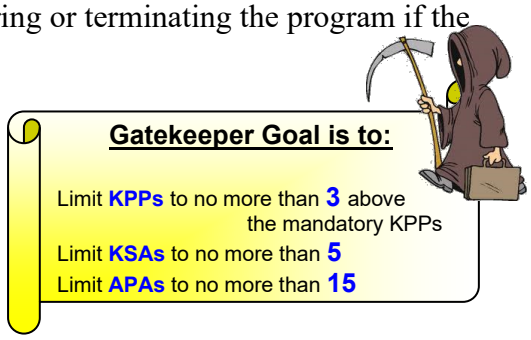
(b) Does it contribute to significant improvement in warfighting capabilities, operational effectiveness, and/or operational suitability?

(c) Is it achievable and affordable (total life-cycle costs)?

(d) Is it measurable and testable?

(e) Are the definition of the attribute and the recommended threshold and objective values reflective of fiscal constraints, applicable technology maturity, timeframe the capability is required, and supported by analysis?

(f) Is the Sponsor willing to consider restructuring or terminating the program if the KPP/KSA is not met?



b. For additional guidance on designation of KPP, see Appendix B to Enclosure B of the JCIDS Manual. Avoid over specification of KPPs/KSAs, or inclusion of technical specifications as KPPs/KSAs, unless essential to addressing a specific capability gap. Limit KPPs to no more than three above the mandatory KPPs; KSAs to no more than five; and additional performance attributes, to no more than fifteen. *KPPs and KSAs are major cost drivers and potential program killers. While some requirements are so critical to the operational force that we cannot live without them, great care must be taken as we decide how many of these mandatory requirements are in the CDD.* Establishing and scrutinizing these goals will encourage developers to articulate only those attributes that are key and essential to closing the gap to a prudent level of risk, not the entire gap.

c. Provide a description of each attribute and list each attribute in a separate numbered subparagraph. Present each attribute in output-oriented, measurable, and testable terms. For each attribute, provide a development threshold value representing the value below which performance is unacceptable. Provide objective values for attributes when the increased performance level provides significant increases in operational utility. If the objective and the threshold values are the same, indicate this by including the statement "Threshold = Objective." The PM may use this information to provide incentives for the developing contractor or to weigh capability tradeoffs between threshold and objective values. When there are multiple capability increments and the threshold changes between increments, clearly identify the threshold for each increment. For CDDs that describe IS and use the IT Box model, list the Initial Minimums in lieu of Threshold values and do not list Objective values.

d. **Limit supporting rationale to no more than one paragraph.** Include rationale for each, in terms of ISCs supported or as being derived from other requirements, and cite any existing analytic references. When appropriate, the description should include any unique

operating environments for the system. Rationale should be a clear operational statement that links the required capability to the metric specified in the threshold and objective. This should result in a meaningful reduction in the size of the documents and possibly the cost of the system.

e. **Traceability to Tier 1 & 2 JCAs.** Correlate each KPP and KSA to the capability requirements defined in the ICD and the Tier 1 and 2 JCAs ***to which they contribute directly***. Where applicable, also correlate to the UJTL tasks to which each contributes.

f. Provide any additional information that the Program Manager (PM) should consider. If the CDD is describing a SoS solution, it must describe the attributes for the SoS level of performance and any unique attributes for each of the constituent systems. If the CDD is describing multiple increments, clearly identify which attributes apply to each increment.

g. Provide tables summarizing specified KPPs, KSAs, and additional performance attributes in threshold/objective format, as illustrated below.

Tier 1 & Tier 2 JCAs	Key Performance Parameter	Development Threshold	Development Objective
	KPP1	Value	Value
	KPP2	Value	Value
	KPP3	Value	Value

Table 1: Example KPP Table

Tier 1 & Tier 2 JCAs	Key System Attribute	Development Threshold	Development Objective
	KSA1	Value	Value
	KSA2	Value	Value
	KSA3	Value	Value

Table 2: Example KSA Table

Additional Performance Attribute	Development Threshold	Development Objective
Attribute 1	Value	Value
Attribute 2	Value	Value

Table 3: Example Additional Performance Attribute Table

CDTM uses a third party COTS product called Syncfusion to provide rich text support, including support for simple tables. You will note that certain formatting features are NOT available in the Rich Text Editor. These include text coloring and font support, as well as justification. To add a table, position the cursor where you want the table to be added and click the Insert Table button (the third button from the left on the second row of the Rich Text Editor toolbar). Specify the number of rows and columns for the table. A table is created with an X in each cell. You may then fill in your table data.

You can copy and paste tables into the editor, however, the results are unpredictable because the component does not support the breadth of formatting options available in Microsoft Word.

Recommend that you do not import tables from Word as they will not be able to be seen in the final version of the document. Import any text from a Word document as "Rich Text" then Bold, Italicize, or create tables using the available tools within CDTM.

The *CDD Wizard - Mandatory and Selectively Applied KPPs* page prompts for all KPPs that may be required for the CDD. Selecting the "Edit" block for the KPP will automatically open a corresponding input forms for you to complete.

At the top of this CDTM page, you are asked to select if the sustainment KPP to this CDD. ***Yes*** is the default answer. Per DOD guidance, this wizard prompts for a detailed breakdown of sustainment information. If the Sustainment KPP does not apply, click the ***No*** radio button at the top of the page next to "Does this capability require Sustainment?" When you click No, the Sustainment prompts will be removed from the page and replaced with a single prompt to provide a justification. CDTM will prompt you before making this change to ensure you do not accidentally delete your Sustainment KPP data.

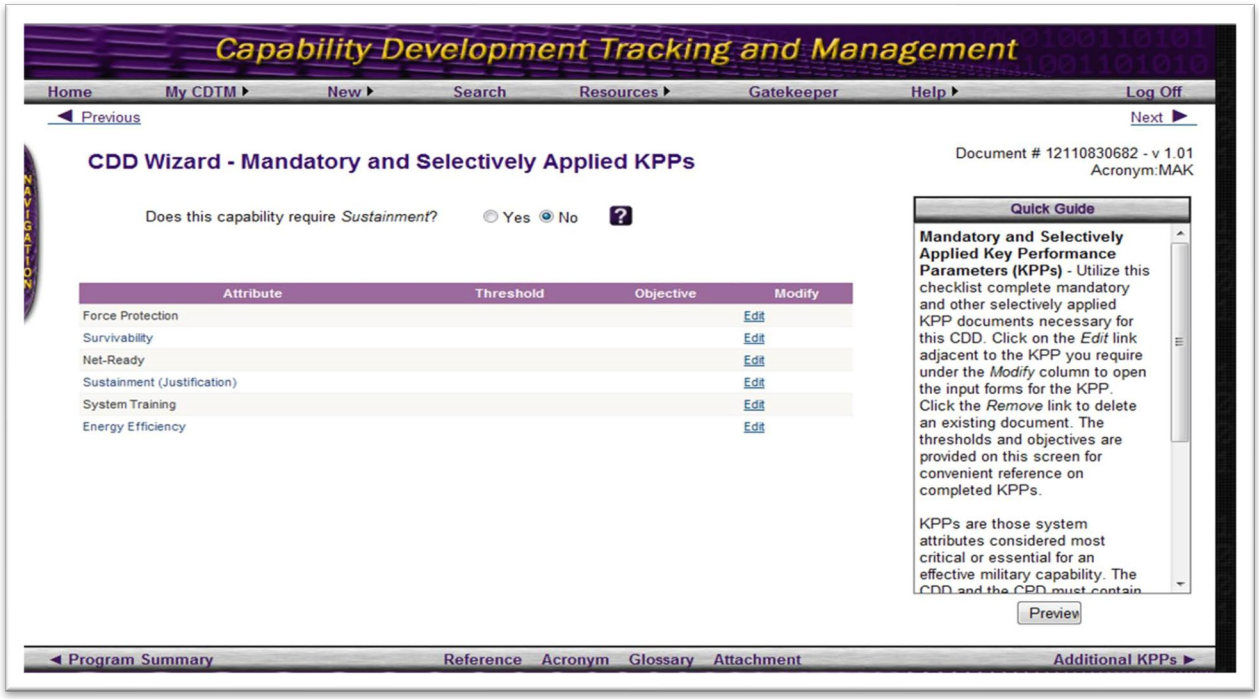


Figure 5: Mandatory KPPs

CDD Wizard - Mandatory KPPs and Selectively Applied KPPs
Force Protection

Force Protection (FP). The FP KPP is applicable to all documents addressing a manned system, or system designed to enhance personnel survivability, when these systems will be used in an asymmetric threat environment. Although a FP KPP may include many of the same attributes as those that contribute to the Survivability KPP, the intent of the FP KPP is to address protection

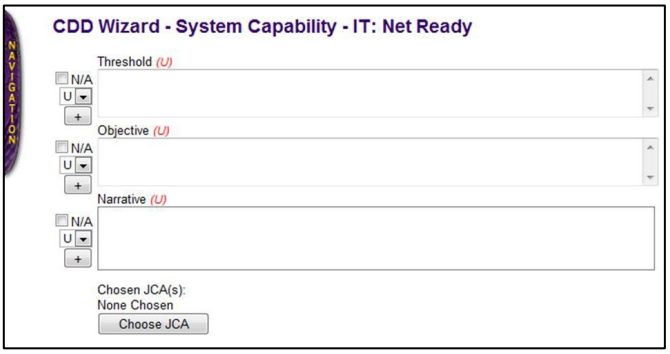
of the system operator or other personnel rather than protection of the system itself (Survivability). The Protection FCB will assess the FP KPP, or your justification of why the FP KPP is not applicable, for any document with a JSD of JROC or JCB Interest. Additional guidance on the FP KPP is provided in Appendix C to Enclosure B of the JCIDS Manual.

CDD Wizard - Mandatory KPPs and Selectively Applied KPPs
Survivability

Survivability. The Survivability KPP is applicable to all documents addressing a manned system, and may be applicable to documents addressing an unmanned system. The intent of the Survivability KPP includes reducing a system's likelihood of being engaged by hostile fire, through attributes such as speed, maneuverability, detectability, and countermeasures; reducing the system's vulnerability if hit by hostile fire, through attributes such as armorand redundancy of critical components; and allowing the system to survive and continue to operate in a chemical, biological, radiological, and nuclear (CBRN) environment, if required. The Protection FCB will assess the Survivability KPP, or our justification of why the Survivability KPP is not applicable, for any document with a JSD of JROC or JCB Interest. Additional guidance on the Survivability KPP is provided in Appendix D to Enclosure B of the JCIDS Manual.

CDD Wizard - Mandatory KPPs and Selectively Applied KPPs
Net-Ready

Net-Ready (NR). The NR-KPP is applicable to all documents addressing IS and National Security Systems (NSS) used in the automated acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of DOD data or information regardless of classification or sensitivity. The NR-KPP is not applicable to documents addressing systems that do not communicate with external ones, including IS systems in accordance with DODD 4630.05, CJCSI 6212.01E, and DODI 4630.8. The intent of the NR-KPP is to ensure new IS fits into the existing DOD architectures and infrastructure to the maximum extent practicable.



The NR-KPP identifies operational, net-centric requirements in terms of threshold and objective values for measures of effectiveness (MOEs) and measures of performance (MOPs). The NR-KPP covers all communication, computing, and electromagnetic spectrum requirements involving information elements among producer, sender, receiver, and consumer. Information elements include the information, product, and service exchanges. These exchanges enable successful completion of the warfighter mission or joint business processes. The NR-KPP identified in the CDD or CPD will also be used in the Information Support Plan (ISP) to identify support required from external IS. When identified as applicable for a given capability

requirement, the NR-KPP is required for all program increments. The NR-KPP includes three attributes derived through a three step process of mission analysis, information analysis, and systems engineering. These attributes are then documented in solution architectures developed according to the current DOD Architecture Framework (DODAF). The attributes depict how planned or operational IS:

a. Attribute 1. Supports military operations,
b. Attribute 2. Is entered and managed on the network, and
c. Attribute 3. Effectively exchanges information.

The following table summarizes the NR-KPP attributes and their associated metrics in terms of a standardized framework and data sources to leverage when developing attributes and their threshold and objective values.

Provide MOEs and MOPs to evaluate IS's ability to meet the threshold and objective or initial minimum values when testing the system for joint interoperability certification.

NR-KPP Development Step	NR-KPP Attribute	Attribute Details	Measures	Sample Data Sources	MOE/ MOP
Mission Analysis	Support to Military Operations	Military Operation (e.g., Mission areas or mission threads)	MOEs used to determine the success of the military operation	JMETL, JMT, UJTL, and METL	MOE
			Conditions under which the military operations must be executed		
		Operational tasks required by the military operations	MOPs used to determine activity performance	JMETL, JMT, UJTL, and METL	MOP
			Conditions under which the activity must be performed		
Information Analysis	Entered and managed on the network	Which networks do the netcentric military operations require	MOP for entering the network	N/A	MOP
			MOP for management in the network	N/A	MOP
	Effectively exchanges information	Information produced and consumed by each Military operation and operational task	MOP to ensure information exchanges are: Continuous Survivable Interoperable Secure Operationally Effective	DODAF OV-3, Operational Resource Flow Matrix	MOP

NR-KPP Development Step	NR-KPP Attribute	Attribute Details	Measures	Sample Data Sources	MOE/ MOP
Systems Engineering and Architecture	Supports all 3 attributes	Ensures that IS satisfies the attribute requirements	Provides traceability from the IS MOPs to the derived operational requirements	OVs and SVs	N/A

Table 4: NR- KPP Development

Interoperability Issues. Analyze and identify potential interoperability issues early in the IS's life cycle and identify joint interfaces through systems engineering and architecture development. IS architecture in JCIDS documents is developed according to the current DODAF. In addition, the architecture must align with Joint Mission Threads (JMTs), Joint Common System Functional List (JCSFL), DOD Information Enterprise Architecture (IEA), and the Joint Information Environment Operational Reference Model (JIE ORA) to identify potential interoperability disconnects with interdependent systems or services as well as detailed information exchange and information sharing strategies.

Compliance. Determine whether IS complies with network operations (NETOPS) for the Global Information Grid (GIG) direction, GIG 2.0 goals and characteristics, and is integrated into system development, in accordance with JROCM 095-09.

Spectrum Requirements. To obtain a NR-KPP certification, all IS must comply with spectrum management and E3 direction. The spectrum requirements process includes Joint, DOD, national, and international policies and procedures for the management and use of the electromagnetic spectrum. The spectrum requirements process is detailed in CJCSI 6212.01E and details on compliance available NR-KPP Manual Wiki Page.

The C4/Cyber FCB will assess the NR-KPP, or your justification of why the NR-KPP is not applicable, for your CDD with a JSD of JROC Interest, JCB Interest, or Joint Integration, and provide NR-KPP certification in accordance with CJCSI 6212.01E. Additional guidance on the NR-KPP is provided in Appendix F to Enclosure B of the JCIDS Manual and on the NR-KPP Manual Wiki Page and in CJCSI 6212.01E.

Table 5: Example of a completed NR-KPP

NR-KPP Attribute	Key Performance Parameter	Threshold	Objective
Support to military operations	Mission: Tracking and locating (Finding, Fixing, Finishing) High-Value Target (HVT)		
	Measure: Timely, actionable dissemination of acquisition data for HVT	10 minutes	Near-real-time
	Conditions: Targeting quality data to the neutralizing/tracking entity	Area denial of HVT activities	HVT tracked, neutralized

	Mission Activities: Find HVT Measure: Location accuracy Conditions: Individual differentiation	 100 meter circle Identify armed/ not armed	 25 meter circle Identify individual
Enter and be managed in the network	Network: SIPRNET Measure: Time to connect to an operational netwok from power up Conditions: Network connectivity	 2 minutes 99.8	 1 minute 99.9
	Network: NIPRNET Measure: Time to connect to an operational network from power up Conditions: Network connectivity	 2 minutes 99.8	 1 minute 99.9
Exchange information	Information Element: Target Data Measure: Dissemination of HVT biographic and physical data Measure: Recipt of HVT data Measure: Latency of data Measure: Strength of encryption Conditions: Tactical/Geopolitical	 10 seconds Line of Sight (LOS) 5 seconds NSA certified type 1 Permissive environment	 5 seconds Beyond LOS 2 seconds NSA certified type 1 Non-permissive environment

Sustainment KPP

Sustainment. The provision of logistics and personnel services necessary to maintain availability of materiel and support operations until mission accomplishment. The Sustainment KPP and two supporting KSAs (Reliability, Operation and Support (O&S) Cost) are applicable to all documents addressing potential ACAT I programs. ACAT II and below programs, with materiel solutions, shall include the Sustainment KPP or defined sustainment metrics. A Reliability, Availability, Maintainability, and Cost (RAM-C) report, as defined in the DOD Guide Book, 1 Jun 2009, "Department of Defense Reliability, Availability, Maintainability, and Cost Rationale Report Manual", will document the quantitative basis for the three elements of the sustainment KPP as well as the tradeoffs made with respect to system performance.

Sustainment is a key component of performance. The intent of the Sustainment KPP is to ensure that sustainment planning "upfront" enables the requirements and acquisition

communities to provide a system with optimal availability and reliability to the warfighter at an affordable cost.

The value of the Sustainment KPP is derived from the operational capability requirements of the system, assumptions for its operational use, and the planned logistical support. For the PM to develop a complete capability solution for the warfighter, sustainment objectives must be established and performance of the entire system measured against those metrics.

The Logistics FCB, in coordination with the Joint Staff J-4 / Maintenance Division (J-4/MXD), will assess the Sustainment KPP, or our justification of why the Sustainment KPP is not applicable, for any document with a JSD of JROC or JCB Interest. Additional guidance on and assistance in developing the Sustainment KPP is provided in Appendix E to Enclosure B of the JCIDS Manual and in DOD Guide Book, 1 Jun 2009, "Department of Defense Reliability, Availability, Maintainability, and Cost Rationale Report Manual". For questions regarding the Sustainment KPP, please contact J-4/MXD at 703-614-0161. The methodology utilized to establish the Sustainment KPP will be reviewed and shall include sufficient supporting documentation.

Per DoD guidance, CDTM prompts for a detailed breakdown of sustainment information. If the Sustainment KPP does not apply, click the ***No*** radio button at the top of the page next to "Does this capability require Sustainment?" When you click ***No***, the Sustainment prompts will be removed from the page and replaced with a single prompt to provide a justification. CDTM will prompt you before making this change to ensure you do not accidentally delete your Sustainment KPP data.

CDD Wizard – Mandatory KPPs and Selectively Applied KPPs
Sustainment – Operational Availability

Operational Availability - Operational Availability indicates the percentage of time that a system or group of systems within a unit are operationally capable of performing an assigned mission and can be expressed as (uptime / (uptime + downtime)). Development of the Operational Availability metric is a requirements manager responsibility

Determining the optimum value for Operational Availability requires a comprehensive analysis of the system and its planned CONOPS, including the planned operating environment, operating tempo, reliability and maintenance concepts, and supply chain solutions. Operational Availability may be equivalent to Materiel Availability if the total number of a system or group of systems within a unit is the same as the total inventory.

Review Crieteria for Operational Availability:

a. Is there evidence of a comprehensive analysis of the system and its planned use, including the planned operating environment, operating tempo, reliability and maintenance

concepts, and supply chain solutions leading to the determination of the value? Are the analyses documented?

b. Are specific definitions provided for failures, mission-critical systems, and criteria for counting assets as "up" or "down"? Are the values for failure rates supported by analysis?

c. Is scheduled downtime which affects the CCMD identified and included? Does the analysis package support the downtime? Are data sources cited? How does the downtime value compare with that experienced by analogous systems?

d. Is downtime caused by failure addressed? Are the values used for failure rates supported by the analysis? Is there a specific definition established for failure?

e. Is the administrative and logistics downtime associated with failures addressed (e.g. - recovery time, diagnostics time, movement of maintenance teams to the work site, etc.)?

CDD Wizard – Mandatory KPPs and Selectively Applied KPPs
Sustainment – Materiel Availability

Materiel Availability - Materiel Availability (Am) is the measure of the percentage of the total inventory of a system operationally capable, based on materiel condition, of performing an assigned mission. This can be expressed mathematically as the number of operationally available end items/total population. The total population of operational end items includes those in training, attrition reserve, pre-positioned, and temporarily in a non-operational materiel condition, such as for depot-level maintenance. The total life-cycle timeframe, from placement into operational service through the planned end of service life, must be included. This is often referred to as equipment readiness. Materiel Availability covers the total life-cycle timeframe, from placement into operational service through the planned end of service life. Development of the Materiel Availability metric is a program manager responsibility.

Review Crieteria for Materiel Availability:

a. Is there evidence of a comprehensive analysis of the system and its planned use, including the planned operating environment, operating tempo, reliability alternatives, maintenance approaches, and supply chain solutions leading to the determination of the KPP value? Are the analysis assumptions documented?

b. Is the total population of end items being acquired for operational use documented?

c. Are specific definitions provided for failures, mission-critical systems, and criteria for counting assets as "up" or "down"? Are the failure rate values supported by analysis?

d. Does the metric clearly define and account for the intended service life, from initial placement into service through the planned removal from service? (A graphic representation (timeline) of the life-cycle profile is an effective way to present the data.)

e. What is the overall sustainment CONOPS? Is it consistent with other CONOPS, design reference missions, ISCs, etc. being supported? Is it traceable to the original capability requirements, or agreement with the warfighting community? What alternatives were considered? Have surge/deployment acceleration requirements been identified?

f. Is failure/down-time defined? Is planned downtime (all causes) identified and included? Does analysis data support the downtime? Are data sources cited? How does the downtime value compare with downtimes for analogous systems?

g. Are sources of data and processes to track the KPP across the life-cycle identified? What models are used to establish and track the KPP?

CDD Wizard - Mandatory KPPs and Selectively Applied KPPs
Sustainment – Reliability KSA

Sustainment Reliability - Reliability is a measure of the probability that the system will perform without failure over a specific interval, under specified conditions. Reliability shall be sufficient to support the warfighting capability requirements, within expected operating environments. Considerations of reliability must support both availability metrics. Development of the Reliability metric is a requirements manager responsibility.

Reliability may initially be expressed as a desired failure-free interval that can be converted to a failure frequency for use as a requirement (e.g., 95 percent probability of completing a 12-hour mission free from mission-degrading failure; 90 percent probability of completing 5 sorties without failure). Specific criteria for defining operating hours and failure criteria must be provided together with the reliability. Single-shot systems and systems for which other units of measure are appropriate must provide supporting analysis and rationale.

Reliability Review Criteria:

a. Has the reliability metric been established at the system level? Is it traceable to the original capability requirements, or other performance agreement?

b. Does the analysis clearly provide criteria for defining relevant failure?

c. Does the analysis clearly define how time intervals will be measured?

d. Does the analysis identify sources of baseline reliability data and any models being used? Is the proposed value consistent with comparable systems? Are sources of data and processes to track reliability across the lifecycle identified?

e. Is the reliability value consistent with the intended operational use of the system (i.e., the CONOPs)?

f. Is the reliability value consistent with the sustainment approach as presented in the operational availability metric?

g. Is the reliability value improved relative to existing or analogous systems?

h. For single-shot systems and systems for which units of measure other than time are used as the basis for measuring reliability, does the package clearly define the units, method of measuring or counting, and the associated rationale?

Operation & Support Cost KSA

Operation and Support (O&S) Cost metrics provide balance to the sustainment solution by ensuring that the O&S costs associated with availability and reliability are considered in making decisions. The O&S Cost KSA is to be completed using Base Year dollars.

For consistency and to capitalize on existing efforts in this area, the Cost Assessment and Program Evaluation (CAPE) O&S Cost Estimating Structure will be used in support of this KSA. As a minimum the following cost elements are required:

- 2.0 Unit Operations (2.1.1 (only) Energy (fuel, petroleum, oil, lubricants, electricity));
- 3.0 Maintenance (All);
- 4.0 Sustaining Support (All except 4.1, System Specific Training);
- 5.0 Continuing System Improvements (All).

Energy costs included in this O&S cost will be set using the base year price for every year of this assessment. Scenario based estimates for fully burdened cost of energy, including fuel and/or electric power will also be calculated and reported as part of this KSA. The guidance for developing the fully burdened cost of energy estimates can be found in section 3.1.6 of the Defense Acquistion Guidebook.

Costs are to be included regardless of funding source or management control. The O&S value should cover the planned lifecycle timeframe, consistent with the timeframe and system population identified in the Materiel Availability metric. Sources of reference data, cost models, parametric cost estimating relationships, and other estimating techniques or tools must be identified in supporting analysis. Programs must plan for maintaining the traceability of costs incurred to estimates and must plan for testing and evaluation.

The proponent shall plan to monitor, collect, and validate operating and support cost data to support the O&S cost KSA. (Ref:OSD Cost Analysis Improvement Group (CAIG) Cost-Estimating Guide, Oct 2007.) Development of the Ownership Cost metric is a program manager responsibility.

O&S Cost Review Criteria:

a. Has the O&S Cost goal been defined for the system's life cycle?

b. Does the analysis utilize the CAPE O&S cost element structure where applicable? (Specifically, which CAPE O&S cost elements?)

c. Are sources of baseline cost data, cost estimating relationships, and cost models identified?

d. Is the cost model consistent with the assumptions and conditions being used for materiel availability and materiel reliability?

e. Is the cost metric traceable to the original capability requirements, or agreement with the warfighter?

f. Are all required costs included, regardless of funding source or management control?

g. Is the O&S cost KSA data consistent with the program's life cycle cost estimate (LCCE), Cost Analysis Requirements Data (CARD) and/or the CAPE independent cost estimate (ICE) if available for comparison?

h. Does the analysis include the process for monitoring, collecting, validating, and reporting O&S cost data?

i. If the Energy KPP is being applied to the program, are the same ISCs and duty cycles being used for gauging energy logistics risk in that KPP as are being used for estimating the "Fully Burdened Cost of Energy" as part of the O&S Cost KSA? If the same ISCs were not used, was rationale provided?

CDD Wizard - Mandatory KPPs and Selectively Applied KPPs
Sustainment 1.0 Unit-Level Manpower Cost

1.0 Unit Level Manpower Operating and Support Cost - includes the costs of all operator, maintenance, and other support manpower at operating units (or at maintenance and support units that are organizationally related and adjacent to the operating units). Unit-level manpower includes active and reserve military, government civilian, and contractor manpower costs. Manpower associated with general and indirect support, such as manpower supporting base level functions, are accounted for as indirect costs, item 6.0. In other words, manpower included in functions covered by indirect costs (item 6.0) is not regarded as unit-level manpower. While the cost elements in this category make the distinction between operators, maintainers, and other unit-level manpower, that distinction may not apply to all situations. For example, in O&S cost estimates for Navy ships, the ship manpower is typically estimated and documented for the entire crew as a whole, and is not broken down into operators, maintainers, and other support.

Provide threshold and objective for unit level manpower O&S cost, as well as a description, link to the supported JCA(s), supporting rationale, and associated estimated total life-cyle or ownership cost for unit level manpower.

CDD Wizard - Mandatory KPPs and Selectively Applied KPPs
Sustainment 2.0 Unit Operations Cost

2.0 Unit Operations Operating and Support Cost - includes the unit-level consumption of operating materials such as fuel, electricity, expendable stores, training munitions and other operating materials. Also included are any unit-funded support activities; training devices1 or simulator operations that uniquely support an operational unit; temporary additional

duty/temporary duty (TAD/TDY) associated with the unit's normal concept of operations; and other unit funded services. Unit-funded service contracts for administrative equipment as well as unit-funded equipment and software leases are included in this portion of the estimate. Unit Operating costs provided through a system support contract should be separately identified from those provided organically. (Simulator costs that provide support to multiple units should be included in 4.1 Sustaining Support/System Specific Training.).

Provide threshold and objective for unit operations O&S cost, as well as a description, the supported JCA(s), supporting rationale, and associated estimated life-cyle or total ownership cost for unit operations.

CDD Wizard - Mandatory KPPs and Selectively Applied KPPs
Sustainment 3.0 Maintenance Cost

3.0 Maintenance Operating and Support Cost - includes the costs of labor (outside of the scope of unit-level) and materials at all levels of maintenance in support of the primary system, simulators, training devices, and associated support equipment. Where costs cannot be separately identified to distinct levels of maintenance, the category that represents the predominant costs should be used. Any maintenance costs provided through a system support contract should be separately identified within the appropriate cost element.

Provide threshold and objective for maintenance cost, as well as a description, the supported JCA(s), supporting rationale, and estimated total maintenance cost.

CDD Wizard - Mandatory KPPs and Selectively Applied KPPs
Sustainment 4.0 Sustaining Support Cost

4.0 Sustaining Operating and Support Cost – Cost of support activities other than maintenance that can be attributed to a system and are provided by organizations other than operating units. This category includes support services provided by centrally managed support activities external to the units that own the operating systems. It is intended that costs included in this category represent costs that can be identified to a specific system and exclude costs that must be arbitrarily allocated. Where a single cost element includes multiple types of support, or where the support is provided by contractors, each should be separately identified in the cost estimate.

Provide threshold and objective for sustaining support cost of this capability, as well as a description, the supported JCA(s), supporting rationale, and estimated total sustaining support cost.

CDD Wizard - Mandatory KPPs and Selectively Applied KPPs
Sustainment 5.0 Continuing System Improvement Cost

5.0 Continuing System Improvement Operating and Support Cost - includes the costs of hardware and software updates that occur after deployment of a system that improve a system's safety, reliability, maintainability, or performance characteristics to enable the system to meet its basic operational requirements throughout its life. These costs include government and contract labor, materials, and overhead costs. Costs should be separated into government and contractor costs within each cost element, if possible.

The continuing system improvements portion of an O&S estimate does not include all changes to a system developed subsequent to the initial delivered configuration. System improvements identified as part of an incremental evolutionary acquisition strategy or pre-planned product improvement program that are included in the acquisition cost estimate are not included in this portion of an O&S cost estimate. Any improvement of sufficient dollar value that it would qualify as a distinct Major Defense Acquisition Programs (MDAP) in its own right normally would not be included in this portion of the O&S cost estimate.

Provide threshold and objective for continuing system improvement cost of this capability, as well as description and rationale, the supported JCA(s), and estimated total life-cyle or ownership cost.

CDD Wizard - Mandatory KPPs and Selectively Applied KPPs
Sustainment 6.0 Indirect Support Cost

6.0 Indirect Operating and Support Cost - are those installation and personnel support costs that cannot be directly related to the units and personnel that operate and support the system being analyzed. O&S cost analyses should include marginal indirect costs. The intention is to include only the costs that would likely change if the action being analyzed (e.g., new system development, etc.) occurs.

Indirect support costs are more relevant in situations when total DOD manpower would change or when installations are affected (i.e., expanded, contracted, opened, or closed). Indirect support costs may also be relevant in analyses involving a choice between government and contracted support. In these cases it is important to compare the government and contracted alternatives on a comparable basis, including the relevant indirect costs of all alternatives

Provide threshold and objective for indirect support cost of this capability, as well as description and rationale, the supported JCA(s), and estimated total life-cyle or ownership cost.

NOTE: **Training** and **Energy** are mandatory KPPs and no longer 'selectively applied'. CDTM will be updated to reflect changes in CJCSI 3170.01H and JCIDS Manual.

Training. The Training KPP is applicable to all documents addressing potential ACAT I programs involving materiel solutions. The training KPP shall be considered for all systems under development where one of the major components of the system capability is dependent on operators, maintainers and leaders to be properly trained to fully utilize the capability of the system. The intent of the Training KPP is to ensure that training requirements are properly addressed from the beginning of the acquisition process (with the analyses that support development of the ICD and continues with development of the CDD), in parallel with the planning and material development, and updated throughout the program's Acquisition Life-Cycle. The Training KPP is required for MS B and C along with a detailed training plan that addresses full training requirements and associated cost data.

This addresses the historic problem where new systems are developed and fielded to address a gap in warfighter capability and training on the proper use was not completed for some period of time later. Training was either not a formal part of the resourced program or the training resources were traded away to supplement increased cost of the parent system. Training not planned and integrated early, has the potential to be one of the top cost drivers over a program's life cycle. Therefore, to better mitigate cost growth of a program over that life cycle training shall be made available from the beginning of a program. The performance of any system is directly dependent on the training of the warfighters who operate and maintain the system. Ensure system training is addressed in the AoA and supporting analysis for subsequent acquisition phases and ensure projected training requirements and associated costs are appropriately addressed across the program life cycle. System Training Plans (STRAPs), developed and approved by the proponent sponsor, define training strategies, training support and training resource requirements in support of new, improved and displaced systems per AR 350-1.

The principal attributes of training are proficiency level, time to proficiency, and training retention.

Metrics for training KPPs. Metrics are suggested below in terms of how time/schedule, performance, and resources/cost can be used with training KPPs.

a. Time/Schedule metrics for training performance.

(1) Time required achieving initial capability on a system task (to standard).

(2) Time required to sustain proficiency on a system task (to standard);

(a) Time until skill proficiency is lost (skill decay).

(b) Frequency of training events to sustain proficiency.

(3) Relative time required to achieve/sustain task proficiency in

terms of hours, days, or weeks.

(4) Ability to deliver training capabilities on schedule

(a) Before initial fielding requirements.

(b) Before initial institutional requirements.

b. Resources/Cost metrics for training performance.

(1) Land resources required to conduct training.

(2) Ammunition resources required to conduct training.

(3) Fuel/parts required to conduct training (in peacetime).

(4) Facilities required to conduct training.

(5) Instructors required to conduct training.

(6) Support personnel required to conduct training.

(7) Bandwidth and satellite time required to conduct training.

(8) Training Aids, Devices, Simulators, and Simulations required to conduct training.

c. Performance metrics for training performance.

(1) Objective defined as best performance achievable by training audience population with unlimited time and resources.

(2) Threshold defined as best performance desired from training audience population with time constrained (consider 1 hour/1 day/1 week intervals).

(3) Interoperability with:

(a) Live, virtual and constructive training environments.

(b) Combat Training Center (CTC) instrumentation systems.

(4) Degree of embedded training capability versus appended/standalone training capabilities.

(5) Deployment/transportability of training capabilities.

(6) Flexibility/realism of training capability to adapt to changed training conditions:

(a) Weather/temperature/humidity.

(b) Urban/suburban/rural.

(c) Terrain (mountain, desert, woodland, coastal, swamp, etc.).

(7) Leadership and education. Leaders at all levels of employment are capabile of utilizing the system to its full design capability in all contingencies.

With the incorporation of a Training KPP, programs must develop a Training KPP tailored to their program, or provide required justification regarding recommendation for its exclusion, as directed by the validation authority. The J-7 representative participating in the lead FCB, in coordination with USD(P&R)/TRS, will assess the Training KPP, or your justification of why the Training KPP is not applicable, for your CDD with a JSD of JROC or JCB Interest. Endorsement of the Training KPP will be provided as part of the J-7 DOTmLPF-P endorsement. Additional guidance on the Training KPP is provided in Appendix G to Enclosure B of the JCIDS Manual and Chapter 6 of AR 350-1.

CDD Wizard - System Capability – Energy Efficiency
Energy Efficiency

Energy. The Energy KPP is applicable to all documents addressing systems where the provision of energy, including both fuel and electric power, to the system impacts operational reach, or requires protection of energy infrastructure or energy resources in the logistics supply chain. The intent of the Energy KPP is to optimizing fuel and electric power demand in capability solutions as it directly affects the burden on the force to provide and protect critical energy supplies. The operational Energy metrics you identify in this CDD will ensure that supportable operational energy is addressed and achieved. The KPP includes fuel and electric power demand considerations in systems, including those for operating "off grid" for extended periods when necessary, consistent with future force plans and Integrated Security Constructs (ISCs).

The value of the Energy KPP is derived from the operational requirements of the system, scenario-based assumptions for its operational use, and the planned logistical and force protection support to sustain it. In order for the PM to develop a complete system to provide warfighting capability, energy performance objectives must be established for the entire system measured against those metrics. Include operational energy demand and related energy logistics resupply risk considerations with the focus on mission success and mitigating the size of the logistics force within the ISCs. These assessments inform the setting of targets and thresholds for the energy efficiency where applicable. Consider energy delivery risk in irregular warfare, operations in austere or concealed settings, and other asymmetric environments, as well as operations in conventional campaigns.

The scenario analyses needed to set threshold and objective measures of energy usage by the system must include the logistics forces required as well as realistic threats and disruptions to

those logistics. This interplay of combat and support forces, based on existing DOD Component and Joint planning factors and ISCs, will help identify the threshold and objective levels of unrefueled range and loiter required to be mission capable. From those ranges and mission profiles, the design, technology, cost and schedule trades between each variable that affects energy demand on-board (powerplant, weight, drag, electrical load, etc.) can be informed. The KPP metrics could be expressed as units of energy used per period of time (e.g. gallons per hour), or as the number of refueling required per period of time (e.g. tankings per hour). It is from these operational metrics that technical system metrics can be established.

This KPP differs from the Sustainment KPP in several ways. First, fuel delivery logistics have a uniquely large presence in the total force structure (tanker aircraft, oilers and fuel trucks) and in the battlespace. Second, fuel, in the large volumes US forces demand it, and, in the timeframe when new systems will come into the force, may become less readily available in the marketplace near where it is required for operations. Third, this Energy KPP does not address energy-related costs, but rather, the interaction of combat and support assets required to deliver military capability. The Sustainment KPP requires that the Fully Burdened Cost of Energy (FBCE) be calculated and considered within the O&S Cost KSA. Some of the same scenario-based analysis used to calculate the FBCE is the same as that for setting the Energy KPP threshold and objective.

a. Include fuel efficiency considerations in systems consistent with future force plans and approved planning scenarios. Include operational fuel demand and related fuel logistics resupply risk considerations with the focus on mission success and mitigating the size of the fuel logistics force within the given planning scenarios. These assessments will inform the setting of targets and thresholds for the fuel efficiency of materiel solutions. Consider fuel risk in irregular warfare scenarios, operations in austere or concealed settings, and other asymmetric environments, as well as conventional campaigns.

b. These assessments will inform the setting of targets and thresholds for the fuel efficiency of materiel solutions. Consider fuel risk in irregular warfare scenarios, operations in austere or concealed settings, and other asymmetric environments, as well as conventional campaigns.

c. If you have a program that involves a "fleet of vehicles" or a "fleet of equipment that consumes energy" (i.e. generators or heaters that use fuel), use the guide below to develop the Energy Efficiency KPP.

Energy Efficiency
KPP Development.pdf

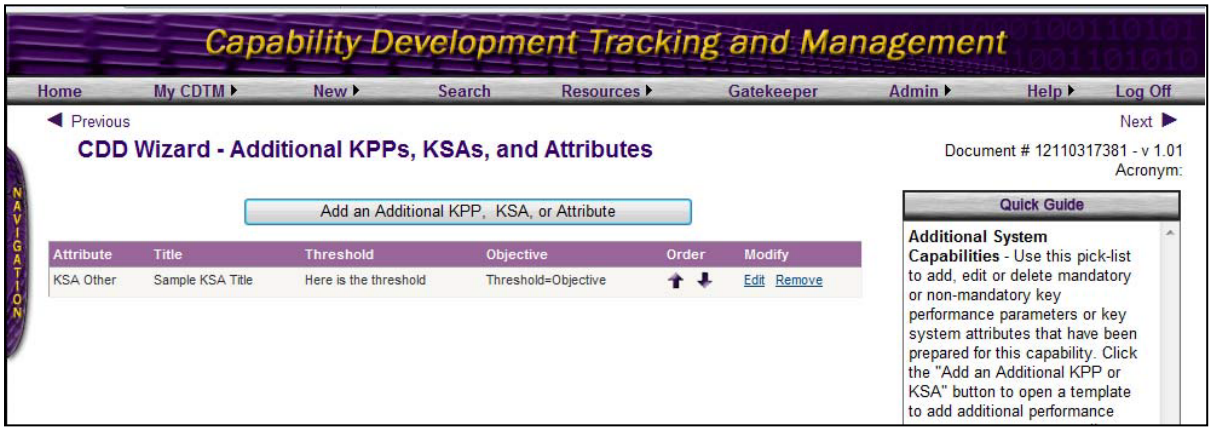
Insert 2: Energy Efficiency KPP Development

The Logistics FCB, in coordination with the Joint Staff J-4 / Engineering Division (J-4/ED) and with advice from the Defense Energy Board as appropriate, will assess the Energy KPP, or your justification as to why the Energy KPP is not applicable, for your CDD with a JSD of JROC or

JCB Interest. Additional guidance on the Energy KPP is provided in Appendix H to Enclosure B of the JCIDS Manual.

CDD Wizard - Additional KPPs, KSAs, and Performance Attributes

The Additional KPPs, KSAs, and Attributes page lists a summary of all additional KPPs, KSAs and Attributes you have added to this document. You may reorder them by clicking the Up and Down arrows to move them up and down in the list. To add more KPPs, KSAs or Attributes, click the ***Add an Additional KPP, KSA, or Attribute*** button. To make changes or add information for one of the KPPs/KSAs/Attributes in the list, click the ***Edit*** link. Clicking the ***Remove*** link will delete that KPP/KSA/Attribute.



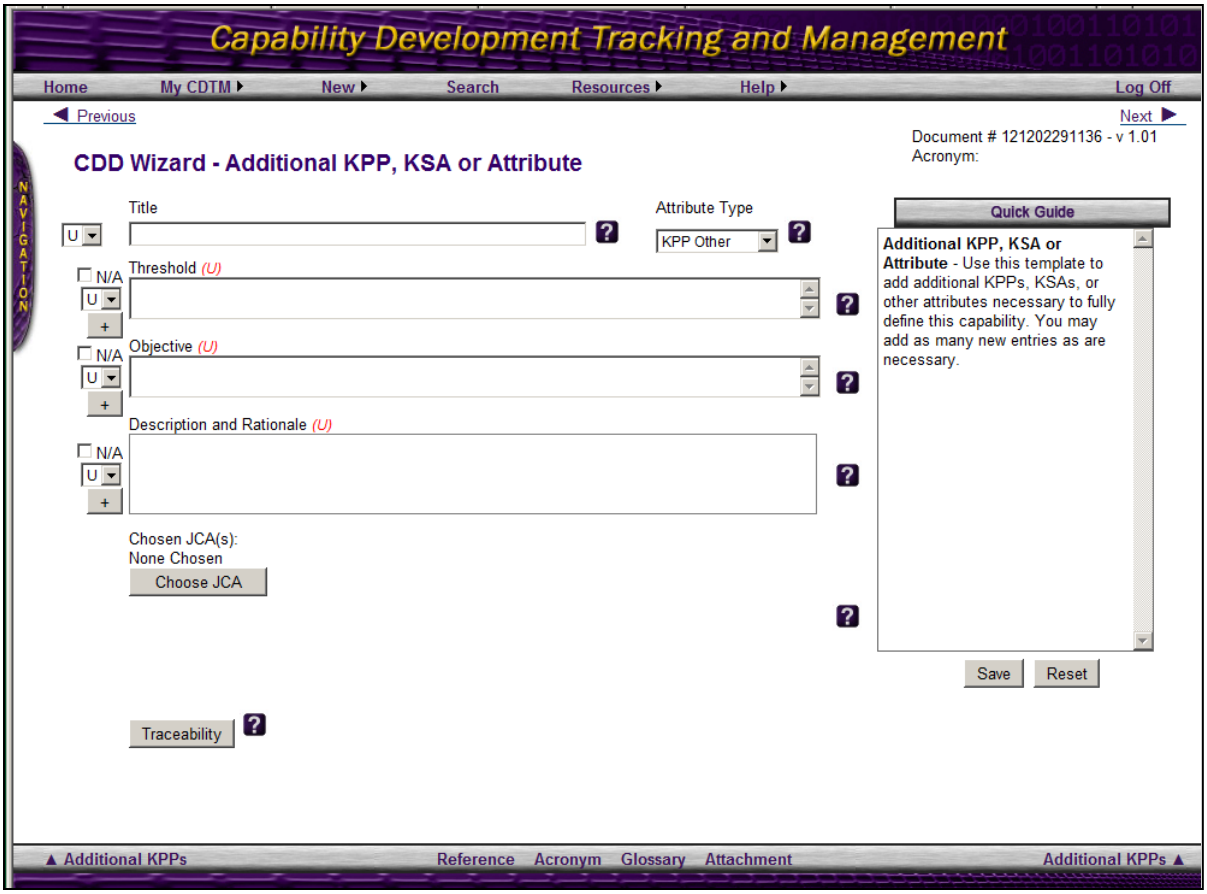


Figure 6: Additional KPP, KSA or Attribute

If this capability is a weapon system:

CPD Wizard - Weapon Safety Issues – Weapon: Environmental Attributes
Weapon Environmental Attributes

Weapon Environmental Attributes - Includes the air, water, living things, built infrastructure, cultural resources, and the interrelationships that exist among them in regards to the environment(s) the weapon system will be expected to perform.

Provide a description of the environment that the weapons system will operate and also discuss the impact the weapon system will have on the environment.

CCD Wizard - Weapon Safety Issues – Weapon: Performance
Weapon Performance Parameter

Weapons Performance Parameter - For weapon programs, the joint mission environment attributes and performance parameters must be addressed as the basis for the weapon safety endorsement. Identify, as specifically as possible, all projected requirements necessary to provide for safe weapon storage, handling, transportation, or use by joint forces throughout the weapon life cycle, to include required performance and descriptive, qualitative, or quantitative attributes.

Describe in detail what the expected performance the weapons system will be in the battlespace and the platform required to deliver the weapon.

CDD Wizard - Weapon Safety Issues – Weapon: Storage
Weapon Storage

Weapon Storage - Consider how this weapon system will be stored.

Factor the logistics required for accessibility and proximity of weapon storage to the battlespace. Discuss use of hardened facilities, proximity of spare parts to deployed weapons systems, readiness maintenance on stored weapons systems, upgrades to on-board computer system modules, and other considerations for storing this weapons system.

CDD Wizard - Weapon Safety Issues – Weapon: Handling and Transport
Weapon Handling and Transport

Weapons Handling and Transport - Describe in detail how this weapon system will be staged from the storage location to operational readiness in the battlespace.

Consider the need for additional security, specialized vehicles and equipment, cargo space required on military/commercial air, land or sea transport, maintenance required enroute, technical work needed to ready the weapon in the battlespace, and other key requirements for staging this system from its source to the place of need.

Weapons System Usage - Provide detailed information on the expected operational environment, the expected intensity of the weapon, and the desired effect on opposing combatant forces.

Consider the operational environment (high or low intensity combat), usage against a nation-state with fixed assets as opposed to non-state bad actors, what expected battle damage (decrease in enemy capabilities) this weapon will create for enemy combatants, the availability of delivery platforms, the refresh tempo for restoring the weapon system to operational readiness after use, and other key components for the use of this weapons system. Discuss why existing weapons systems cannot achieve the same objectives either through current use or modifications. Evaluate the mission supported by this capability to determine if CBRN survivability is required. If so, complete the due diligence required for a full CBRN KPP.

7. System of Systems Synchronization (formerly FoS and SoS).

Paragraph title must be edited after you output the document to Microsoft Word and then update the TOC by right clicking anywhere in the TOC and select "Update Field" and "Update entire Table."

Paragraph 7.0 – SoS Synchronization

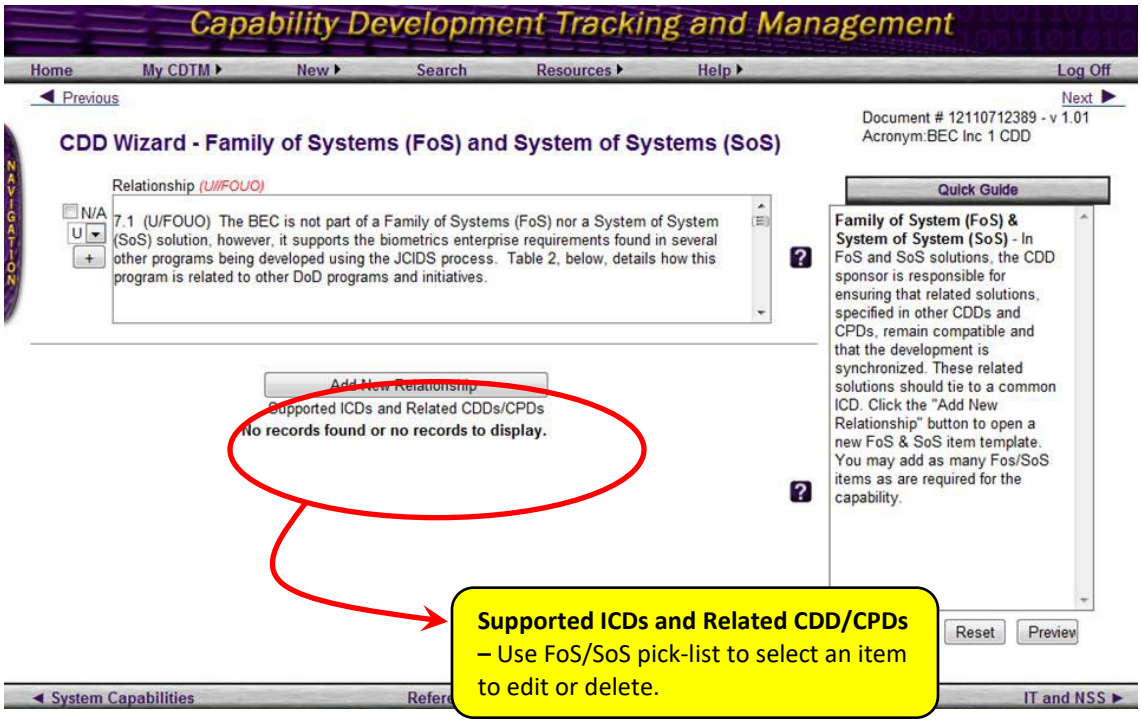
Use of the table in the template is mandatory per HQDA G-3/5/7. No capability stands alone on the battlefield. Consider the relationship of the system described in the CDD to other systems contributing to the capability.

JCIDS Manual Guidance

Ensure all JCAs listed in paragraph 1.3 appear and are correlated to the Table in Paragraph 7–Supported ICDs and Related CDDs/CPDs *(Joint Capability Documents (JCDs) are no longer created but you should still reference any applicable ones)*.

System of System (SoS) Synchronization - In SoS solutions, you are responsible for ensuring that related solutions, identified in other CDDs and CPDs, remain compatible and that the development is synchronized. These related capability solutions should tie to a common ICD, set of ICDs, or approved substitutes. Click the "Add New Relationship" button to open a new FoS & SoS item template. You may add as many Fos/SoS items as are required for the capability.

Relationship - Discuss the relationship of the system described in this CDD to other systems contributing to satisfying the capability requirements. Discuss any overarching DOTMLPF-P changes that are required to make the SoS an effective military capability solution in Secion 14.



Provide a table that briefly describes the contribution this CDD makes to the fulfillment of capability requirements and closing of capability gaps described in the applicable ICDs, and the relationships to other CDDs and CPDs that also support these capability requirements, as illustrated in Table B-9. Review all related ICDs, CDDs, and CPDs for applicability to the SoS addressed by this CDD. Also identify the primary JCAs (Tier1 & 2) supported by this CDD. If the CDD is not based on validated capability requirements from an ICD, identify the validated source document(s).

Capability Requirement	CDD Contribution	Related CDDs	Related CPDs	Tier 1 & Tier 2 JCAs
Capability 1 from ICD 1	Brief description of the contribution	CDD Title	CPD Title	
Other Joint validated source document	Brief description of the contribution	CDD Title	CPD Title	

Table 6: Supported ICDs and Related CDD/CPDs

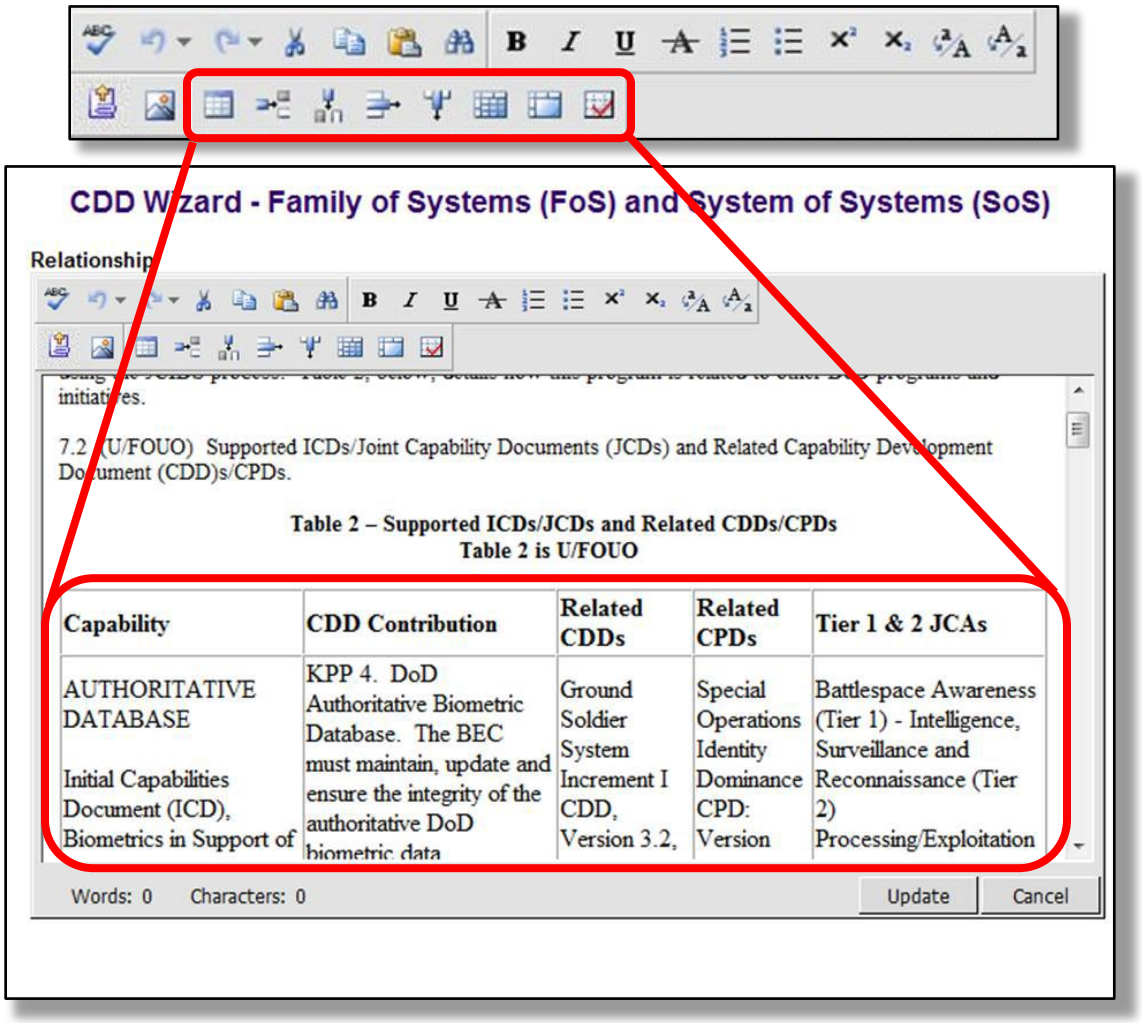
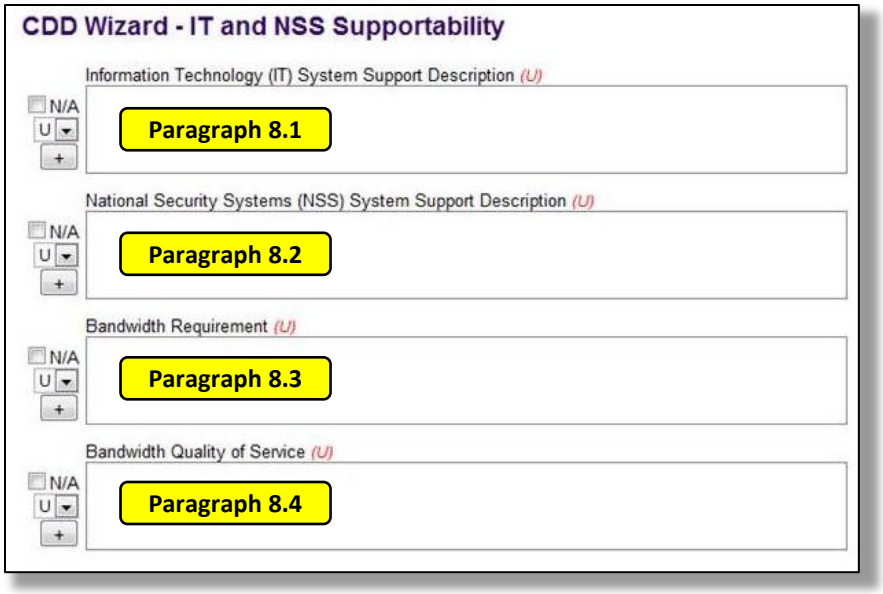


Figure 7: Paragraph 7 Relationship Text Box

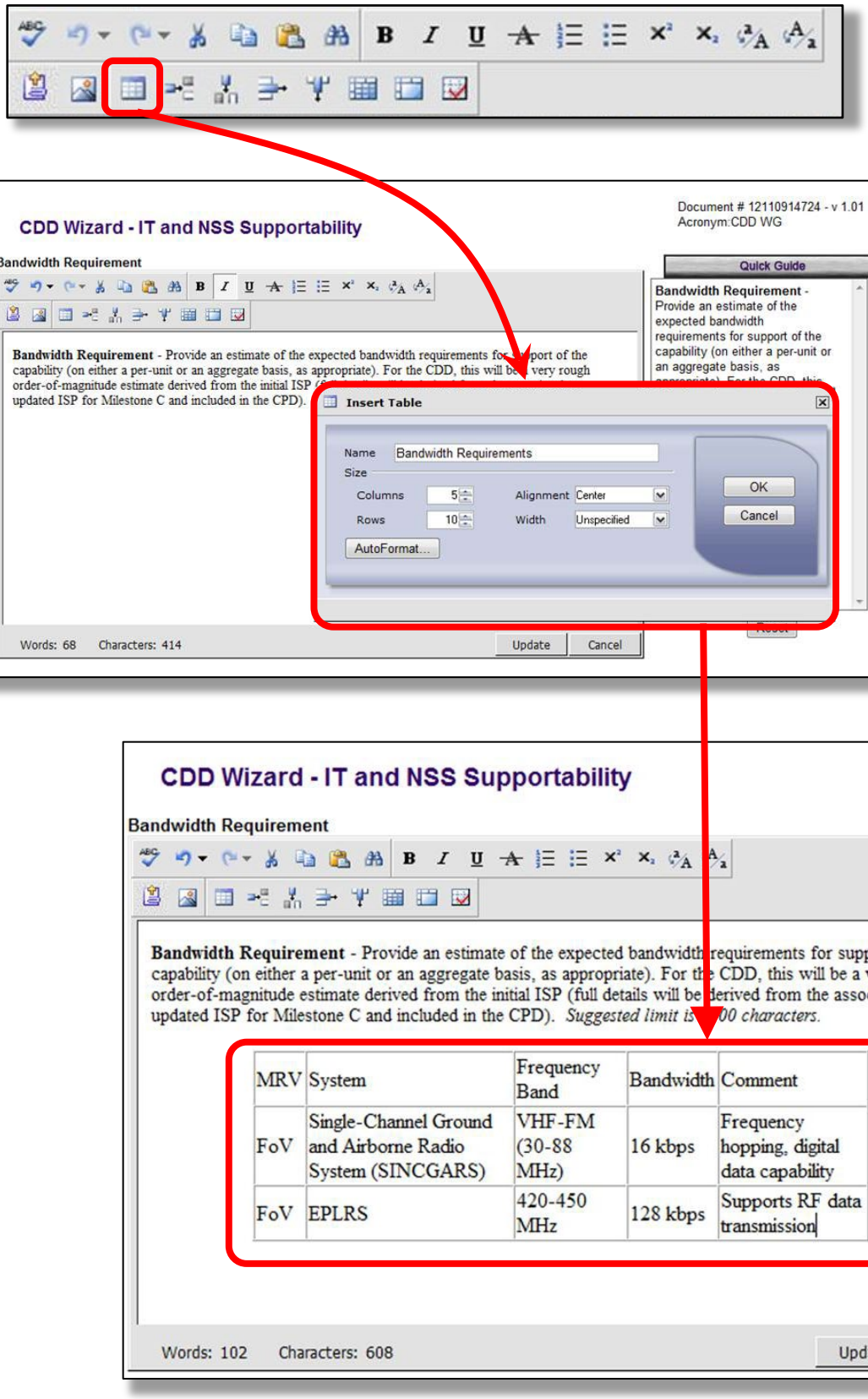
8. Spectrum Requirements (formerly IT & NSS).

Paragraph 8.0 – Spectrum Requirements

To obtain NR-KPP certification, all IS must comply with the spectrum management and electromagnetic environment effects (E3) direction. The spectrum supportability process includes joint, DOD, national and international policies and procedures for the management and use of the electromagnetic spectrum. The spectrum supportability process is detailed in CJCSI 6212.01E and details on compliance available at the NR-KPP Manual Wiki Page.



For systems that do not receive or transmit information the writer must provide a brief explanation. (Example sentence: "XYZ does not receive or transmit information. Therefore, IT and NSS supportability are not applicable to the XYZ.")


CDD Wizard - IT and NSS Supportability
Document # 12110914724 - v 1.01
Acronym:CDD WG
Bandwidth Requirement
Quick Guide
Bandwidth Requirement - Provide an estimate of the expected bandwidth requirements for support of the capability (on either a per-unit or an aggregate basis, as appropriate). For the CDD, this will be a very rough order-of-magnitude estimate derived from the initial ISP (full details will be derived from the associated or updated ISP for Milestone C and included in the CPD).
Insert Table
Name Bandwidth Requirements
Size
Columns 5
Rows 10
Alignment Center
Width Unspecified
AutoFormat...
OK
Cancel
Words: 68
Characters: 414
Update
Cancel
CDD Wizard - IT and NSS Supportability
Bandwidth Requirement
Bandwidth Requirement - Provide an estimate of the expected bandwidth requirements for support of the capability (on either a per-unit or an aggregate basis, as appropriate). For the CDD, this will be a very rough order-of-magnitude estimate derived from the initial ISP (full details will be derived from the associated or updated ISP for Milestone C and included in the CPD). Suggested limit is 00 characters.
MRV System Frequency Band Bandwidth Comment
FoV Single-Channel Ground and Airborne Radio System (SINCGARS) VHF-FM (30-88 MHz) 16 kbps Frequency hopping, digital data capability
FoV EPLRS 420-450 MHz 128 kbps Supports RF data transmission
Words: 102
Characters: 608
Update
Cancel

9. Intelligence Supportability.

Paragraph 9.0 – Intelligence Supportability

Intelligence Supportability - Identify, as specifically as possible, all projected need for intelligence support throughout the expected acquisition life cycle in accordance with CJCSI 3312.01B, Joint Military Intelligence Requirements Certification, 10 Jun 10. During staffing, documents with JSDs of JROC Interest, JCB Interest, and Joint Integration will be subject to Joint Staff J-2 intelligence certification in accordance with CJCSI 3312.01B. Assistance is also available from J-2 Intelligence Requirements Certification Office (J2P/IRCO) for assistance at DSN 225-8085 or 671-9539; SIPRNET: http://j2sid.js.smil.mil/IntelCertification/j2sid.html.

For systems that do not produce, consume, process, or handle intelligence information, the writer must provide a brief explanation. (Example sentence: "***XYZ* does not produce, consume, process, or handle intelligence information. Therefore, it is not applicable to the *XYZ*.**") ***If you use the preceeding sentence, say it once in 9.1 shown below, then check the "NA" block in the other 15 subparagraphs.***

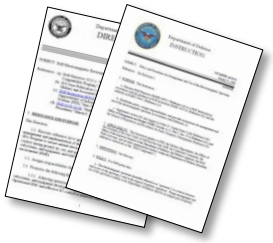
The Intelligence options section of the CDD has several pages, Intelligence 1 through 4. In these pages, the user will identify as specifically as possible, all projected requirements for intelligence support throughout the expected acquisition life cycle in accordance with the format and content prescribed by CJCSI 3312.01B, "Joint Military Intelligence Requirements Certification."

The CDTM will produce the following sub-paragraphs once the above text boxes are filled in:

9.0	Intelligence Supportability
9.1	Intelligence Support to Development
9.2	Intelligence Support to Development and Testing
9.3	Intelligence Support to Operations
9.4	Geospatial Intelligence Support
9.5	Targeting Support
9.6	Combat Search & Rescue
9.7	Battlespace Preparation
9.8	Warning Support
9.9	Space Intelligence
9.10	Intelligence Manpower
9.11	Intelligence Resource Support
9.12	Collection Management Support
9.13	Signature Support
9.14	Counter Intelligence Support
9.15	Intelligence Training Requirement
9.16	Dissemination Support

10. Weapons Safety Assurance (formerly Electromagnetic Environmental Effects (E3) and Spectrum Supportability).

Paragraph 10.0 – Weapon Safety Assurance



Weapons Safety Assurance – In accordance with JROCM 102-05, all munitions capable of being handled, transported, used, or stored by any Service in joint warfighting environments are considered to be joint weapons and require a joint weapons safety review in accordance with Appendix A to Enclosure D of the JCIDS Manual and JROCM 102-05, DoDI 5000.69, and J-8/DDFP Charter, 23 Feb 2006, "Joint Weapon Safety Technical Advisory Panel Charter". The joint or multinational mission environment attributes and performance parameters must be addressed as the basis for the weapon safety endorsement. Identify, as specifically as possible, everything necessary to provide for safe weapon storage, handling, transportation, or use by joint forces throughout the weapon lifecycle, to include performance and descriptive, qualitative, or quantitative attributes. The CDD will address the following:

a. **System Safety**. Confirm the establishment of a System Safety Program (SSP) for the life cycle of the weapon system in accordance with DODD 5000.01and MIL-STD-882. DODI 5000.02 provides risk acceptance criteria for high, serious, medium, and low risks.

b. **Insensitive Munitions**. Confirm capability of resisting insensitive munitions (IM) threats per the established standardized IM protocols in accordance with JROCM 235-06 and MIL-STD-2105D. If munitions cannot meet all IM criteria, provide details of and rationale for proposed variances, for consideration during review for weapon safety endorsement.

c. **Fuze Safety**. Confirm compliance with the provisions of MIL-STD-1316E, "Fuze Engineering Safety Working Group (FESWG) requirements for the use of Logic Devices in the Implementation of Safety Features", and "FESWG Guideline for Qualification of Fuzes, Safety & Arming (S&As), and Ignition Safety Device (ISDs)".

d. **Explosive Ordnance Disposal**. If munitions contain or deliver energetic material, confirm coordination with the Explosive Ordnance Disposal (EOD) research, development, test and evaluation (RDT&E) authority in accordance with DoDD 5160.62.

e. **Demilitarization/Disposal**. If the munitions contain or deliver energetic material, confirm that the weapon system has a Demilitarization and Disposal plan IAW with treaties, international agreements, Federal and state regulations and laws, and DODI 5000.02.

f. **Laser Safety**. If the munitions contain lasers, confirm that engineering design, protective equipment, administrative controls, or a combination thereof have been implemented in

accordance with reference eee, to protect and mitigate the risk to personnel from laser radiation to an acceptable level.

11. Technology Readiness Assessment.

Paragraph 11.0 – Technology Readiness Assessment

Technology Readiness Assessment (TRA) - A formal, systematic, metrics-based process and accompanying report that assesses the maturity of critical hardware and software technologies to be used in systems. It is conducted by an Independent Review Team (IRT) of subject matter experts (SMEs). All Department of Defense (DOD) acquisition programs must have a formal TRA at Milestone B and at Milestone C of the Defense Acquisition System. For ships, a preliminary assessment is required at program initiation. TRAs for Acquisition Category (ACAT) ID and IAM programs must be submitted to the Director, Research Directorate (DRD) in the office of the Director of Defense Research and Engineering (DDR&E).

Discuss the program's critical technology elements in accordance with DOD Technology Readiness Assessment Guidance. Identify any critical technology elements linked to the program's KPPs. Identify who performed the technology readiness assessment, when it was accomplished, whether an independent technology readiness assessment is planned, and, if applicable, when the Deputy Under Secretary of Defense, Science and Technology (DUSD(S&T)) review of the program technology readiness assessment is planned.

11.1 Description

Technical Readiness Assessment (TRA) Description - Provide a short introduction that includes the program name, the system name if different from the program name, and the milestone or other decision point for which the TRA was performed. For example, "This document presents an independent TRA for the UH-60M helicopter program in support of the Milestone B decision. The TRA was performed at the direction of the Army S&T Executive."

11.2 Summary

Technology Readiness Assessment Summary - identify any critical technology elements linked to the program's key performance parameters. Identify who performed the technology readiness assessment, when it was accomplished, whether an independent technology readiness assessment is planned, and, if applicable, when the DUSD(S&T) review of the program technology readiness assessment is planned.

11.3 Milestone B Actual Technology Readiness Level (TRL)

Milestone B Actual Technical Readiness Assessment - Programs that enter the Engineering and Manufacturing Development (EMD) phase of the Defense Acquisition System and have immature technologies will incur cost growth and schedule slippage. Therefore, Title 10 United States Code (U.S.C.) Section 2366b requires, in part, that the Milestone Decision Authority (MDA) certify that the technology in Major Defense Acquisition Programs (MDAPs), including space MDAPS, has been demonstrated in a relevant environment (TRL 6) before Milestone B approval. Reference: "*DOD Technology Readiness Assessment Deskbook*", 13 May 2011.

11.4 Program Manager Estimate TRL

Program Managers' Estimate of Technical Readiness Level (TRL) Today - TRLs are not a measure of design validity. Rather, they indicate a level of maturity at the time of CTE measurement. They do not indicate the difficulty in achieving the next TRL level. CTEs should be identified and assessed under the assumption that the design—developed as part of the systems engineering approach—is adequate for the performance of the required functions. Reference: "*DOD Technology Readiness Assessment Deskbook*", 13 May 2011.

11.5 TRL Estimate at Milestone C

Technology Readiness Level Estimate at Milestone C - Use this section if you expect that this CDD will be promoted to a CPD. Otherwise, leave blank unless the TRL matured to the level that can be defined as a production document for Milestone C. Milestone C marks approval to enter low rate initiation production (LRIP) for hardware systems and Suggested limited deployment in support of operational testing for MAIS programs or for software-intensive systems that have no production components. TRL 7 or higher is the expected state of technology maturity at Milestone C. Reference: "*DOD Technology Readiness Assessment Deskbook*", 13 May 2011.

11.6 Critical Technology Summary

Critical Technology Summary - Discuss the program's critical technology elements in accordance with the DOD Technology Readiness Assessment Deskbook ("*DOD Technology Readiness Assessment Deskbook*", 13 May 2011).

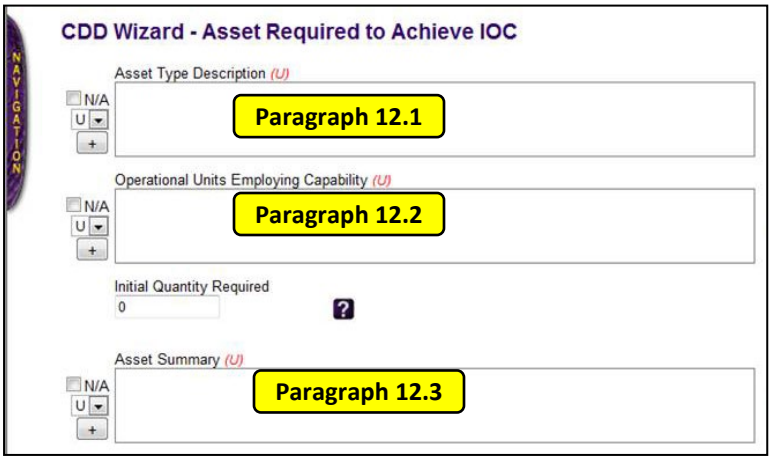
Associated KPP/KSA	Critical Tech Element	Critical Element Description
Associated KPP or KSA - Specifically identify any critical technology elements linked to the program's key performance parameters or key system attributes.	(U) **Critical Technical Element -** Enter the title of this Critical Technology Element. Specifically identify any critical technology elements linked to the program's key performance parameters.	(U) **Discuss Critical Technology -** Provide a description of the critical technology element. Discuss the program's critical technology elements in accordance with the DOD Technology Readiness Assessment Deskbook.

Table 7: Critical Technology Summary

12. Assets Required Achieving Initial Operational Capability (IOC).

Paragraph 12.0 – Assets Required Achieving Initial Operational Capability (IOC)

Assets Required to Achieve Initial Operational Capability (IOC) - Describe the types and initial quantities of assets required to attain IOC. Identify the operational units (including other DOD Components or government agencies, if appropriate) that will employ the capability, and define the initial asset quantities (including initial spares and training and support equipment, if appropriate) needed to achieve IOC.



a. If the discussion consumes more than allotted space in CDTM, move the discussion to the "Supporting Documents" file and leave summary level detail in the paragraph that describes the types and quantities of assets required to attain IOC.

b. The USAFMSA documentation team and ARCIC's Force Design Division (FDD) must be included during the development of basis of issue (BOI) guidance and attend any other meetings where BOI concerns arise.

c. Proponents should include assets necessary for new equipment training (NET), unit training, and institutional training at COMPO I schools (TRADOC schools) and COMPO 2 & 3 schools where Reserves & NGB teach courses on-site.

12.1 Asset Type Description

Asset Type - Describe the type of assets required to attain Initial Operational Capability.

12.2 Operational Units Employing Capability

Operational Units Employing the Asset - Identify the operational units (including other Services or government agencies, if appropriate) that will employ the capability and define the asset quantities (including spares, training, and support equipment, if appropriate) required to achieve IOC.

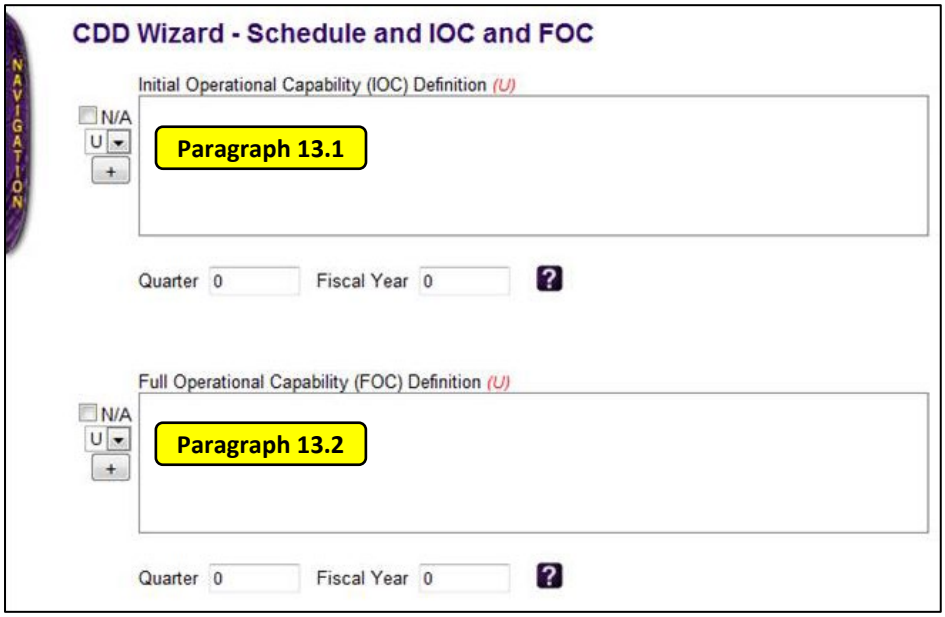
12.3 Asset Summary

Asset Summary - Provide a summary of the asset required to achieve initial operational capability.

13. IOC and Full Operational Capability (FOC) Schedule Definitions.

Paragraph 13.0 – IOC and Full Operational Capability (FOC) Schedule Definitions

IOC and FOC Definitions - Define what actions, when complete, will constitute attainment of IOC and FOC of the current increment. Specify the target date for IOC and FOC attainment based on discussions and coordination with the acquisition community.



13.1 IOC Definition

Define what actions, when complete, will constitute attainment of IOC of the current increment.

13.2 FOC Definition

Define what actions, when complete, will constitute attainment of FOC of the current increment.

Target Date

Specify the target date for full operational capability FOC attainment based on discussions and coordination with the acquisition community. Indicate the quarter and the fiscal year of FOC.

14. DOTmLPF -P Considerations.

Paragraph 14.0 – DOTmLPF-P Considerations

DOTmLPF-P – DOTmLPF-P changes should be considered from two perspectives:

1 – Enabling - changes that enable the implementation, operations and support of the specific system;

2 – Integrating – changes that must must be made to support integration of this system with existing capability solutions.

Clearly differentiate which kind of DOTmLPF-P changes are necessary.

a. Discuss any additional DOTmLPF-P implications associated with fielding the system, to include those approaches that would impact CONOPS or plans within a CCMD Area of Responsibility (AOR). Describe the implications for all recommended changes.: List the impacts, not a detailed technical requirements list. ***This should not be considered an "a la carte" menu. Each DOTmLPF-P domain and policy must be addressed.***

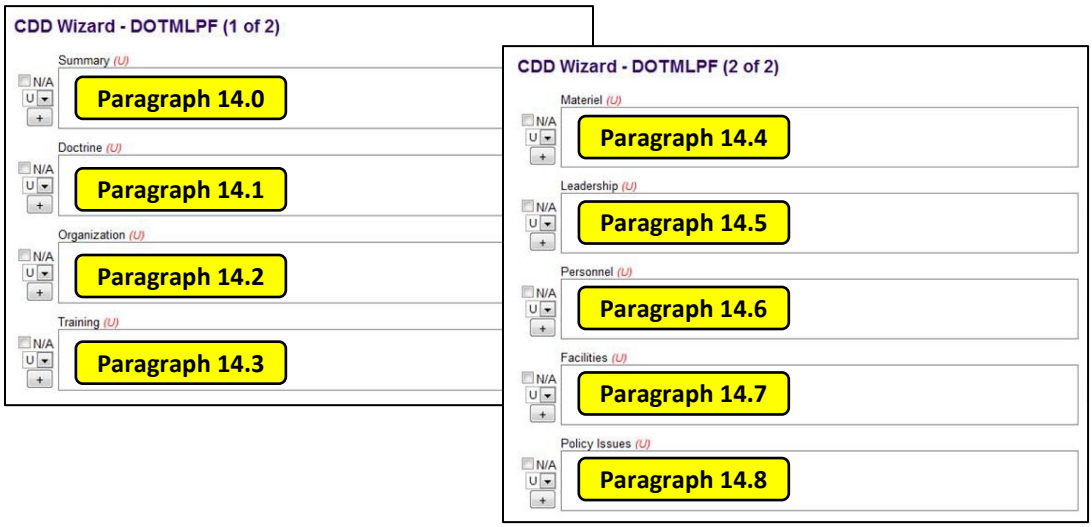
b. Highlight the status (timing and funding) of the other DOTmLPF-P considerations.

c. Describe, at an appropriate level of detail, the key logistics criteria, such as system reliability, maintainability, transportability, and supportability that will help minimize the system's logistics footprint, enhance mobility, and reduce the total ownership cost. Also discuss energy demand impacts, including fuel and/or electrical power, if applicable.

d. Detail any basing needs (forward and main operating bases, institutional training base, and depot requirements).

e. Specify facility, shelter, supporting infrastructure, and Environment, Safety, and Occupational Health (ESOH) asset requirements, and the associated costs, availability, and acquisition MS schedule(s) related to supporting the system."

f. Describe how the systems will be moved either to or within the theater, and identify any lift constraints.



Gatekeeper Guidance

Each DOTMLPF domain and policy implication(s) must have a separate summary. It is unacceptable to state there weren't any domain implications without an explanation as to why.

Use the question sets, provided in each paragraph description below, as examples to help you identify potential implications. ***You do not have to answer each question.*** Each DOTmLPF domain and policy implication(s) must have a separate summary. It is **unacceptable** to state there weren't any domain implications without an explanation as to why. If other information comes to mind that has impact on the various DOTmLPF areas, discuss those issues under the appropriate subparagraph.

14.0 DOTmLPF-P Summary Paragraph

DOTmLPF-P Summary - Discuss DOTMLPF-P implications associated with fielding the system that have not already been addressed in the CDD, to include those approaches that would impact CONOPS or plans within a combatant command's area of responsibility. Highlight the status (timing and funding) of the other DOTmLPF-P considerations. Describe implications for likely changes to any aspect of DOTmLPF -P. Discuss human systems integration (HSI) considerations that have a major impact on system effectiveness, suitability, and affordability. Describe, at an appropriate level of detail, the key logistics criteria, such as system reliability, maintainability, transportability, and supportability that will help minimize the system's logistics footprint, enhance mobility, and reduce the total ownership cost. Detail any basing needs (forward and main operating bases, institutional training base, and depot requirements). Specify facility, shelter, supporting infrastructure, anti-tamper and ESOH asset requirements, and the

associated costs and availability milestone schedule that support the capability. Describe how the system(s) will be moved either to or within the theater. Identify any lift constraints.

14.1 Doctrine

Doctrine - The way we fight, e.g., emphasizing maneuver warfare combined air-ground campaigns. A fuller definition is "Fundamental principles by which the military forces or elements thereof guide their actions in support of national objectives. It is authoritative but requires judgment in application."

1	What doctrinal development work has to be done to support the institutionalization of this system capability?
2	Which proponent(s) should take the lead to develop this doctrine/TTP?
3	When is the earliest that the doctrine can be developed (projected timelines)?
4	Does this new capability require a new TTP, or can existing TTP be modified to support its introduction into the force? When is the earliest that the TTP for its use can be developed?
5	Can the TTP/doctrine work be done within existing resources? What additional resource is required? Paragraph 16
6	Are there any joint doctrine/TTP implications?

14.2 Organization

Organization - How we organize to fight; divisions, Marine-Air Ground Task Forces (MAGTFs), etc.

1	What organizations will operate this equipment? Does it require a new organization or a modification to a current organization? What changes are required for the TOE?
2	Does the proposed change warrant a Force Development Update (FDU)? If so, who will coordinate with ARCIC FDD?
3	Can an existing organizational task be changed to provide resources to execute this mission and what is the impact on the organization, if any?
4	What units will provide logistic support to these organizations? Will this require new units, or can existing maintenance/logistics organizations support this capability? Does the support organization require augmentation? Will this require Contractor Logistics Support (CLS)? What are the estimated costs (paragraph 16)?
5	What is the total potential requirement for new organizations?
6	Which organization is responsible to implement these changes?
7	Are there joint organizational considerations for employing this capability, e.g., would the combatant commander be better served by a joint-manned capability?
8	Does this capability suggest creation of a new Military Occupation Specialty (MOS) or Special Skill Identifier (SSI)? If so, what “describes” that new MOS or SSI
9	If a new MOS or SSI is not required, what MOS/SSI has the appropriate competencies to best

	employ this capability?

14.3 Training

Training - How we prepare to fight tactically; basic training to advanced individual training, various types of unit training, joint exercises, etc.. The approved STRAP is the comphrehensive source of training detail and guidance used to develop this section.

Sample Question sets:

1	Will training be executed by a contactor support team, by a mobile training team, by a unit training system or by a school? If conducted by some combination of these approaches, what will the schedule be for transitioning between the options? (STRAP, see paragraph 5)
2	What school(s) will take the lead to implement this training? (STRAP, see paragraph 6.1)
3	How many courses will be added to the curriculum? (STRAP, see paragraphs 6.1.1.2.2 & 7.1.1.2.2 & 8.1.1.2.2.)
4	Is there a joint training requirement (e.g., training for other Services)? (STRAP, see paragraphs 6.1.3.1.7 & 7.1.3.1.7 & 8.1.3.1.7)
5	Does this capability suggest creation of a new Military Occupation Specialty (MOS) or Special Skill Identifier (SSI)? If so, what "describes" that new MOS or SSI? And, what are the most critical training support requirements, timelines, and resources? (STRAP, see paragraph 2.0)
6	If a new MOS or SSI is not required, what MOS/SSI has the appropriate competencies to best employ this capability? (STRAP, see paragraph 2.0)
7	Are additional Army resources needed by the school to support training? If so, Paragraph 16 (STRAP, see paragraphs 6.1.3.3.1 & 7.1.3.3.1 & 8.1.3.3.1)
8	How many additional instructors are required to support the training? Is additional Army resourcing required? If so, Paragraph 16 (STRAP, see paragraphs 6.1.3.3.1 & 7.1.3.3.1 & 8.1.3.3.1)
9	Are additional Army resources are required to support course development? If so, Paragraph 16 (STRAP, see paragraphs 6.1.3.3.1 & 7.1.3.3.1 & 8.1.3.3.1)
10	What Training Aids, Devices, Simulators, and Simulations (TADSS) will be required to support training? (STRAP, see paragraphs 6.1.1.3 & 7.1.1.3) What modifications to existing TADSS are required? What are the estimated costs? List in Paragraph 16. (STRAP, see paragraphs 6.1.3.3.1 & 7.1.3.3.1 & 8.1.3.3.1)
11	What additional facilities (storage, operations, and maintenance, etc.) are required to support new or modified TADSS? (STRAP, see paragraphs 6.1.1.4 & 7.1.1.4) What are the estimated costs? List in Paragraph 16. (STRAP, see paragraphs 6.1.3.3.1 & 7.1.3.3.1 & 8.1.3.3.1)
12	Will training will be required for support or maintenance personnel? Where will this training be conducted? (STRAP, see paragraphs 2 & 5)
13	What is the projected total cost and timelines for the training support required to field this capability in the Army? List in Paragraph 16. (STRAP, see paragraphs 6.1.3.3.1 & 7.1.3.3.1 & 8.1.3.3.1)
14	What is the projected total cost and timelines to support training for other Services? List in Paragraph 16. (STRAP, see paragraphs 6.1.3.3.1 & 7.1.3.3.1 & 8.1.3.3.1)

14.4 Materiel

Materiel - All the "stuff" necessary to equip our forces, that is, weapons, spares, etc. so they can operate effectively.

Sample Question sets:

Materiel (general comment – show estimated costs (requiring Army-level funding) for each response in paragraph 16, as applicable).

1	Does this system require new (or modifications to current) materiel systems in order to enable the total capability, e.g., new C2 software for Army Battle Command System (ABCS) to accompany new sensor platform?
2	Will the acquisition of this capability result in other materiel impacts or special Package, Handling, and Storage (PHS) requirements (e.g., additional lines of ammunition, fuel, batteries, power sources, etc.)?
3	Are there ecological or hazardous waste issues that will result from this acquisition?
4	Can it be deployed within existing transportation assets, or does it require outsized/oversized lift capability?
5	Will other systems or subsystems have to be developed or modified to support this equipment (e.g., radio mounts/night vision equipment/crew served weapons mounts)?
6	Does this system operate on a network or frequency that will potentially interfere with other systems in the Army? Does it potentially interfere with systems in other Services?
7	Does the C2 for this system require an interface with existing C2 systems? What systems? What are the architecture requirements?
8	What are the costs associated with the materiel impacts of this system?
9	Should there be a formal review of the potential legal implications of using this technology? Who will coordinate for that review and on what timeline?
10	Do supporting organizations have proper and adequate numbers of support equipment, tools, TMDE, etc.?
11	Does the system transmit or receive information/data with other than ancillary C4ISR systems, i.e. SINCGARS, EPLRS, FBCB2, etc?
12	Which organization should take the lead to resolve these issues?

Logistics. Use the guide below in crafting Logistics considerations. Refer to Paragraph 14 instructions for handling areas that are not applicable to the capability you are describing.

NOTE: This should be considered an "a la carte" menu. Only choose those areas where you have something to say. Do not use the subparagraph heading followed by NA.

Insert 4: Logistics Supportability Guide

Maintenance.

- Maintenance/Support Concept.
    - The maintenance concept. (Logistics Supportability Guide (LSG), see page 3, paragraph 1a)
    - If CLS or ICS is initial source of system support. (LSG, see page 4, paragraph 1b)
    - Level of Repair Analysis. (LSG, see paragraph 4, paragraph 1c)
    - Provisioning Plan. (LSG, see page 4, paragraph 1d)
    - Supportability Test & Evaluation Program. (LSG, see page 4-5, paragraph 1e)
    - Performance Based Logistics (PBL) and Performance Based Agreements (PBA) Requirements. (LSG, see page 5, paragraph 1f)
- Maintenance Manpower Support.
    - Current vs. New MOS Requirements. (LSG, see page 6, paragraph 2a)
    - Force Structure Implications. (LSG, see page 6, paragraph 2b)
    - Table of Organization and Equipment (TO&E)/Modified TO&E (MTO&E) Changes. (LSG, see page 6, paragraph 2c)
    - Supply, Ammunition, POL support requirements: (LSG, see page 6, paragraph 2d)
    - Human Factors Engineering: (LSG, see page 6, paragraph 2e)
- Supply Support: (LSG, see page 7, paragraph 3a)
- Support Equipment.
    - Test, Measurement and Diagnostic Equipment (TMDE): (LSG, see page 8, paragraph 4a)
    - Calibration requirements: (LSG, see page 8, paragraph 4b)
    - Material Handling Equipment (MHE) or Container Handling Equipment (CHE) Requirements. (LSG, see page 8, paragraph 4c)
    - Specialized or Standard Shelters: (LSG, see page 8, paragraph 4d)
    - Vehicle Recovery: (LSG, see page 8, paragraph 4e)
    - Standard or Unique Support Requirements (When Applicable). (LSG, see page 9 , paragraph 4g)
- Technical Data. (Logistics Supportability Guide, see page 9, paragraph 5 a)
- Training and Training Support
    - Weapon System Family of Vehicles (FoV) Training: (LSG, see page 10, paragraph 6a)
    - Training Structure: (LSG, see page 10, paragraph 6b)
    - Training Support: (LSG, see page 11, paragraph 6c)
    - New Equipment Training: (LSG, see page 11, paragraph 6d)
    - Institutional Training: (LSG, see page 11, paragraph 6e)
    - Unit (Sustainment) Training: (LSG, see page 11, paragraph 6f)
    - Weapon System FoV Simulators: (LSG, see page 12, paragraph 6g)
- Computer Resource Support: (LSG, see page 12, paragraph 7)
- Facilities: (LSG, see pages 12-13, paragraph 8)
- Packaging, Handling, Storage and Transportability

    - Storage and Preservation: (LSG, see page 13, paragraph 9a)
    - Containerization Requirements: (LSG, see page 13, paragraph 9b)
    - Transportability Modes Analysis: (LSG, see page 14, paragraph 9c)
    - Hazardous Materials Requirements: (LSG, see page 14, paragraph 9d)
    - Other Special Handling Requirements: (LSG, see page 14, paragraph 9e)
- Design Interface.
    - Safety & Health Issues for Use and Maintenance: (LSG, see pages 14-15, paragraph 10a)
    - Built in Test (BIT)/ Built In Test Equipment (BITE) Requirements: (LSG, see page 15, paragraph 10b)
    - Standardization and Interoperability (LSG, see page 15, paragraph 10c)
- Conditions Based Maintenance Plus (CBM+): (LSG, see pages 15-18, para a-f)
- Common Logistics Operating Environment (CLOE): (LSG, see pgs 18-20, para g)
- Life Cycle Sustainment (LCS) Metrics: (LSG, see page 20)
- Reliability, Availability and Maintainability (RAM)
    - Materiel Availability Key Performance Parameter (KPP): (LSG, see page 21, paragraph a)
    - Materiel Reliability: (LSG, see page 21 , paragraph b)
    - Maintainability (Field Level): (LSG, see page 22, paragraph c)
    - Maintenance Ratio: (LSG, see page 22, paragraph d)
    - Maintainability (Sustainment Level): (LSG, see page 22, paragraph e)
    - Platform Re-Generation (PRG): (LSG, see page 23, paragraph f)
    - Platform Re-Generation-Maximum (PRG-M): (LSG, see page 23, paragraph g)
- Corrosion Prevention and Control (CPC). CPC is a critical consideration in assuring the sustained performance, readiness, economical operation and service life of Army systems and equipment. It requires active consideration in the materiel development, acquisition, fielding, operation, and storage processes. CPC requires life cycle management planning and action in design, development, testing, fielding, training, and maintenance. The Product Manager for XXXXXXXX capability is responsible for ensuring that a suitable corrosion prevention strategy is in place for the XXXXXXXX capability in accordance with AR 750-59, Army Corrosion Prevention and Control Program.
- Item Unique Identification (IUID). IUID is a DOD initiative that will enable easy access to information about DOD possessions that will make acquisition, repair, inventory, and deployment of items faster and more efficient. The implementation of IUID requirements means that qualifying items must be marked with a Unique Item Identifier (UII) in accordance with the DOD Guide to Uniquely Identifying Items. Specifically, MIL STD 130 http://www.uidsolutions.com/milstd130.aspx requires that all XXXXXXXX capability qualifying components, to include legacy components that transition through organic depots, must be marked with a UII in the form of a machine readable 2D Data Matrix, the contents of which will be encoded in the syntax of ISO/IEC 15434 and the semantics of ISO/IEC 15418 or the Air Transport Association (ATA) Common Support Data Dictionary (CSDD). All 2D Data Matrix bar codes must meet the verification standards for mark quality as established in ISO 15415 and SAE AS9132.

Support Equipment. It is highly desirable that no new Test, Measurements and Diagnostic Equipment (TMDE) or Associated Support Items of Equipment (ASIOE) be required for the XXXXXXXX capability. TMDE (4348) and ASIOE requirements will be validated through the establishment of the maintenance concept. If required, new TMDE or ASIOE (compatible at field level with existing TMDE) will be funded, developed and fielded under the XXXXXXXX program to include expanded BOIG fielding of the Maintenance Support Device (MSD).

14.5 Leadership

Leadership and Education - How we prepare our leaders to lead the fight from squad leader to 4-star general/admiral; professional development.

Leadership & Education (general comment – show estimated costs (requiring Army-level funding) for each response in paragraph 16, as applicable).

1	What new leadership training is required (if any)?
2	What changes to existing leader courses are required?
3	Are unit level professional development (PD) courses required? If so, what are they?
4	Are there cultural barriers or drivers to overcome?
5	What resources are required to enable leadership to use this capability?
6	Which school/organization will be responsible for implementing these changes?
7	What is the timeline required to develop leaders to use the capability?

14.6 Personnel

Personnel - Availability of qualified people for peacetime, wartime, and various contingency operations.

Note: **The seven MANPRINT domains are:**

1. Manpower
2. Personnel
3. Training
4. Human Factors Engineering
5. System Safety
6. Health Hazards
7. Soldier Survivability

a. HSI/MANPRINT.

1. **Manpower.** State manpower constraints (if any). For example: Introduction of the XXXXXXXX capability shall not increase the overall number of personnel, both, military and civilian, required to operate, maintain, and support the item.

2. **Personnel.** State MOS constraints (if any). For example: The operation, maintenance, and support of the XXXXXXXX capability shall not require aptitudes, skills, or capabilities beyond those currently present in the user population.

3. **Training.** State training requirements for host station, NET, and field refresher training as required including resources required to meet training levels. For example: The instruction

and resources required providing the Warfighter and maintainer with knowledge, skills and abilities in proper operation, maintain, and support Army systems shall not significantly increase due to the introduction of the XXXXXXXX capability.

4. **Human Factors Engineering.** The XXXXXXXX capability design shall promote effective Soldier-machine integration for optimal total system performance. Design principles taking into account human capabilities and limitations shall be incorporated into system definition, design, development, and evaluation. This includes concepts of human-computer interface (e.g., ease of perception and comprehension of displays, ease of use of controls) and compatibility of XXXXXXXX capability with other mission-essential equipment (including but not limited to use with standard combat gear, CBRN, and environmental clothing). The XXXXXXXX capability should not interfere with the performance of common Soldier tasks. Equipment design must consider mission-dependent tasks and demands through consultation with SMEs, in order to maximize ease of use, minimize workload and enhance mission performance.

5. **System Safety.** State appropriate System Safety requirements to include any regulatory requirements the system must meet. For example "The XXXXXXXX capability design and operational characteristics shall minimize the possibilities for accidents or mishaps caused by human error or system failure. Safety, health, environmental, fire, and ergonomic hazards associated with the use, maintenance, transportation, storage, handling, and demilitarization of the XXXXXXXX capability will be identified, evaluated/assessed, and mitigated or controlled to an acceptable level. The resolution of all hazards will be formally documented through a hazard tracking system and the risk associated with the residual hazard, if any, will be accepted by the designated approving authority IAW AR 385-10, *The Army Safety Program* and DA Pam 385-16, *System Safety Management Guide*.

6. **Health Hazards.** Insert the following statement "A Health Hazard Assessment (HHA) will be requested from the U.S. Army Public Health Command (USAPHC) early in the development or procurement process. This HHA will be updated at each Milestone Decision Review (MDR) as required by AR 40-10."

Sample Health Hazard Statement

Through the systematic application of biomedical knowledge to identify, assess and minimize health hazards associated with the system's operation, maintenance, repair or storage, the XXXXXXXX capability shall not present any uncontrolled health hazards to the operator or maintainer through its service lifetime.

7. **Soldier Survivability.** State other survivability requirements applicable to the system which are different than those which may be included as a KPP.

Sample Question sets:

Personnel (general comment – show estimated costs (requiring Army-level funding) for each response in paragraph 16, as applicable).

1	Will there be a requirement for additional personnel to operate this equipment or can it be fielded within existing personnel limits?
2	Do the Soldiers have the skills to operate the equipment (and support equipment)?
3	What are the likely personnel implications (MOS/SSI designations) for: Primary Users, Maintenance Personnel, Support Personnel
4	Will contract personnel support this equipment? How many are required per unit? What is the anticipated yearly cost of this support across the Army?
5	Are there any Training, Transient, Hospital, and School (TTHS) implications?
6	Which office/agency is responsible to resolve the issues and what is the timeline to resolve the personnel challenges associated with delivering this capability to the Army?
7	What personnel changes are required for the TOE?

14.7 Facilities

Facilities - Real property; installations and industrial facilities (e.g. government owned ammunition production facilities) that support our forces.

Storage Environment. The appropriate storage temperature and air quality should be specified. This should include length of time to remain in storage, frequency and duration of maintenance actions, etc. *For example: The XXXXXXXX capability must be not be affected under storage conditions from -28° F (-33° C) to +160°F (+71° C).*

Sample Question sets:

Facilities (general comment – show estimated costs (requiring Army-level funding) for each response in paragraph 16, as applicable).

1	What changes to the facilities in the supporting schools will have to be made to support training?
2	Does this require any new, modified, or special facilities at either the unit or support levels?
3	Are current range capabilities adequate to support training requirements associated with this capability? (i.e., firing range, maneuver range, flight range)
4	Will current motor pool, storage facilities, and other facilities support this equipment?
5	Which organization will take the lead to coordinate these changes?
6	Are there facility considerations for Joint manned/operated capabilities?
7	What additional facilities (storage, operations, and maintenance, etc.) are required to support new or modified TADSS.

14.8 Policy Issues

Policy Issues - Discuss other policy issues that may affect the development of this capability.

Sample Question sets:

1	Will fielding the capability require any changes to existing policy articulated in Army Regulations or other authoritative sources, i.e. Joint Instructions, DOD Directives, NATO STANAGs, etc?
2	Are there any changes in public law required?

15. Other System Attributes.

Paragraph 15.0 – Other System Attributes

Other System Attributes - Address any other attributes not previously identified, especially those that tend to be design, cost, or risk drivers, including but not limited to the following:

Gatekeeper Guidance

Remember, you should address all the attributes mentioned in this paragraph ***as applicable*** to your program.

a. **Anti-tamper, embedded instrumentation, electronic attack (EA), and wartime reserve mode (WARM) requirements**. *For example: The XXXXXXXX capability will have embedded diagnostics that can identify errors or faults down to the Line Replaceable Units/Line Replaceable Module (LRU/LRM) level.*

b. **HSI/ MANPRINT considerations** that have a major impact on system effectiveness and suitability.

c. **Natural environmental factors** (climatic design type, terrain, meteorological and oceanographic factors, impacts and effects).

d. **Expected level of capability** provided in various mission environments, if degraded relative to KPPs, KSAs, and additional performance attributes articulated in Section 6 of the CDD. Include applicable safety parameters, such as those related to system, nuclear, explosive, and flight safety. Environmental operating conditions (percentage of use in Hot, Basic, Cold, etc.) along with dust, smoke, rain, etc. will be included here. *For example: XXXXXXXX capability will be mission capable in all environments. The system must meet basic cold and hot weather conditions and remain operational in adverse weather conditions with no more than 20% degradation of basic capabilities.*

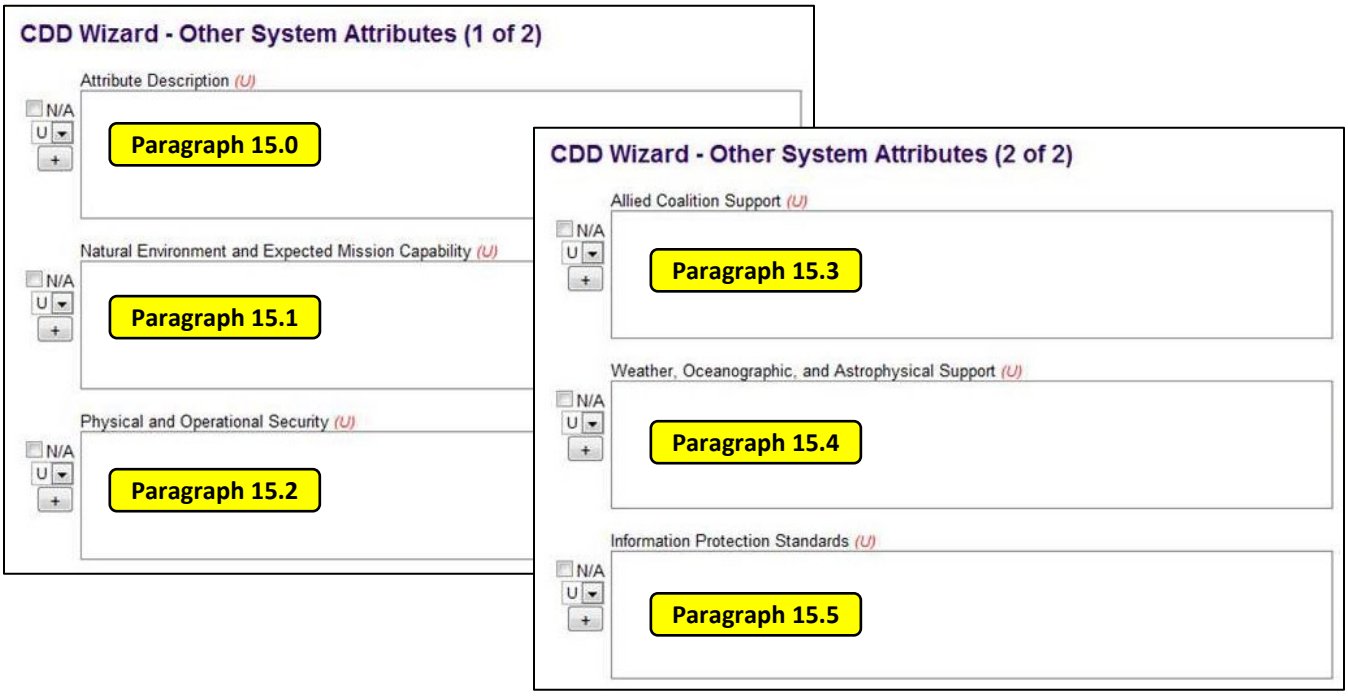
e. **Physical and operational security needs**. *For example: XXXXXXXX capability will be physically secured in the same way as other property book items (i.e., Arms Room, Supply Room, Platoon Equipment Room, or on Vehicles).*

f. **Weather, oceanographic and astro-geophysical support** needs throughout the program's expected life cycle, including data accuracy and forecast needs.

g. For intelligence, surveillance, and reconnaissance (ISR) platforms, issues relating to **information security and protection standards**.

h. For systems that may be used in **combined allied and coalition operations**, issues relating to applicable US-ratified international standardization agreements which will be incorporated in the derived system requirements, in accordance with references DODD 8320.02and DODI 2010.06.

i. Whether or not the system must be able to survive and operate through **CBRN environments** in accordance with DODI 3150.09. In the event the mission requires CBRN survivability, as defined in DODI 3150.09, consider elevating this attribute to be a KPP. If the system is covered under DODD S-5210.81, nuclear survivability must be designated a KPP. As applicable, address operational and maintenance issues related to ensuring continuing hardness against CBRN environments.



15.0 Other system Attributes

Attribute Description - As appropriate, address attributes that tend to be design, cost, and risk drivers, including ESOH, HSI/MANPRINT, embedded instrumentation, EA, information protection standards and IA and WARM requirements.

Address attributes that tend to be design, cost, and risk drivers, including environment, safety and occupational health, human systems integration, embedded instrumentation, electronic attack, information protection standards, information assurance, and wartime reserve mode requirements.

15.1 Natural Environment and Expected Mission Capability

Natural Environment and Expected Mission Capability - Address natural environmental factors (climatic design type, terrain, meteorological and oceanographic factors, impacts and effects); and unplanned stimuli (such as fast cook-off, slow cook-off, bullet impact, fragment impact, sympathetic detonation, and shape charge jet).

Define the mission capability (e.g. full, percent degraded) in the various environments. Include applicable safety parameters, such as those related to system, nuclear, explosive, and fight safety.

Expected Mission Capability. *Environmental operating conditions (percentage of use in Hot, Basic, Cold, etc.) along with dust, smoke, rain, etc. will be included here.*

EXAMPLE: XXXXXXXX capability will be mission capable in all environments. The system must meet basic cold and hot weather conditions and remain operational in adverse weather conditions with no more than 20% degradation of basic capabilities.

Ground Mobility Analysis and Geospatial requirements. Address the need for geospatial data and information to be collected, stored, fused, analyzed, and disseminated from peer to peer and from echelon to echelon, down to the individual Soldier.

Ground Mobility Instructions.docx

Insert 5: Ground Mobility Instructions

15.2 Physical and Operational Security

Physical and Operational Security Needs - Identify physical and operational security needs. When appropriate, identify the weather, oceanographic and astrogeophysical support needs throughout the expected life cycle of the program. Include data accuracy and forecast needs. For ISR platforms, address information protection standards. XXXXXXXX capability will be physically secured in the same way as other property book items (i.e. Arms Room, Supply Room, Platoon Equipment Room, or on Vehicles).

15.3 Allied Coalition Support

Allied Coalition Support - Describe the non-IT/NSS capabilities required for allied and coalition operations, identify the potentially applicable US-ratified international standardization agreements, and provide an initial indication of which ones will be incorporated in the system requirements. (Reference: DODD 8320.02, *Data Sharing in a Net-Centric Department of Defense*)

15.4 Weather, Oceanographic, and Astrophysical Support

Weather, Oceanographic, and Astrophysical Support - When appropriate, identify the weather, oceanographic and astrogeophysical support needs throughout the program's expected life cycle. Include data accuracy and forecast needs.

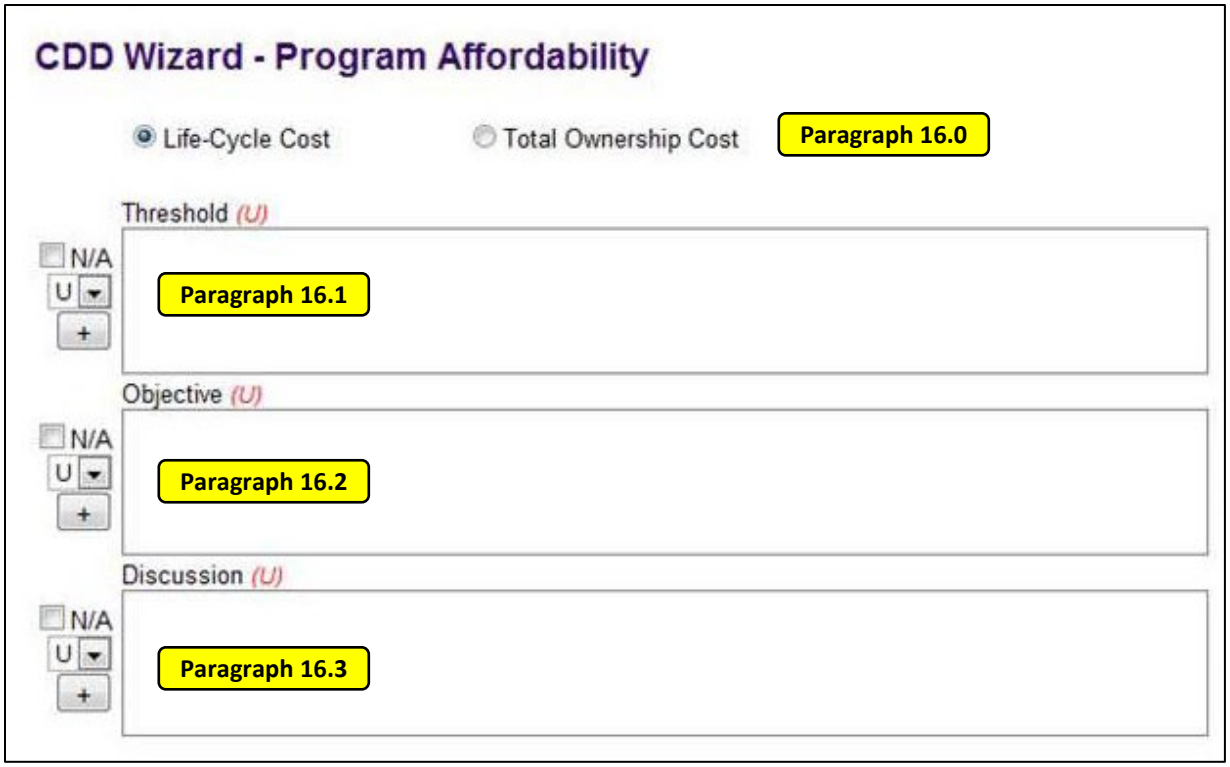
15.5 Information Protection Standards

Information Protection Standards - For ISR platforms, address issues relating to information security and protection standards. Include data accuracy and forecast needs.

16. Program Affordability.

Paragraph 10.0 – Program Affordability

Each Army CDD must contain a life cycle or total ownership cost estimate, an affordability table, and the source, or approved proposed source, of funding. The CDD outlines an affordable increment of militarily useful, logistically supportable, and technically achievable or mature capability. The CDD may define multiple increments if there is sufficient definition of the performance attributes (KPPs, key system attributes, and other attributes) to support approval of multiple increments. The tables below are mandated by HQDA G8 as promulgated in AR 71-9, Warfighting Capabilities Determination, 28 Dec 09, paragraph 4-7.



16.1 Threshold

Threshold - The cost figure should be stated in terms of a threshold capability (not necessarily a KPP) to provide flexibility for program evolution and cost as an independent variable (CAIV) tradeoff studies.

16.2 Objective

Objective - The cost figure should be stated in terms of an objective capability (not necessarily a KPP) to provide flexibility for program evolution and cost as an independent variable (CAIV) tradeoff studies.

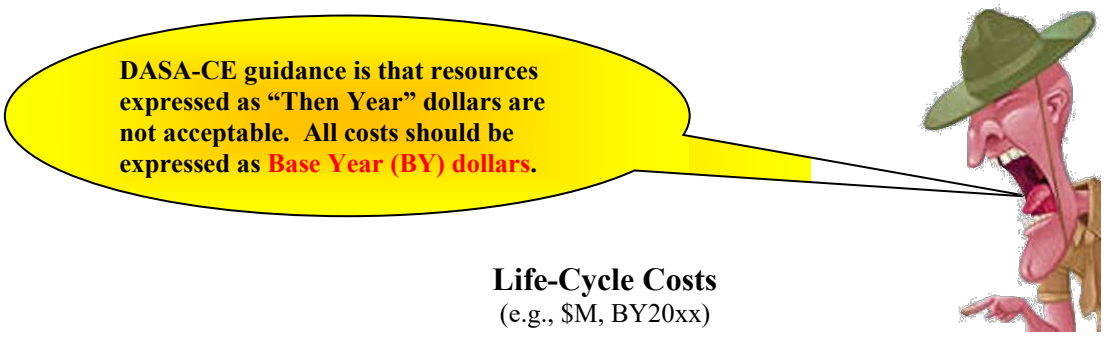
16.3 Discussion

Discussion - The affordability determination is made as part of the cost assessment in the analysis supporting the CDD development. Cost will be included in the CDD as life-cycle cost or, if available, total ownership cost. It will include all associated system(s) DOTMLPF–P costs. Inclusion of cost allows the sponsor to emphasize affordability in the proposed program. In addition, the discussion on affordability should articulate the CDD sponsor funding level

estimates for developing, producing, and sustaining the desired capability. Provide rationale for the level of funding required.

Note: The required tables from AR 71-9 do not lend themselves to the delineation of individual DOTMLPF Affordability issues. In fact, some of these affordability issues lay outside the program from an APB standpoint (hence Table 10 below, as extracted from Figure C-1 of AR 71-9). Use table 9 to record ALL DOTMLPF–P costs that are **directly related to the program** (the program means the APB). Use table 10 to capture DOTMLPF-P costs **outside the program** (APB).

a. Describe **life-cycle cost** (include all associated DOTMLPF-P costs). Life cycle or total ownership costs must be expressed in threshold and objective values and must include the base year and dollar-level for example, thousands ($K) and millions ($M). State cost in terms of a threshold and objective capability (not necessarily a KPP) to provide flexibility for program evolution and cost as an independent variable tradeoff studies.



Objective	Threshold
$627	$700

Table 8: Life-Cycle or Total Ownership Costs

b. **Program Affordability** - The affordability determination is made as part of the cost assessment in the analysis supporting the CDD development. This section is a final check to see if all requirements are expressed, linked, and synchronized so the Army leadership can make an informed decision.

The Army program affordability table will specify all DOTMLPF-P funding costs directly related to the program (APB) required by fiscal year (FY) over the future years defense program/plan for research, development, test, and evaluation (RDT&E), procurement, sustainment, and any unfunded requirements (UFR). Program funding is shown in the most recent POM and/or the President's budget or identified during the POM process. This matrix will support Army leadership making informed decisions on whether to move funding for this program

(dollar-level, base year)	APPN	APE	FY xx	FY xx	FY xx	FY xx
RDT&E						
Funding						
UFR						
Procurement Cost						
Funding						
UFR						
Sustainment Cost						
Funding						
UFR						
Total UFR						

Table 9: Army Program Affordability

This includes the big "M" and the associated DOTMLPF. For example, systems TADSS goes here.

c. Show total cost as shown in the table immediately below, including cost by FY and type of funding based upon threshold levels of performance. Show cost factors used to determine ACAT level, per DODI 5000.02. The affordability determination is made as part of the cost assessment in the analysis supporting the CDD development. Cost will be included in the CDD as life-cycle cost or, if available, total ownership cost, and will include all associated DOTMLPF-P costs. Inclusion of cost allows you to emphasize affordability in the proposed program. Cite applicable cost analyses conducted to date. For IS, identify the programmed funding by year for the software development and sustainment and for hardware refresh and integration, and provide rationale for the level of funding required.

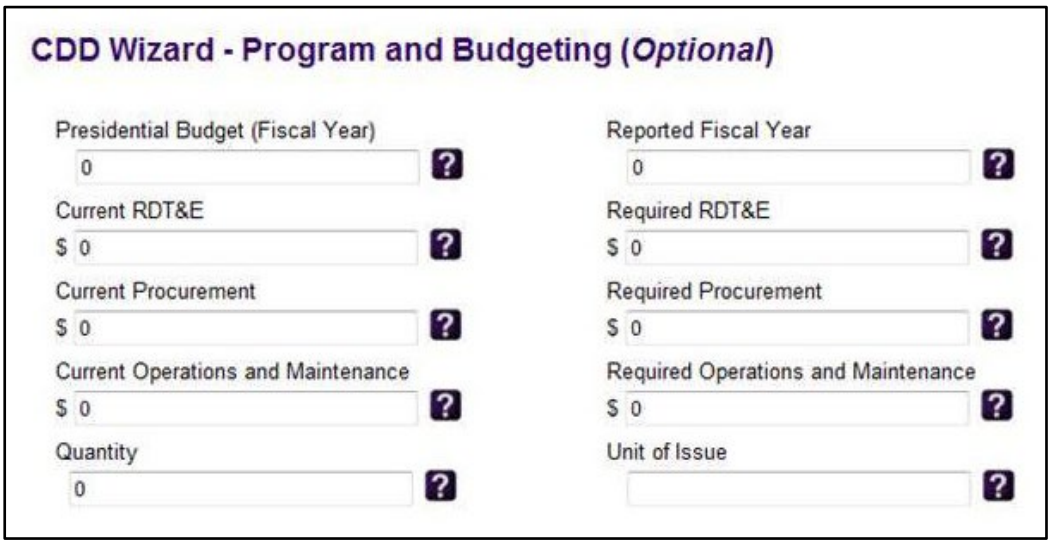
Resources Required	FY xx (e.g. 12)	FY xx (e.g. 13)	FY xx (e.g. 14)	FY xx (e.g. 15)	FY xx (e.g. 12)	FY xx (e.g. 12)	FYDP Total	Life Cycle Cost
Resources ($M)								
O&M								
RDT&E								
Procurement								
Manpower								
MILCON								
Total Funding								

Table10: Summary of Resources Required

d. Describe the Source of Funding and applicable cost analyses conducted to date. The DCS, G–8 is responsible for providing the level of funding identified or programmed, and the source of funding to the document sponsor.

CDD Wizard – Program and Budgeting (Optional)

Programming and Budgeting - This section is optional if you want to capture budget information in CDTM. The data is not printed in the final document. Programming includes the definition and analysis of alternative force structures, weapon systems, and support systems together with their multi-year resource implications and the evaluation of various tradeoff options. Budgeting includes formulation, justification, execution, and control of the budget.



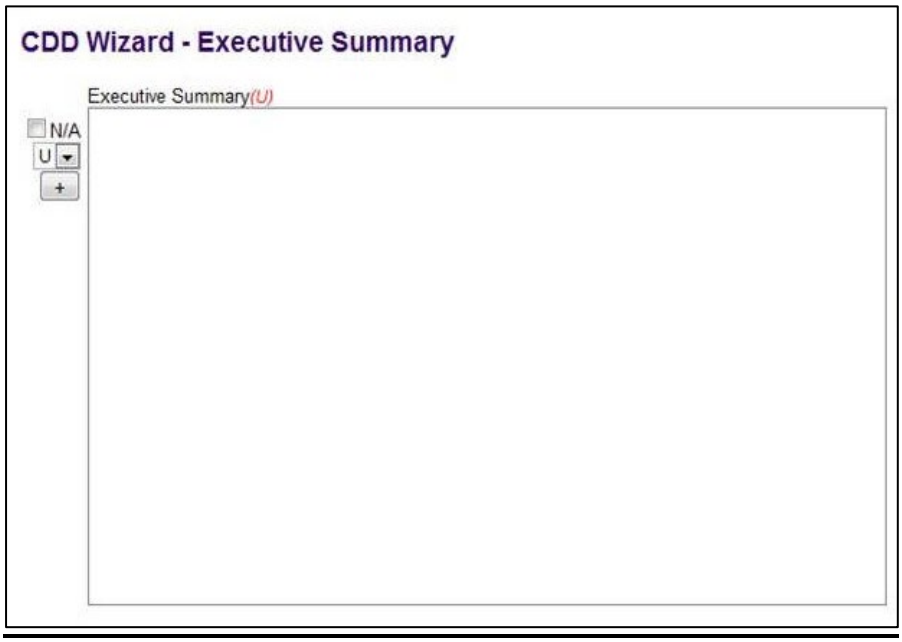
CDTM Note: This Wizard page is for future capabilities. It can be filled out but it does not currently print in the final document.

Executive Summary

Page ii: Executive Summary

An executive summary, **not to exceed 1 page**, shall follow the cover page and precede the body of the completed CDD. The Executive Summary Section of the CDD wizard contains a field to provide a short summarization of the CDD that covers the key points, including background

information, analysis and conclusion. It should not be a direct lift from main body of the document (paragraph 1.1).



CDTM NOTE: Even though this module is almost the last module in the CDTM Wizard, the Executive Summary will print after the cover page of the document in the final product.

a. There are **four Appendices** generated by CDTM. The **Cost-Benefit Analysis** (C-BA) is the only additional appendix that **must be** appended to the CDD, although additional appendices may also be added.

(1) **Appendix A -** Net-Ready KPP (NR-KPP) Architecture Data.

(2) **Appendix B -** References.

(3) **Appendix C -** Acronym List.

(4) **Appendix D -** Glossary.

Appendix A: Net-Ready PP (NR-KPP) Architecture Data

Appendices & Annex Options - Enter text and graphics for Appendix A, Net-Ready KPP, which is a mandatory appendix for the CDD. Include the link(s) to the architecture repository for the required NR-KPP architecture data identified in the JCIDS Manual (Appendix F to Enclosure B, Table B-F-3).

Appendix A: Net-Ready KPP (NR-KPP) Architecture Data

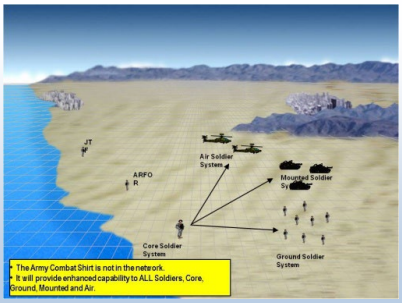
Appendix A: Net-Ready KPP (NR-KPP) Architecture Data - Enter NR-KPP text in this block. The NR-KPP is composed of the following elements:

1. Compliant solution architecture,
2. Compliance with DOD Net-centric Data and Services strategies, including data and services exposure criteria,
3. Compliant with applicable GIG Technical Direction to include DISR mandated IT Standards reflected in the TV-1 and implementation guidance of GIG Enterprise Service Profiles (GESPs) necessary to meet all operational requirements specified in the DOD Information Enterprise Architecture and solution architecture system/service views,
4. Verification of compliance with DOD IA requirements, and
5. Compliance with Supportability elements to include, Spectrum analysis, Selective Availability Anti-Spoofing Module (SAASM) and the Joint Tactical Radio System (JTRS).

Appendix A: Graphics and Attachments

At a minimum, you should have a High-Level Operational Concept Graphic (OV-1), even if the capability does not have a NR-KPP and doesn't require all architecture views. Other than the OV-1, do not include the NR-KPP architecture data unless specifically referenced for illustration purposes elsewhere in the body of the CDD.

Example of an OV-1:



a. **CJCSI 6212.01E**, *Interoperability & Supportability of Information Technology and National Security Systems*, 15 Dec 08, **significantly changed the content of appendix A**. The table on page E-19 provides a summary of required NR-KPP elements.

b. All views included should have accompanying text to highlight the salient point of the architecture view as mandated by the *DOD Architecture Framework (DODAF)*.

c. If the OV-1 is the only view included in the appendix, add the following statement "This capability has no C4I interface with any other system or capability. The NR-KPP is not applicable. The architecture enclosed supports and underpins the CONOPS discussion in paragraph 3."

d. If you are developing the full NR-KPP, the following products are mandatory and should appear in appendix A in the order shown below for ease of review and evaluation:

(1) NR-KPP compliance statement, copy and paste the KPP description, threshold, and objective from Table E-2, CJCSI 6212.01E, 15 Dec 08. The compliance statement does not have to appear in both paragraphs 6 and Appendix A. If included in paragraph 6, provide a statement in Appendix A identifying where the statement is located.

(2) Compliance with Net-Centric Data and Services Strategy. Include Exposure Verification Tracking Sheets as necessary.

(3) Global Information Grid (GIG) Technical Guidance (GTG). Information on GTG can be found at this web site: https://www.intelink.gov/wiki/Portal:CJCSI_6212_Resource_Page. GIG Technical Profiles (GTP) has replaced Key Interface Profiles (KIP). Use the table below

which includes the 8 approved GTPs. Only fill out the rows that apply to the capability you are producing.

GTP Approved Use Declaration Table.doc

Insert 6: GTP Approved Use Declaration Table

(4) DoD Information Assurance (IA) and Critical Infrastructure Protection (CIP) Requirements. Comply with IA requirements and include the required compliance statement. Verbiage for a CDD must include the following statement verbatim, "This program or system will comply with the IA requirements in DOD 8500 series and CJCS 6510 series directives, instructions and manuals prior to IOC." Verbiage for a CDD must include the following statement verbatim, "This program or system complies with the IA requirements in DOD 8500 series and CJCS 6510 series directives, instructions and manuals."

(5) DOD Supportability Requirements. Include compliance statements for Electromagnetic Environmental Effects (E3) and Spectrum Supportability, Joint Tactical Radio System (JTRS), Selective Availability Anti-Spoofing Module (SAASM), Tactical Data Link (TDL) Implementations, and Bandwidth Analysis.

(6) All Views & Operational Architecture: AV-1, AV-2, OV-1, OV-2, OV-3, OV-4, OV-5, OV-6C.

(7) Systems Architecture: SV-2, SV-4, SV-5, SV-6. The SV-5 is either an Excel file or a Word table at the discretion of the System's Architect. **The OV-3 & SV-6 must be submitted as separate Excel files**. A blank SV-6 template is enclosed below based on DODAF V1.5, April 2007. Systems Architecture is the PM's responsibility. Close coordination is required to ensure products are developed to support staffing of the capability document.

Microsoft Office Excel 97-2003 Works

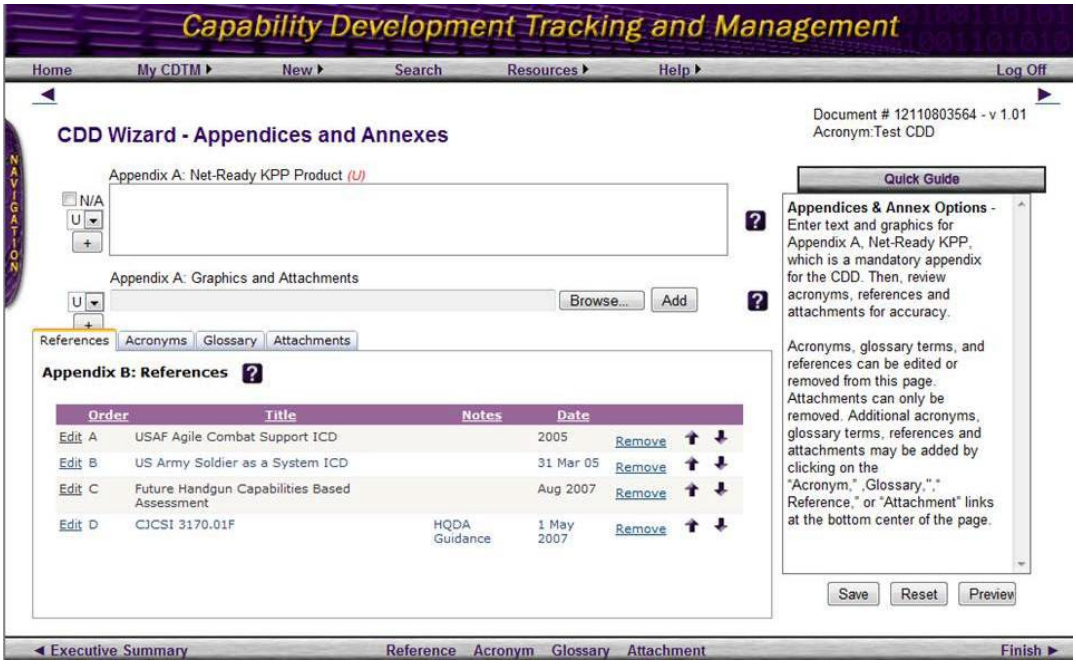
Insert 7: SV-6 Template DODAF 1.5

(8) Technical Architecture. TV-1 & TV-2 (Draft IT Standards Profile generate by the DOD IT Standards Registry (DISR) Online. Note: This view must be developed on DISR Online (NIPRNET), exported to disk, and published on DISR Online SIPRNET Registry. The PM is responsible for developing this product.

(9) Architecture products (except TV's) must be stored in CADIE and metadata tagged to meet the requirements of TR 71-20 and CJCSI 6212.01E.

e. Additional assistance is available on the J6 wiki Portal.

Then, review acronyms, references and attachments for accuracy. Acronyms, glossary terms, and references can be edited or removed from this page. Attachments can only be removed. Additional acronyms, glossary terms, references and attachments may be added by clicking on the “Acronym”, ”Glossary", “Reference,” or “Attachment” links at the bottom center of the page.



Appendix B: References

Appendix B - Appendix B provides the list of references utilized in this CDD. You may edit or remove references from this pick-list. Additional references may be added by clicking on the “Reference” link at the bottom center of the page.

The list below shows seven standard references. Add other references that are germane to the CDD. This is not a library listing.

1. TRADOC Pamphlet 525-3-0, The Army Capstone Concept, Operational Adaptability: Operating under Conditions of Uncertainty and Complexity in an Era of Persistent Conflict 2016-2028, 21 Dec 2009.

2. Capstone Concepts for Joint Operations, Version 3.0, 15 Jan 09.

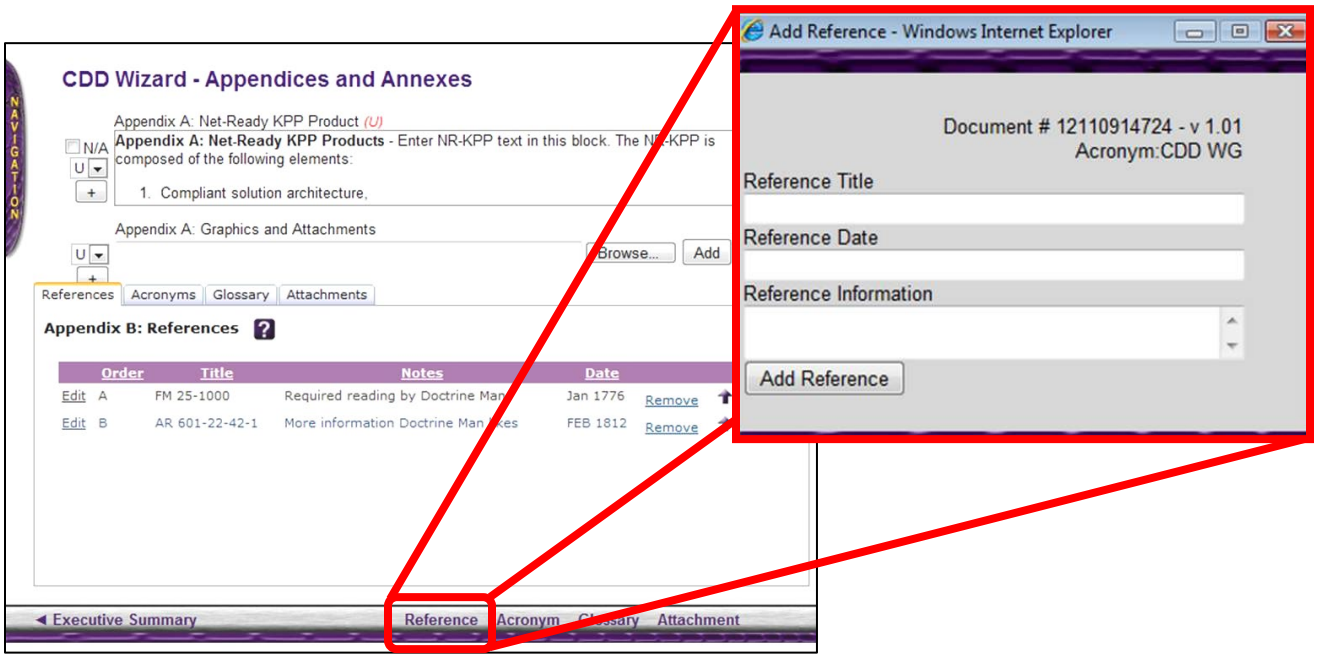
3. Chairman Joint Chief of Staff Instruction (CJCSI) 3170.01H, Joint Capabilities Integration and Development System (JCIDS), 10 Jan 12.

4. CJCSI 6212.01E, Interoperability and Supportability of Information Technology & National Security Systems, 15 Dec 08.

5. Chairman Joint Chief of Staff Manual (CJCSM) 3500.04F, Universal Joint Task List (UJTL), 1 Jun 11.

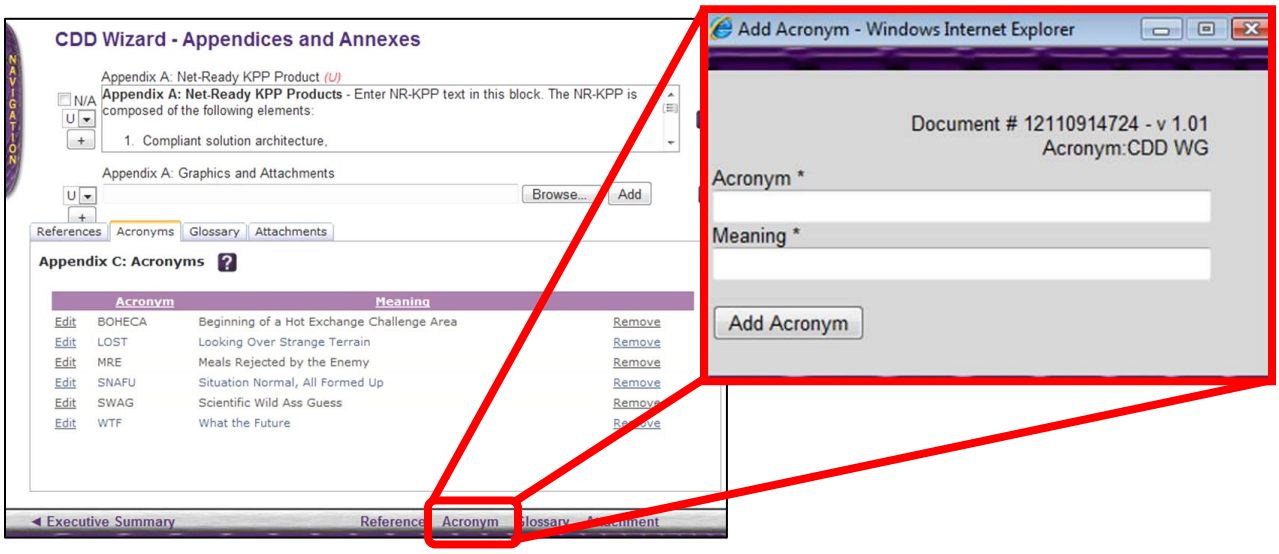
6. CJCS Manual for the Operation of the Joint Capabilities Integration and Development System (JCIDS Manual), https://www.intelink.gov/wiki/JCIDS_Manual, current as of 19 Jan 12.

7. FM 7-15, The Army Universal Task List, 27 Feb 09 with changes 1 through 9 as of 9 Dec 11.



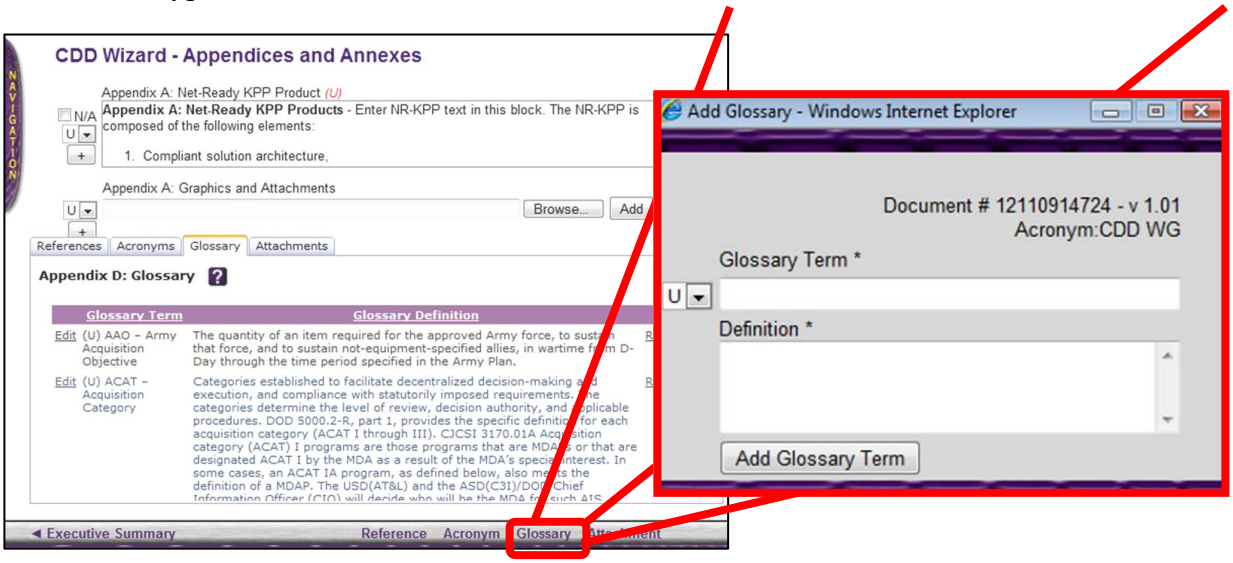
Appendix C: Acronym List

Appendix C - Appendix C lists and defines the acronyms used in this CDD. You may edit or remove references from this pick-list. Additional acronyms may be added by clicking on the "Acronym" link at the bottom center of this page. Add only acronyms and definitions used in this CDD. This is not a glossary of JCIDS terms and definitions. If an acronym or definition is not used in the CDD, do not include it in this appendix.



Appendix D: Glossary

Appendix D - Appendix D provides a picklist of glossary terms and definitions that have been added to this document. You may edit the term and/or the definition by clicking the "Edit " hyperlink preceding the glossary term. You may remove this term from the glossary by clicking the "Remove" hyperlink.



Attachments (Supporting Documents)

Attachment List - The Attachment List is a compilation of all other attached appendices, charts, or graphics used to support this CDD. You may remove references from this picklist. Additional attachments may be added by clicking on the "Attachment" link at the bottom center of the page.

Supporting documents are provided with the CDD. Attach supporting documentation with the appendix identification below in a file identified as Supporting Documentation.

- Appendix E Cost Benefit Analysis (C-BA) and Other Supporting Analysis
- Appendix F OMS/MP
- Appendix G BOIP
- Appendix H STRAP

b. **Supporting Documents provide information relevant to the CDD**, but are not part of the CDTM generated document. Supporting documents will to be added in the "Attachments" tab in CDTM, in the "Appendices and Annexes" window. Group all supporting document in a single file in CDTM. Name the file in CDTM as "Supporting Documents Appendices E – X," where X is the last appendix. If the C-BA is the only supporting document Appendix E Cost-Benefit Analysis.

(1) Appendix E – Cost-Benefit Analysis and Other Supporting Analysis

(a) Section I - **Cost Benefit Analysis (C-BA)**

i. It is now ***mandatory*** to conduct a cost-benefit analysis (C-BA) in addition to an AoA. C-BAs will be prepared for all requirements (new programs and modifications to existing programs) even if an AoA has already been performed per TR 71-20, paragraph 7-11, Cost-Benefit Analysis.

ii. All C-BAs must adhere to the U.S. Army Cost Benefit Analysis Guide and specified C-BA briefing format.

iii. C-BA packages should include all spreadsheets with documented analysis, and any supporting documents. If possible, proposed "tradeoffs" or bill payers to offset the cost of the new requirement should also be included. C-BA Supporting documentation MUST include identifying data sources, models, inflation indexes, and rationale used to complete all eight steps of the C-BA.

iv. Further guidance on the C-BA can be found on AKO at https://www.us.army.mil/suite/files/5232873.

(b) Section II – **Other Supporting Analysis** – as needed.

i. If unable to complete the analysis discussion in the main CDD document then summarize the additional analyses here.

ii. Describe the analysis (AoA or other supporting analysis) conducted to determine system attributes and identify KPPs. Include the alternatives, objective, the criteria, assumptions, recommendation, and conclusion.

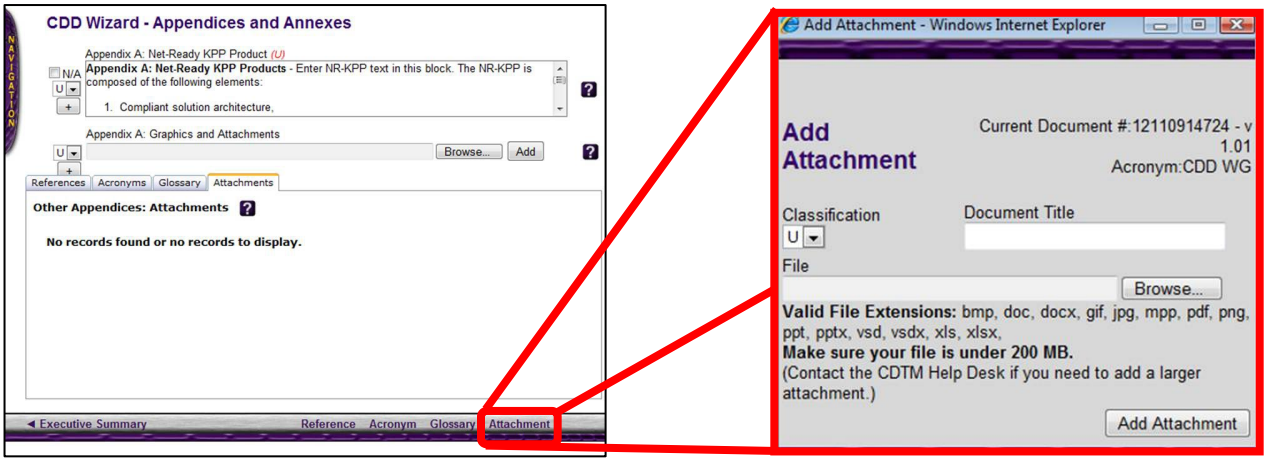
(2) **Appendix F – Operational Mode Summary/Mission Profile (OMS/MP).** The OMS/MP, if required, should be developed to support the CDD submission. TRADOC OMS/MP policy guidance is inserted below. See the OMS/MP Writers Guide for 'how-to" guidance.

OMS-MP Policy.doc

Insert 8: OMS-MP Policy

(3) **Appendix G – Basis of Issue Guidance (BOIG).** The BOIG is a clear articulation of amount of equipment projected to be fielded to the unit. If the information can be displayed in within CDTM character limits, it will be captured in paragraph 12, Assets required to Achieve Initial Operational Capability (IOC) then a separate supporting document for BOIG is not necessary (appendix G).

(4) **Appendix H – System Training Plan (STRAP).** If needed, an initial STRAP should be developed on a parallel path with the CDD. Submit early in the CDD development process to give ATSC sufficient time to review and approve the STRAP or STRAP Waiver if the proponent determines a STRAP is not necessary (appendix H).



Validation Review

Validation Review - The Review function performs a check on all fields in the wizard and alerts you if anything appears to be missing or out of sync. Access the Review from the side Navigation menu. You can run the Review at any time, as many times as you desire.

The validation review matrix will ensure that the overall classification of the document equals the highest classification of any sub-section (**SIPRNET only**) and will provide you a list of:

- *Errors* in your document (i.e. missing information in a mandatory field and the "NA" button has not been clicked)
- *Warnings* if there is no information in non-mandatory fields (i.e. Glossary, Appendices, Reference, Acronyms, etc)
- *Validation pass* notifications for all section that have no validation issues
- *Informational line item counts* for Attachments, References, Glossary, & Acronyms

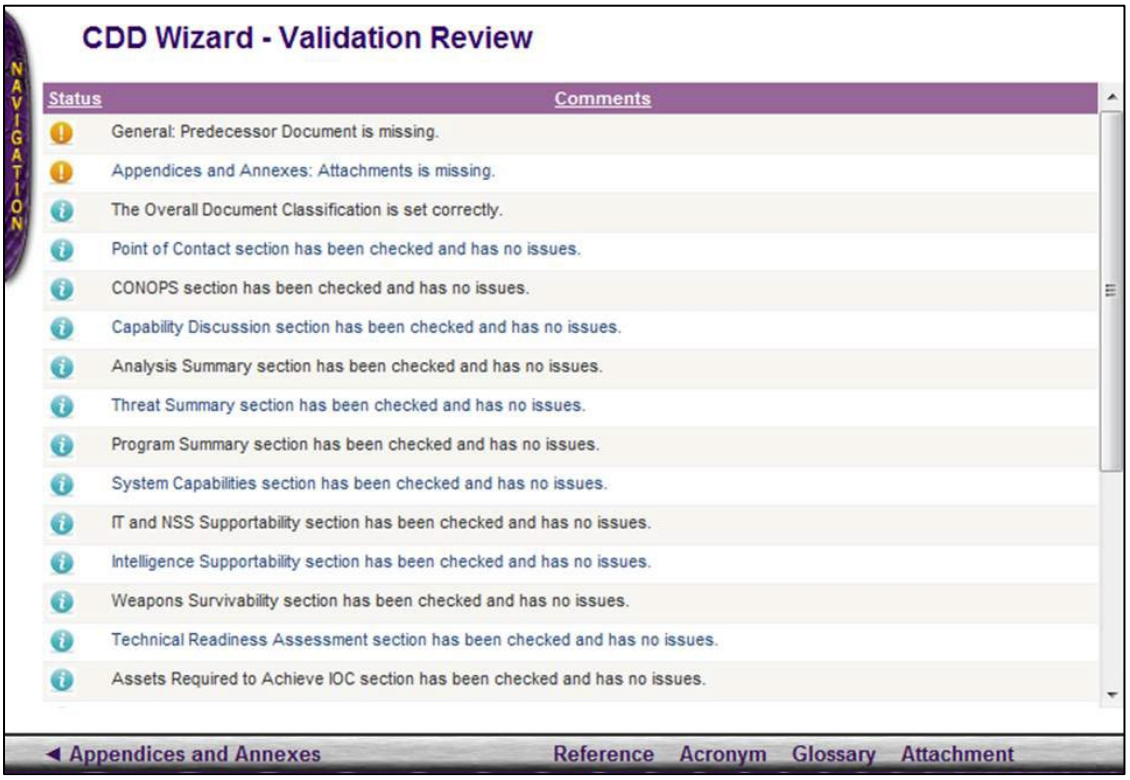


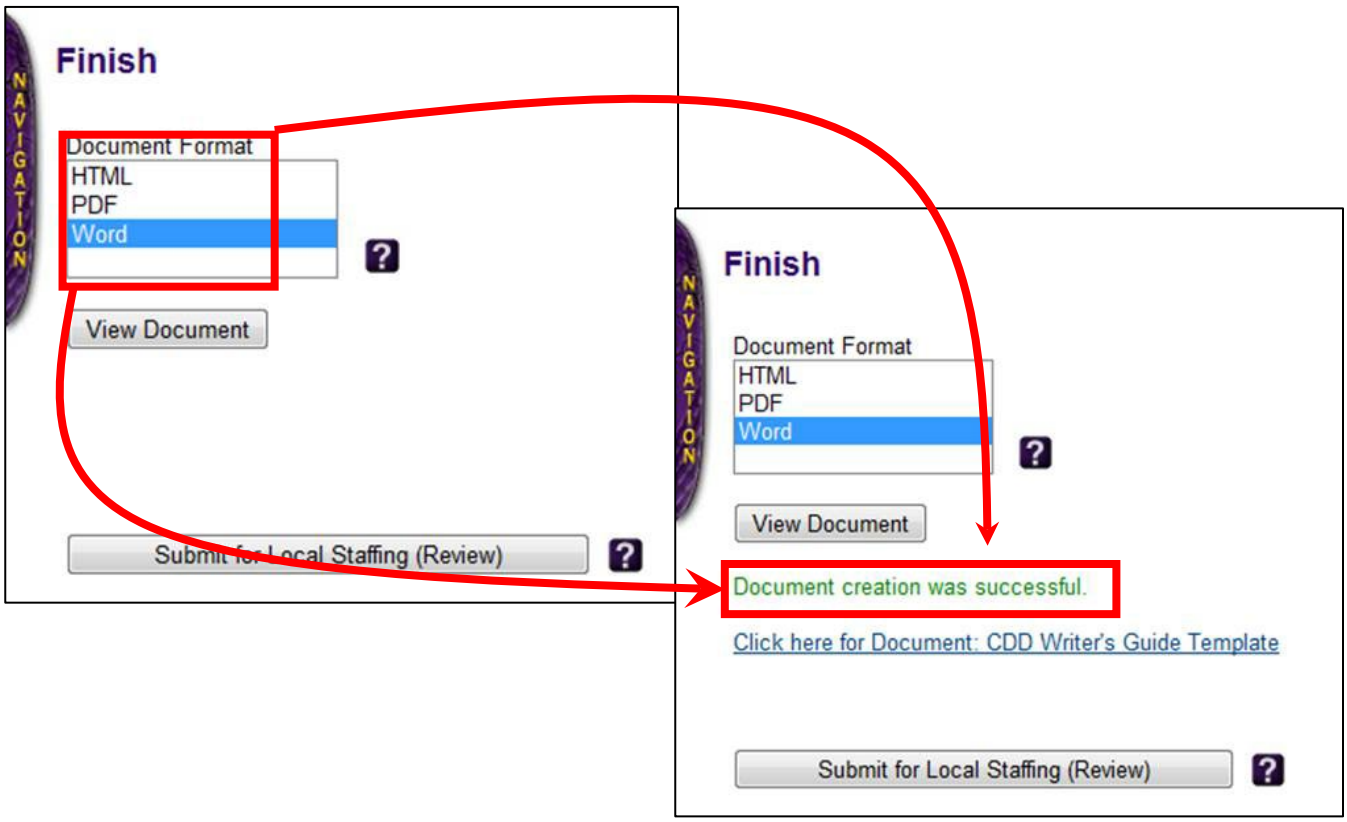
Figure 8: Validation Review Page

CDD Wizard - Finish

Finish - The Finish Page is where you can create a Microsoft Word version of your document. If you are an editor, this is the page where you mark your work as completed. Once the document is created, DO NOT submit the CDD through by clicking the "***Submit for Internal Staffing***" button. Once the button is pushed, the current version is locked and no further editing can be accomplished without opening a new version of the document.

Click ***Finish*** from the left Navigation menu. Change the desired document format if you wish (Microsoft Word is the default) and click the ***View Document*** button. You will get a green message "Document creation was successful" with a hyperlink below it that says "Click here for document: (document title)." Click the link. CDTM will prompt with the message "Do you want to open or save this file?" Click ***Open***. A fully formatted version of the document will open on your computer. This is how the document would look if it were submitted to KM/DS. Note that this document is dynamically assembled from data in the database, and is not saved on the server. You may run the document creation process at any time, as many times as you wish.

Depending on your role for the document, you will see a ***Submit for Local Staffing*** button (if you are the document owner) or a ***My Work is Complete*** button if you are an editor. When you click ***Submit for Local Staffing***, CDTM prompts you to select a Gatekeeper for the document. When you then click ***Submit***, the document is locked for editing. When you click ***My Work is Complete***, the document owner is notified that you have completed your assigned edits. The document status does not change.



Post CDD Export – Revisions before staffing

Currently CDTM is not consistent with JCIDS policy articulated in the 19 Jan 12 JCIDS Manual. The following changes must be applied to the output of the CDD before staffing (recommended) or submission to ARCIC for validation.

JCIDS Manual &
CDTM Wizard Compar