

Capability Development Document (CDD) Writer's Guide

Version 1.5

16 June 2009

The proponent for this guide is the ARCIC Operations, Plans and Policy Division, Army Capabilities Integration Center (ATFC-O), TRADOC. 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 Monr.arcicgatekeeper@us.army.mil. Updates will be uploaded as changes become necessary.

1	Summary of Changes
2 3	Version 1.4
4	• Added subparagraph 14.i (6) Corrosion Prevention and Control (CPC).
6	• Added subparagraph 14.i (7) Item Unique Identification (IUID).
7	
8	Version 1.5
9	• Revised paragraph 14, Other DOTMLPF and Policy Considerations, in
10	response to an Army Audit Agency preliminary recommendation in an ongoing
11	JCIDS audit that "CDDs/CPDs don't contain all the necessary DOTMLPF
12	requirements to support acquisition for a Milestone C decision. The
13	information contained in the documents is inconsistent, generalized and
14	incomplete."
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16 **<u>CDD Instructions and Template</u>**

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18 **NOTE:** This version of the CDD Writer's Guide is based upon the instructions outlined in the

19 CJCSI 3170.01G, Joint Capabilities Integration and Development System, 1 Mar 09, the online

20 <u>Manual for the Operation of the Joint Capabilities Integration and Development System, 1 Mar</u>

21 09, and applicable Army and TRADOC regulations. This is supplemental information and not

22 intended to replace or replicate the JCIDS Manual in its entirety.

23

CDD Format and template. The CDD format described below and included on the attached
 template is mandatory for all Army-developed CDDs. The information in this guide complies

26 with instructions provided by the Office of the Secretary of Defense (OSD), Chairman of the

27 Joint Chiefs of Staff (CJCS), and Headquarters, Department of the Army (HQDA) and leads the

28 user through each paragraph of the CDD format. Annotations for each paragraph and entry

describe the information that it must contain, the source of that information, and how that information is developed in analysis. Use the template below to develop the CDD

information is developed in analyses. Use the template below to develop the CDD.



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a. Each subparagraph should be numbered to facilitate requirements correlation and
 traceability, and for ease of identifying issues during staffing. Use conventional alpha-numeric
 numbering of paragraphs. The use of scientific numbering is unacceptable.

b. CDDs must be submitted in MS-Word (6.0 or greater) format. Use Times New Roman, 12
pitch font. Do not submit document in Microsoft 2007 format, use 97-2003 compatible
documents with the extension ".doc" HQDA is not postured to accept them and the G3
automated staffing tool, Capabilities and AROC Management System (CAMS), does not
recognize them as valid files.

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44 c. Architecture products should be embedded into the MS-Word file for ease of review during
45 the staffing process except the SV-6 which is provided as a separate MS Excel file or an
46 embedded Excel file in Appendix A – Net-Ready KPP Products.

d. All CDDs must be clearly labeled with draft version number, date, classification, and
include any caveats regarding releasability, even if UNCLASSIFIED. Paragraphs that contain
non-releasable information (allies or industry) will be marked appropriately.

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e. Draft documents must be submitted with continuous line numbers displayed.

f. The Manual for the Operation of the Joint Capabilities Integration and Development
System contains the format to be used for the body of the CDD. The CDD should be no more
than 35 pages in length. ARCIC's internal "goal" is to keep the body of the CDD to 10 pages or
less.

- 59 g. The Executive Summary must be no more than two (2) pages.60
- h. Do not use photos, symbols, or logos on the front page as part of the title page, or in otherlocations throughout the document.

i. There are 3 mandatory Appendices listed for all CDDs. *Ensure the appendix names conform exactly to what is prescribed. Innovation is this area is not appropriate. The only exception is supporting analysis, it should be added as appendix D.*

- (1) Appendix A. Net-Ready KPP Products.
- (2) Appendix B. References.
 - (3) Appendix C. Acronym List.
 - (4) Appendix D. Analysis.

j. Supporting Documents are not mandatory, but provide supporting information relevant to
the CDD. Supporting documents should be submitted with the draft CDD forwarded to ARCIC
for validation. Submit them as a separate file labeled as "Supporting Documents for XXX
CDD." Examples of supporting documents are:

81 (1) Operational Mode Summary/Mission Profile (OMS/MP). *The OMS/MP, if required,* 82 should be developed to support the CDD submission.

84 (2) Basis of Issue Guidance (BOIG). The BOIG is a clear articulation of the units and
85 amount of equipment projected to be fielded to the unit. If the information can be displayed in
86 less than 1 page, it will be captured in paragraph 12, Assets required to Achieve Initial
87 Operational Capability (IOC,) then a separate supporting document for BOIG is not necessary.
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(3) 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.

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(4) Template for Supporting Documents.



Documents template

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- 98 2. Considerations.
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a. Resource Informed. Determine if adequate resources are available to develop the
 capability as envisioned in the CDD prior to writing the document. There is no mythical pot of
 "new money" waiting for a claimant. If there are not sufficient resources for RDTE or at least a

viable strategy to get resourcing, then it will not be approved. Be prepared to discuss resource
 trades within your capability portfolio and leverage the APRB through the ARCIC Gatekeeper,
 to get a feel for resourcing.

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b. Considering and Conducting Trades.

109 (1) The most difficult thing for the capability developer to do is to understand all the things 110 they should consider when making effective trades (refer to the CDD Trades Considerations 111 Checklist for examples of some of those considerations). The magnitude of effort required to 112 accomplish beneficial and sound trades must not be minimized. Trades should be evaluated 113 across the DOTMLPF domains to determine the tactical, operational, and strategic impacts of 114 any trades in a holistic fashion. The effect of a change in one domain must be considered, as 115 well as the second and third order effects on other domains, other interdependent systems, and 116 other warfighting organizations, both Army and Joint. Trades provide a means in which we can propose alternative paths to close or mitigate gaps. Those trades must be analytically based, 117 118 analytically sound and risk informed. Additionally, they must consider the integration of joint 119 and other service capabilities.

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121 (2) At the CDD phase, trades should focus on defining affordable, feasible, authoritative, 122 measureable, and testable capabilities needed by the Warfighters to support the Engineering & 123 Manufacturing Development (EMD) phase of an acquisition program. Consider: Organizational 124 Impacts, Functional Impacts, Operational Risk (Internal – that is, Army dependence on its own Service capabilities; External - that is, Joint Integration and dependence on external (Joint, 125 Intergovernmental, Interagency and Multinational) capabilities), Level of Integrated Capability, 126 127 Resource Availability (dollars, personnel, etc.), and Technical Feasibility (technical readiness), 128 when trading Performance, Cost, and Schedule.

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(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. The purpose of this checklist is to provide capability developers an
illustrative list of things they should consider during the JCIDS process.



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137 3. CDD Preparation Instructions.

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a. Cover Page. Determine the most likely JPD as the first step in preparing the cover page.

142	(1) Title – Type "CAPABILITY DEVELOPMENT DOCUMENT"
143	
144	The for the Capability
145	(2) In energy "In group on the 1" is the connect entry uplace you are marking on a fallow on
140 147	increment of a previously developed capability.
148	
149 150	(3) ACAT – 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,
151	Army Acquisition Policy, table 3-1.
152	
153	(4) Validation Authority – The Validation Authority is dependent upon the Joint Potential
154	Designator (JPD) assigned by the Joint Staff Gatekeeper during staffing. For a description of
155	each designation see CJCSI 3170.01G, Joint Capabilities Integration and Development System.
156	Appropriate validation authority entries correlate to JPD entries as shown below:
157	
158	(a) <u>JROC Interest</u> - The JROC is the validation authority.
159	(b) $\underline{\text{JCB Interest}}$ – The JCB is the validation authority.
160	(c) <u>Joint Integration</u> - HQDA is the validation authority.
161	(d) Joint Information - HQDA is the validation authority.
162	(e) <u>Independent</u> - HQDA is the validation authority.
163	(5) Approval Authority – Fill in based on the JPD assigned. For additional information
164	on approval authority see <u>CJCSI 3170.01G</u> . Once the approval authority has been determined,
165	insert one of the following in the space provided:
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167	(a) <u>JROC</u> – for ACAT I and programs designated as JROC Interest.
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169	(b) <u>JCB</u> – for ACAT II and below programs designated as JCB Interest.
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171	(c) <u>HQDA</u> – for ACAT II and below programs that are not JROC or JCB Interest
172	Programs.
173	-
174	(6) Milestone Decision Authority (MDA). The MDA is dependent upon the ACAT. For
175	additional information on MDA designation see DODI 5000.02, Operation of the Defense
176	Acquisition System, Enclosure 3, table 1 or AR 70-1, Army Acquisition Policy, Chapter 3, Table
177	3-1. Generally accepted guidance follows:
178	
179	(a) ACAT I - The MDA is either the Defense Acquisition Executive (DAE) who is dual-
180	hatted as the Under Secretary of Defense for Acquisition, Technology and Logistics (USD
181	AT&L) or the Army Acquisition Executive (AAE), also referred to as the Assistant Secretary of
182	the Army for Acquisition, Technology and Logistics (ASAALT).

183 (b) 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 184 185 may delegate milestone decision authority to any of the PEOs listed below: 186 • PEO Ammunition. 187 • PEO Aviation. 188 • Joint PEO Chemical and Biological Defense. 189 • PEO Combat Support & Combat Service Support. 190 • PEO Command Control and Communications (Tactical). 191 • PEO Enterprise Information Systems. 192 • PEO Ground Combat Systems. • PEO Intelligence, Electronic Warfare and Sensors. 193 194 • PEO Missiles and Space. • PEO Simulation, Training, and Instrumentation. 195 196 PEO Soldier. • 197 198 (7) **Designation.** Use the designation assigned during the ICD or CDD approval process 199 unless this is the first capability document prepared for this system. If this is the first document, use the information on designation in the Manual for the Operation of the Joint Capabilities 200 201 Integration and Development System, Enclosure D, paragraph 1.c. 202 203 (a) "JROC Interest" designation will apply to all ACAT I/IA programs and capabilities 204 that have a potentially significant impact on interoperability in allied and coalition operations. 205 (b) "JCB Interest" designation will apply to ACAT II and below programs where the 206 capabilities and/or systems associated with the document affect the joint force and an expanded 207 joint view is required. 208 (c) "Joint Integration" designation will apply to ACAT II and below programs where the 209 concepts and/or systems associated with the document do not significantly affect the joint force 210 and an expanded review is not required, but staffing is required for applicable certifications 211 (information technology and National Security Systems interoperability, intelligence and/or 212 insensitive munitions), and for a weapon safety endorsement when appropriate. 213 (d) "Joint Information" designation applies to ACAT II and below programs that have 214 interest or potential impact across Services or agencies but do not have significant impact on the 215 joint force. 216 (e) "Independent" designation applies to ACAT II and below programs where the 217 capabilities and/or systems associated with the document do not significantly affect the joint 218 force, an expanded review is not required and no certifications or endorsements are required. 219 220 (8) **Prepared for Milestone B Decision**. Unless there is another specified acquisition 221 decision point identified, use the statement "Prepared for Milestone B Decision." 222

- 223 (9) Draft Version Number. Use draft version numbers to maintain good configuration 224 management of the CDD. Each time the document undergoes a significant revision, the draft 225 version number will be updated, i.e. 1.0, 1.1, 1.2. 226 227 (10) **Date**. Enter the date the CDD was signed out by the last Headquarters. **DO NOT** 228 BEGIN THE LINE WITH THE WORD "DATE" AS IT IS REDUNDANT. For the 229 proponent, enter the date their Headquarters approved the CDD as the proponent position and 230 approved forwarding to ARCIC for validation. Similarly, ARCIC will date the CDD with the 231 date validated by the appropriate ARCIC Director. 232 233 (11) **Releasability**. A CDD defines system level parameters for the current increment of 234 production. The use of one of the following releasability statements is mandatory for CDDs that 235 contain no classified or FOUO Information: 236 237 (a) **Releasability:** Approved for public release; distribution unlimited. 238 239 (b) Releasability: Distribution authorized to U.S. Government Agencies and their 240 contractors to protect information and technical data that advance current technology or describe 241 new technology in an area of significant or potentially significant military application or that 242 relate to a specific military deficiency of a potential adversary. Information of this type may be 243 classified or unclassified, when unclassified, it is export-controlled and subject to the provisions 244 of Department of Defense (DOD) Directive 5230.25 (reference c), date of determination: XX 245 Month XXXX. Other requests for this document should be referred to: List your Organization's 246 Mailing Address here." 247 248 (c) Other appropriate releasability instructions can be found in AR 380-5, Department of 249 the Army Information Security Program, 29 Sep 00, in paragraph 4-12.h. 250 251 (12) **Classification**. Mark the CDD, header and footer, with the appropriate security 252 classification of the document. 253 254 b. Instructions by Document Section. 255 256 (1) **Executive Summary.** Limited to a maximum of two pages, one is preferred. Do not 257 duplicate information that is required in the body of the CDD. Use the Executive Summary to 258 set the stage and explain the importance of the capability the Army should "acquire/produce." 259 260 (2) Table of Contents (TOC). Adjust as required and ensure it's accurate. 261 262 a. The paragraph numbers and names are "fixed." DO NOT ADJUST THEM! 263 264 b. Use the CDD template provided in paragraph 1 of this guide with the Microsoft 265 Word Table of Contents feature embedded in the template. Do not delete any of the embedded formatting, i.e. {TC "1. Capability Discussion" \f c\1 "1"}, or the TOC will not 266 **function properly**. Once the draft CDD is complete and you are finalizing the version, right 267 click on the TOC and select "update field." Then, select "update page numbers only." That will 268
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refresh the TOC and ensure all page and paragraphs correlate properly. Add a list of figures, if used, to complete the TOC. *If you manually create a TOC or have added a list of tables and figures, check this for accuracy as your last editorial review of the CDD.*

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(3) **Revision History**. Use the revision history table below for configuration management
 of the Draft CDD. *Ensure the information is consistent with the revision history table and the cover entries for the Draft Version and Date.*

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Draft Version	Date	Purpose
0.1	Day-Mon-Yr	Initial Draft
		Developmental (Worldwide) Staffing
		ARCIC Staffing/Validation

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278 (4) **Points of Contact (POCs).** POCs should cover the primary writer/editor at the

279 proponent and a Program Manager Representative if available/appropriate. Ensure at least two

280 Proponent level POCs are listed, to include valid SIPRNET (.smil) e-mail addresses. All

281 staffing post-ARCIC Validation (ARSTAF & JSTAF) takes place on SIPRNET and staffing

282 comments will be returned to the proponent/document sponsor on SIPRNET. It is imperative

that the proponent/document sponsor be prepared to operate in a SIPRNET environment.

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Name	Agency/Organization	Phone Number & DSN	Email Address
			NIPR:
			SIPR:
			NIPR:
			SIPR:

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Note: Standard paragraph numbering was restarted at this point to allow for consistency
between the guide and the CDD Template in paragraph 1.

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1. Capability Discussion. Limit this paragraph to one page. Cover the four areas outlined as
 subparagraphs in the attached template.

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

b. If the CDD is part of a FoS or SoS solution, discuss the source ICD and the related CDDs,
 CDDs, integrating DOTMLPF and policy changes and required synchronization.

c. 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).

d. 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

305 306 307 308	production and the JCA Lexicon at <u>http://jcams.penbaymedia.com/</u> . Ensure all JCAs listed in paragraph 1.d appear and should be consistent with the KPPs and KSAs in paragraph 6 and Table 7.1 – Supported ICDs and Related CDDs/CDDs in Paragraph 7.
309 310 311 312 313 314	2. Analysis Summary. Summarize all analyses (AoA or other support analysis) conducted to determine system performance attributes and KPPs. Include the alternatives, objective, the criteria, assumptions, recommendation, and conclusion. If the discussion consumes more than two pages, move the Summaries to Appendix D. If you can get it in the body of the CDD, delete Appendix D from the TOC and final page of the template (Appendix D listing).
315 316 317	3. Concept of Operations Summary. The information is this paragraph should serve as the basis for OMS/MP development. Cover these five areas in the attached template:
318 319	a. Relevance to Joint Operations Concepts (JOpsC).
320 321	b. Operational Outcomes.
322 323	c. Effects it must produce.
324 325	d. How it complements the integrated Joint Warfighting Force.
326 327	e. Enabling capabilities required to achieve its desired operational outcomes.
328 329	4. Threat Summary. Cover these three areas in the attached template:
330 331	a. Projected threat Environment.
332 333 224	<i>b</i> . Specific threat capabilities to be countered. Include the nature of the threat, threat tactics, and projected threat capabilities (lethal and non lethal) over time.
335 336	c. Include Defense Intelligence Agency (DIA) validated threat references when appropriate.
337 338 339 340	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: <u>http://www.dia/smil/mil/admin/di/dwo/dwo3.html</u> .
342 343 344 345	5. Program Summary. 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.
346 347 348 349 350	6. System Capabilities Required for the Current Increment. All systems capabilities described in this paragraph must be achievable, measurable, testable, and operationally relevant. Statutory KPPs derived from public law (Force Protection and Survivability) and compliance KPPs derived from policy (Net-Ready and Sustainment) <u>must be addressed</u> regardless of the sponsor's determination of applicability. Selectively applied KPPs (Energy Efficiency and

- 351 System Training) should be considered, but are not required to be addressed if the sponsor 352 determines they are not appropriate. If the document sponsor determines one or more of these 353 KPPs are not applicable, they must provide the rationale for non-inclusion based on solid 354 analysis. The rationale and analysis will be reviewed by higher level authorities to determine the 355 validity of the claim. 356 357 a. Traceability to Tier 1 & 2 JCAs. Correlate the KPPs to the Tier 1 & 2 JCAs the capability 358 supports directly and ensure consistency with the JCA discussion in paragraph 1. 359 360 b. Force Protection. Is the capability "designed to prevent or mitigate hostile actions against personnel, resources, facilities, and critical information?" If that is the focus, then the KPP 361 362 should be developed. (Reference: Manual for the Operation of the JCIDS, 1 Mar 09, Enclosure 363 *B*, *paragraph 2.a*) 364 365 c. Survivability. Determination of whether the capability you are producing is a "manned 366 system" is the central focus for the Survivability KPP. Is the equipment designed to enhance personnel survivability? Has the system entered low rate initial production (LRIP)? If you are at 367 368 or beyond LRIP, this KPP is not applicable. If you answered yes to a manned system and have 369 not entered LRIP, then the KPP should be developed. (Reference: *Manual for the Operation of* 370 the JCIDS, 1 Mar 09, Enclosure B, paragraph 2.a) 371 372 d. Sustainment (Availability). This KPP is mandatory for all ACAT I programs involving materiel solutions. The KPP has 2 metrics: Materiel Availability (A_m) a fleet measurement of 373 374 the total inventory of system's operationally capable (ready for tasking) and Operational 375 Availability (A_0) that measures a group of systems within a unit that are operationally available. 376 Additionally, there are the two mandatory Key System Attributes (KSAs) of Materiel Reliability 377 and Ownership Cost. For ACAT II and below programs, the sponsor will determine 378 applicability. (Reference: Manual for the Operation of the Joint Capabilities Integration and 379 Development System, Appendix B, Enclosure B) 380 381 e. Net-Ready. The capability will be developed for all information technology (IT) and 382 national security systems (NSS) used in the automation acquisition, storage, manipulation, 383 management, movement, control, display, switching, interchange, or transmission or reception of 384 DOD data or information regardless of classification or sensitivity." There is an exception for 385 those systems that are "closed loops" and do not communicate with external sources. Another 386 way to approach it is to determine whether the capability has a C4I interface capable of any 387 communication through the Global Information Grid (GIG). If yes, then the NR-KPP is required 388 with all the mandated architecture, compliance statements, and Key Interface Profiles (KIPs) 389 Declaration in Appendix A. (Reference: CJCSI 6216.01E, Interoperability and Supportability 390 of Information Technology and National Security Systems, Enclosure E) 391 392 f. Selectively applied KPPs: System Training and Energy Efficiency. The sponsor will 393 perform an analysis to determine the applicability of Selectively Applied KPPs. *Selectively* 394 applied KPPs are not required to be addressed by the document sponsor if your analysis 395 determines they are not appropriate.
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397 (1) <u>System Training</u>. A System Training KPP is required where the sponsor has

determined that "training" is a significant part of total life cycle costs. (Reference: <u>Manual for</u>
 the Operation of the Joint Capabilities Integration and Development System, Enclosure B,
 Appendix C)

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402 (2) <u>Energy Efficiency</u>. If you have a program that involves a "fleet of vehicles" or a "fleet
 403 of equipment that consumes energy" (i.e. generators or heaters that use fuel), use the guide below
 404 to develop the Energy Efficiency KPP.

405



Energy Efficiency KPP Development.pdf

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g. If the document sponsor determines one or more KPPs (Force Protection, Survivability, Net-Ready, and Sustainment) is not applicable, you must provide the rationale for excluding it. *h.* If there are Statutory or Compliance KPPs that are not appropriate for the capability you are developing, restructure paragraph 6 as shown below in Figure 6-1:

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- Revise the subparagraphs in the template.
- Add a new subparagraph "a" titled "Statutory and Compliance KPPs not appropriate for XXXXXXX Capability."
- The revised paragraph should mirror the box shown below where subparagraphs b-d are already in the template and only require revising the alphabetic designator that precedes the description.
- 419 420 421

Figure 6-1 Alternate Paragraph 6 Structure

a. Statutory and Compliance KPPs not appropriate for XXXXXXXX Capability.

(1) Net-Ready (NR). This capability does not have a C4I interface with any other system or capability. As a result, there is no NR-KPP and only the OV-1 has been developed.

(2) Force Protection. This capability is not designed to prevent or mitigate hostile actions against personnel, resources, facilities, and critical information.

(3) Survivability. This capability is an unmanned system and does not contribute to survivability. Therefore, the Survivability KPP is not appropriate.

(4) Sustainment. XXXXXXX Capability is not a JROC Interest program. Furthermore, the sponsor has determined that this KPP and its two mandated KSAs are not appropriate for this capability for the following reason(s)....

b. Key Performance Parameters (KPPs).

c. Key System Attributes (KSAs).

d. Additional Performance Attributes.

423 7. Family of Systems and System of Systems Synchronization. Use of the table in the 424 template is mandatory per HQDA G-3/5/7. Ensure all JCAs listed in paragraph 1.d appear and are correlated to Table 7.1-Supported ICDs and Related CDDs/CDDs (Joint Capability

- 425
- 426 Documents (JCDs) are no longer created but you should still reference any applicable ones).
- 427 No capability stands alone on the battlefield. Consider the relationship of the system described
- 428 in the CDD to other systems contributing to the capability.
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430 8. Information Technology and National Security Systems Supportability. For systems that 431 receive or transmit information, provide an estimate of the expected bandwidth and quality of

- 432 service requirements for support of the system(s) (on either a per-unit or an aggregate basis, as
- 433 appropriate). The description must explicitly distinguish IT and NSS support to be acquired as
- 434 part of this program from the IT and NSS support to be provided to the acquired system through
- 435 other systems or programs. Use ARCIC Policy Letter 19 for assistance in determining the
- 436 content of paragraph 8. 437

ARCIC Policy Ltr 19 Capability Developme

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440 9. Intelligence Supportability. Identify all requirements for intelligence support throughout the 441 projected life-cycle of the capability. Requirements for consideration are outlined in CJCSI 442 3312.01A, Joint Military Intelligence Requirements Certification, 23 Feb 07. Assistance is also 443 available from J-2 Intelligence Requirements Certification Office (J2P/IRCO) for assistance at 444 DSN 225-8085 or 671-9539; SIPRNET: http://j2sid.js.smil.mil/IntelCertification/j2sid.html 445

10. Electromagnetic Environmental Effects (E³) and Spectrum Supportability. Define the 446 447 electromagnetic spectrum requirements that the system must meet to assure spectrum 448 supportability. Describe the electromagnetic environment in which the system will operate and 449 coexist with other US, allied, coalition, and non-government systems. 450

451 a. Identify potential operational issues regarding electromagnetic interference from threat 452 emitters and from other E3 effects such as electromagnetic pulse. (Reference DODD 3222.3, 453 DOD Electromagnetic Environmental Effects (E3) Program. 454

455 b. Define the electromagnetic spectrum requirements that the system must meet to assure 456 spectrum supportability in accordance with **DODD** 4650.1, Policy for the Management and Use 457 of the Electromagnetic Spectrum.

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459 c. For spectrum dependent systems, equipment spectrum certification is required and 460 sufficient availability of frequencies from host nations.

- 461 462 d. Describe the electromagnetic environment in which the system will operate and coexist 463 with other US, allied, coalition, and non-government systems.
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465	e. Specifically address safety issues regarding Hazards of Electromagnetic Radiation to
466	Ordnance (HERO), Hazard of Electromagnetic Radiation to Fuel (HERF), and Hazard of
467	Electromagnetic Radiation to Personnel (HERP).
468	
469	11. Technology Readiness Assessment. Discuss the program's critical technology elements in
470	accordance with the DOD Technology Readiness Assessment Deskbook.
471	
472	a. Identify any critical technology elements linked to the program's KPPs.
473	
474	b. Identify who performed the technology readiness assessment, when it was accomplished.
475	whether an independent technology readiness assessment is planned, and, if applicable, when the
476	Deputy Under Secretary of Defense. Science and Technology (DUSD(S&T)) review of the
477	program technology readiness assessment is planned
478	program commonogy readiness assessment is praimed.
479	12. Assets Required to Achieve Initial Operational Capability (IOC).
480	
481	a. Describe the types and quantities of assets required to attain IOC.
482	
483	b. Identify the operational units (including other Services or government agencies, if
484	appropriate) that will employ the capability and define the asset quantities (including spares.
485	training, and support equipment, if appropriate) required to achieve IOC.
486	
487	$c_{\rm c}$. If the discussion consumes more than 1 page, move the discussion to the "Supporting
488	Documents" file and leave summary level detail in the paragraph that describes the types and
489	quantities of assets required to attain IOC.
490	1
491	d. The USAFMSA documentation team and ARCIC's Force Design Division (FDD) must be
492	included during the development of BOI guidance and attend any other meetings where BOI
493	concerns arise.
494	
495	13. Schedule and IOC and Full Operational Capability (FOC) Definitions. Define the
496	actions that, when complete, will constitute attainment of IOC and FOC for the current
497	increment. Specify the target date for IOC attainment.
498	
499	14. Other DOTMLPF and Policy Considerations. Consider the following areas. <i>This should</i>
500	not be considered an "a la carte" menu. Each DOTMLPF domain and policy must be
501	addressed. The JCIDS manual states "DOTMLPF and policy changes should be considered
502	from two perspectives: 1) DOTMLPF that supports the implementation, operations and support
503	of the specific system; 2) DOTMLPF that must be changed to support integration of this system
504	with existing capabilities. Discuss any additional DOTMLPF and policy implications associated
505	with fielding the system that have not already been addressed in the CDD, to include those
506	approaches that would impact CONOPS or plans within a combatant command's area of
507	responsibility. Highlight the status (timing and funding) of the other DOTMLPF and/or policy
508	considerations. Describe implications for likely changes to any aspect of DOTMLPF or policy."
509	Use the question sets below as examples or "guides" to help you identify potential issues to
510	consider, create a write-up for each DOTMLPF domain and Policy Considerations. You do not

- 511 have to answer each question, but you must include a subparagraph for each domain and for
- 512 policy. If other information comes to mind that has impact on the various DOTMLPF areas,
- 513 discuss those issues under the appropriate subparagraph. *If you more than one domain where*
- 514 no changes are necessary, you may address them collectively in one subparagraph.

a. Doctrine.

1	Is there an existing concept of the operation to leverage or will this require the development of a new concept of the operation?
2	What doctrinal development work will have to be done to support the institutionalization of this capability?
3	Which proponent(s) should take the lead to develop this doctrine/TTP?
4	When is the earliest that the doctrine can be developed (projected timelines)?
5	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?
6	Can the TTP/doctrine work be done within existing resources? What additional resource is required?
7	Are there any joint doctrine/TTP implications?

b. Organization.

c. Training.

1	What organization 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 resource 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)?
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?

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?
2	What school(s) will take the lead to implement this training?
3	How many courses will be added to the curriculum?
4	Is there a joint training requirement (e.g., training for other Services)?
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?
6	If a new MOS or SSI is not required, what MOS/SSI has the appropriate competencies to best employ this capability?
7	What resources will be needed by the school to support training?
8	How many additional instructors are required to support the training?
9	What additional resources are required to support course development?
10	What Training Aids, Devices, Simulators, and Simulations (TADSS) will be required to support training? What modifications to existing TADSS are required?
11	Will training be required for support or maintenance personnel? Where will this training be conducted?
12	What is the projected total cost and timelines for the training support required to field this capability in the Army?
13	What is the projected total cost and timelines to support training for other Services?

d. Materiel.

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 is the cost 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?

528 529

e. Leadership & Education.

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?

f. Personnel.

5	2	0
J	Э	4

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 necessary 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?

g. Facilities.

h. Policy.

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?
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 facilities considerations for Joint manned/operated capabilities?

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?
Are there any changes in public law required?

i. 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.



544	
545	(1) Maintenance.
546	
547	(a) Maintenance/Support Concept.
548	
549	• The maintenance concept. (Logistics Supportability Guide (LSG), see page 3,
550	paragraph 1a)
551	
552	• If CLS or ICS is initial source of system support. (LSG, see page 4, paragraph
553	1b)
554	
555	• Level of Repair Analysis. (LSG, see paragraph 4, paragraph 1c)
556	
557	• Provisioning Plan. (LSG, see page 4, paragraph 1d)
558	
559	• Supportability Test & Evaluation Program. (LSG, see page 4-5, paragraph 1e)
560	
561	• Performance Based Logistics (PBL) and Performance Based Agreements (PBA)
562	Requirements. (LSG, see page 5, paragraph 1f)
563	
564	(b) Maintenance Manpower Support.
565	
566	• Current vs. New MOS Requirements. (LSG, see page 6, paragraph 2a)
567	
568	• Force Structure Implications. (LSG, see page 6, paragraph 2b)
569	
570	 Table of Organization and Equipment (TO&E)/Modified TO&E (MTO&E)
571	Changes. (LSG, see page 6, paragraph 2c)
572	
573	• Supply, Ammunition, POL support requirements: (LSG, see page 6, paragraph
574	2d)
575	
576	• Human Factors Engineering: (LSG, see page 6, paragraph 2e)
577	
578	(c) Supply Support: (LSG, see page 7, paragraph 3a)
579	
580	(d) Support Equipment.
581	
582	• Test, Measurement and Diagnostic Equipment (TMDE): (LSG, see page 8,
583	paragraph 4a)
584	
585 586	• Calibration requirements: (LSG, see page 8, paragraph 4b)
386	
587	• Material Handling Equipment (MHE) or Container Handling Equipment (CHE)
588 590	Requirements. (LSG, see page 8, paragraph 4c)
289	

590	• Specialized or Standard Shelters: (LSG, see page 8, paragraph 4d)
591	
592	• Vehicle Recovery: (LSG, see page 8, paragraph 4e)
593	
594	• Standard or Unique Support Requirements (When Applicable). (LSG, see page 9
595	, paragraph 4g)
596	
597	(e) Technical Data. (Logistics Supportability Guide, see page 9, paragraph 5 a)
598	
599	(f) Training and Training Support
600	
601	• Weapon System Family of Vehicles (FoV) Training: (LSG, see page 10,
602	paragraph 6a)
603	
604	• Training Structure: (LSG, see page 10, paragraph 6b)
605	
606	• Training Support: (LSG, see page 11, paragraph 6c)
607	
608	• New Equipment Training: (LSG, see page 11, paragraph 6d)
609	
610	• Institutional Training: (LSG, see page 11, paragraph 6e)
611	
612	• Unit (Sustainment) Training: (LSG, see page 11, paragraph 6f)
613	
614	• Weapon System FoV Simulators: (LSG, see page 12, paragraph 6g)
615	
616	(g) Computer Resource Support: (LSG, see page 12, paragraph 7)
01/	(h) Excilition (LSC and pages 12.12 paragraph 8)
018 610	(<i>n</i>) Facilities: (LSG, see pages 12-15, paragraph 8)
620	(i) Dackaging Handling Storage and Transportability
621	(i) Tackaging, Handling, Storage and Hansportability
622	• Storage and Preservation: (ISC see page 13 paragraph 0a)
623	• Storage and Treservation. (LSO, see page 15, paragraph 9a)
624	• Containerization Requirements: (ISC see page 13 paragraph 9b)
625	• Containenzation Requirements. (LSO, see page 15, paragraph 90)
626	• Transportability Modes Analysis: (ISC, see page 14, paragraph 9c)
627	• Transportability Modes Analysis. (LSO, see page 14, paragraph 90)
628	• Hazardous Materials Requirements: (ISC see page 14 paragraph 0d)
629	• mazardous materiais requirements. (LSO, see page 14, paragraph 90)
630	• Other Special Handling Requirements: (ISG see page 14 paragraph 0a)
631	• Other Special Handling Requirements. (LSO, see page 14, paragraph 96)
632	(i) Design Interface
633	U/ Delign Interface.

634	• Safety & Health Issues for Use and Maintenance: (LSG, see pages 14-15,
635	paragraph 10a)
636	
637	• Built in Test (BIT)/ Built In Test Equipment (BITE) Requirements: (LSG, see
638	page 15, paragraph 10b)
639	
640	• Standardization and Interoperability (LSG, see page 15, paragraph 10c)
641	
642	(2) Conditions Based Maintenance Plus (CBM+): (LSG, see pages 15-18, paragraph a-f)
643	
644	(3) Common Logistics Operating Environment (CLOE): (LSG, see pages 18-20, paragraph
645	g)
646	
647	(4) Life Cycle Sustainment (LCS) Metrics: (LSG, see page 20)
648	(5) $\mathbf{D} = 1^{1} = \mathbf{h} \cdot 1^{1} \mathbf{h} \cdot 1^{1} \mathbf{h} + \mathbf{h} \cdot 1^{1} \mathbf{h} + \mathbf{h} \cdot \mathbf{h} + \mathbf{h} \cdot 1^{1} \mathbf{h} + \mathbf{h} \cdot \mathbf{h} + \mathbf{h} \cdot$
649	(5) Reliability, Availability and Maintainability (RAM)
03U 651	(a) Material Assoilability Kay Derformance Deremeter (KDD), (LSC, see nece 21
652	(<i>a</i>) Materiel Availability Key renormance rarameter (KFr). (LSO, see page 21, paragraph a)
652	paragraph a)
654	(h) Material Paliability: (ISC, see page 21, paragraph h)
655	(b) Materier Renability. (LSO, see page 21, paragraph b)
656	(c) Maintainability (Field Level): (LSG see page 22 paragraph c)
657	(c) Maintainability (Field Level). (LSS, see page 22, paragraph c)
658	(d) Maintenance Ratio: (LSG, see page 22, paragraph d)
659	(a) maniferration (1200, see page 12, paragraph o)
660	(e) Maintainability (Sustainment Level): (LSG, see page 22, paragraph e)
661	
662	(f) Platform Re-Generation (PRG): (LSG, see page 23, paragraph f)
663	
664	(g) Platform Re-Generation-Maximum (PRG-M): (LSG, see page 23, paragraph g)
665	
666	(6) Corrosion Prevention and Control (CPC). CPC is a critical consideration in assuring the
667	sustained performance, readiness, economical operation and service life of Army systems and
668	equipment. It requires active consideration in the materiel development, acquisition, fielding,
669	operation, and storage processes. CPC requires life cycle management planning and action in
670	design, development, testing, fielding, training, and maintenance. The Product Manager for
671	XXXXXXXX capability is responsible for ensuring that a suitable corrosion prevention strategy
672	is in place for the XXXXXXX capability in accordance with AR 750-59, Army Corrosion
673	Prevention and Control Program.
674	
675	(/) Item Unique Identification (IUID). IUID is a DOD initiative that will enable easy
676	access to information about DOD possessions that will make acquisition, repair, inventory, and
6/7	deployment of items faster and more efficient. The implementation of IUID requirements means
6/8	that qualifying items must be marked with a Unique Item Identifier (UII) in accordance with the
6/9	DOD Guide to Uniquely Identifying Items. Specifically, MIL STD 130

680	http://www.uidsolutions.com/milstd130.aspx requires that all XXXXXXXX capability
681	qualifying components, to include legacy components that transition through organic depots,
682	must be marked with a UII in the form of a machine readable 2D Data Matrix, the contents of
683	which will be encoded in the syntax of ISO/IEC 15434 and the semantics of ISO/IEC 15418 or
684	the Air Transport Association (ATA) Common Support Data Dictionary (CSDD). All 2D Data
685	Matrix bar codes must meet the verification standards for mark quality as established in ISO
686	15/15 and SAF A \$9132
687	13+15 and SAL AS/152.
688	15 Other System Attributes This should be considered an "a la carte" many Only choose
689	those areas where you have something to say. Do not use the subparagraph heading followed by
690	NA.
691	
692	a. Address attributes that tend to be design, cost, and risk drivers, including environment, safety
693	and occupational health, human systems integration, embedded instrumentation, electronic attack,
694	information protection standards, information assurance, and wartime reserve mode requirements.
695	
696	b. Address natural environmental factors (such as climatic, terrain, and oceanographic factors):
697	and unplanned stimuli (such as fast cook-off slow cook-off bullet impact fragment impact
698	sympathetic detonation and shape charge jet)
600	sympatiette detonation, and snape enarge jet).
700	c Define the expected mission canability (e.g. full percent degraded) in the various
700	anvironments. Include applicable safety parameters, such as those related to system, nuclear
701	environments. Include applicable safety parameters, such as mose related to system, nuclear,
702	explosive, and hight safety.
705	1 Identify abresiant and executional economity needs
704	a. Identify physical and operational security needs.
705	With a second state identifies the second second state of a state second s
/06	<i>e</i> . When appropriate, identify the weather, oceanographic and astro-geophysical support needs
/0/	throughout the program's expected life cycle.
/08	
/09	f. Include data accuracy and forecast needs.
/10	
711	g. For intelligence, surveillance, and reconnaissance platforms, address information protection
712	standards.
713	
714	<i>h</i> . Describe the non-information technology/national security system capabilities required for
715	allied and coalition operations, identify the potentially applicable US-ratified international
716	standardization agreements, and provide an initial indication of which ones will be incorporated in the
717	system requirements. (References DODD 8320.2, Data Sharing in a Net-Centric Department of
718	<u>Defense</u> available at: <u>http://www.dtic.mil/whs/directives/corres/pdf/832002p.pdf</u> and <u>DODD 2010.6</u> ,
719	Material Interoperability with Allies and Coalition Partners.
720	
721	<i>i</i> . Address conventional and initial nuclear weapons effects and CBRN survivability In the event
722	the mission requires CBRN survivability, consider elevating this attribute to be a KPP.
723	
724	j. The following statements are examples only and information provided should reflect the
725	attributes of the specific system addressed in the CDD. Consider the following areas:
-	

726	
720	(1) Storage Environment. The appropriate storage temperature and air quality should be
727	(1) Storage Environment. The appropriate storage temperature and an quality should be specified. This should include length of time to remain in storage, frequency and duration of
720	maintenance actions, etc.
729	maintenance actions, etc.
/30	
731	(2) Embedded Instrumentation. The XXXXXXXX capability will have embedded
732	diagnostics that can identify errors or faults down to the Line Replaceable Units/Line
733	Replaceable Module (LRU/LRM) level.
734	
735	(3) Conventional Weapons Effects and Initial Nuclear Weapons Effects. Include the
736	assessment of whether the capability is mission critical.
737	
738	(4) Nuclear, Biological, and Chemical Contamination (NBCC) Survivability. The
739	XXXXXXX canability is (or is not) mission critical, however, it will be Chemical, Biological,
740	Radiological and Nuclear (CBRN) contamination and decontamination survivable against the
741	effects of CBRN agents and decontaminates so that it remains operational in all CBRN
741	anyironments, with the exception of rubber and canvas field replaceable items, and is compatible
742	with personnel operating and maintaining while in MOPP IV
743	with personnel operating and maintaining while in MOFF TV.
744	
745	(5) Expected Mission Capability. Environmental operating conditions (percentage of use
746	in Hot, Basic, Cold, etc.) along with dust, smoke, rain, etc. will be included here.
747	
748	(6) Physical and Operational Security Needs. XXXXXXXX capability will be physically
749	secured in the same way as other property book items (i.e. Arms Room, Supply Room, Platoon
750	Equipment Room, or on Vehicles).
751	
752	(7) Human System Integration/MANPRINT.
753	
754	(a) Manpower. State manpower constraints (if any).
755	
756	(b) Personnel. State MOS constraints (if any).
757	
758	(c) Training. State training requirements for host station. NET, and field refresher
759	training as required including resources required to meet training levels.
760	
761	(d) Human Factors Engineering – The XXXXXXXX canability design shall promote
762	affective Soldier machine integration for ontimal total system performance. Design principles
762	taking into account human capabilities and limitations shall be incorporated into system
703	definition design development and evaluation. This includes concents of human computer
704	interface (a second framewith and evaluation. This includes concepts of numan-computer
/05	interface (e.g., ease of perception and comprehension of displays, ease of use of controls) and
/66	compatibility of XXXXXXX capability with other mission-essential equipment (including but
767	not limited to use with standard combat gear, CBRN, and environmental clothing). The
768	XXXXXXX capability should not interfere with the performance of common Soldier tasks.
769	Equipment design must consider mission-dependent tasks and demands through consultation
770	with SMEs, in order to maximize ease of use, minimize workload and enhance mission
771	performance.

112	
773	(e) System Safety. State appropriate System Safety requirements to include any
774	regulatory requirements the system must meet. For example "The XXXXXXX capability
775	design and operational characteristics shall minimize the possibilities for accidents or mishaps
776	caused by human error or system failure. Safety, health, environmental, fire, and ergonomic
777	hazards associated with the use maintenance transportation storage handling and
778	demilitarization of the XXXXXXXX canability will be identified evaluated/assessed and
779	mitigated or controlled to an acceptable level. The resolution of all hazards will be formally
780	documented through a hazard tracking system and the risk associated with the residual hazard if
781	any will be accepted by the designated approving authority IAW AR 385-10 The Army Safety
782	<i>Program</i> (available at: http://www.and.army.mil/ndffiles/r385_10.pdf) and DA Pam 385-16
783	System Safety Management Guide (available at: http://www.apd.army.mil/pdffiles/p385_16.pdf)
784	<u>System Sufety Management Onde</u> (available al. <u>http://www.apd.atmy.http://files/p505_10.pdf</u>).
785	(f) Health Hazards Insert the following statement "A Health Hazard Assessment (HHA)
786	will be requested from the Center for Health Promotion & Preventive Medicine (CHPPM) early
787	in the development or procurement process. This HHA will be updated at each Milestone
788	Decision Review (MDR) as required by AR 40-10."
789	
790	(g) Soldier Survivability. State other survivability requirements applicable to the system
791	which are different than those which may be included as a KPP.
792	
793	16. Program Affordability.
794	
795	
175	a. Describe life-cycle cost (include all associated DOTMLPF and policy costs).
796	<i>a</i> . Describe life-cycle cost (include all associated DOTMLPF and policy costs).
796 797	<i>a</i>. Describe life-cycle cost (include all associated DOTMLPF and policy costs).<i>b</i>. Describe sponsor's estimates of the appropriate funding level for developing, producing,
796 797 798	 <i>a.</i> Describe life-cycle cost (include all associated DOTMLPF and policy costs). <i>b.</i> Describe sponsor's estimates of the appropriate funding level for developing, producing, and sustaining the desired capability.
796 797 798 799	 a. Describe life-cycle cost (include all associated DOTMLPF and policy costs). b. Describe sponsor's estimates of the appropriate funding level for developing, producing, and sustaining the desired capability.
796 797 798 799 800	 <i>a.</i> Describe life-cycle cost (include all associated DOTMLPF and policy costs). <i>b.</i> Describe sponsor's estimates of the appropriate funding level for developing, producing, and sustaining the desired capability. <i>c.</i> State cost in terms of a threshold and objective capability (not necessarily a KPP) to
796 797 798 799 800 801	 a. Describe life-cycle cost (include all associated DOTMLPF and policy costs). b. Describe sponsor's estimates of the appropriate funding level for developing, producing, and sustaining the desired capability. c. 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.
796 797 798 799 800 801 802	 a. Describe life-cycle cost (include all associated DOTMLPF and policy costs). b. Describe sponsor's estimates of the appropriate funding level for developing, producing, and sustaining the desired capability. c. 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.
796 797 798 799 800 801 802 803	 a. Describe life-cycle cost (include all associated DOTMLPF and policy costs). b. Describe sponsor's estimates of the appropriate funding level for developing, producing, and sustaining the desired capability. c. 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. d. Describe applicable cost analyses conducted to date.
796 797 798 799 800 801 802 803 804	 a. Describe life-cycle cost (include all associated DOTMLPF and policy costs). b. Describe sponsor's estimates of the appropriate funding level for developing, producing, and sustaining the desired capability. c. 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. d. Describe applicable cost analyses conducted to date.
796 797 798 799 800 801 802 803 804 805	 a. Describe life-cycle cost (include all associated DOTMLPF and policy costs). b. Describe sponsor's estimates of the appropriate funding level for developing, producing, and sustaining the desired capability. c. 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. d. Describe applicable cost analyses conducted to date. e. The structure of the paragraph and the two tables are mandated by HQDA G8 as
796 797 798 799 800 801 802 803 804 805 806	 a. Describe life-cycle cost (include all associated DOTMLPF and policy costs). b. Describe sponsor's estimates of the appropriate funding level for developing, producing, and sustaining the desired capability. c. 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. d. Describe applicable cost analyses conducted to date. e. The structure of the paragraph and the two tables are mandated by HQDA G8 as promulgated in the HQDA G3 memo, 18 Oct 07, <i>Approval of Army Warfighting Capabilities</i>
796 797 798 799 800 801 802 803 804 805 806 807	 a. Describe life-cycle cost (include all associated DOTMLPF and policy costs). b. Describe sponsor's estimates of the appropriate funding level for developing, producing, and sustaining the desired capability. c. 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. d. Describe applicable cost analyses conducted to date. e. The structure of the paragraph and the two tables are mandated by HQDA G8 as promulgated in the HQDA G3 memo, 18 Oct 07, <i>Approval of Army Warfighting Capabilities</i> DCS G-3/5/7, Interim Implementation Guidance The full version of the memo is located in the
796 797 798 799 800 801 802 803 804 805 806 807 808	 a. Describe life-cycle cost (include all associated DOTMLPF and policy costs). b. Describe sponsor's estimates of the appropriate funding level for developing, producing, and sustaining the desired capability. c. 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. d. Describe applicable cost analyses conducted to date. e. The structure of the paragraph and the two tables are mandated by HQDA G8 as promulgated in the HQDA G3 memo, 18 Oct 07, <i>Approval of Army Warfighting Capabilities</i> DCS G-3/5/7, Interim Implementation Guidance The full version of the memo is located in the ARCIC AKO Policy Site at URL: <u>https://www.us.army.mil/suite/kc/5232873</u>. An excerpt of the
796 797 798 799 800 801 802 803 804 805 806 807 808 809	 a. Describe life-cycle cost (include all associated DOTMLPF and policy costs). b. Describe sponsor's estimates of the appropriate funding level for developing, producing, and sustaining the desired capability. c. 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. d. Describe applicable cost analyses conducted to date. e. The structure of the paragraph and the two tables are mandated by HQDA G8 as promulgated in the HQDA G3 memo, 18 Oct 07, <i>Approval of Army Warfighting Capabilities</i> DCS G-3/5/7, Interim Implementation Guidance The full version of the memo is located in the ARCIC AKO Policy Site at URL: https://www.us.army.mil/suite/kc/5232873. An excerpt of the G8 section is enclosed below in the PDF file. An information paper put out by the Director,
796 797 798 799 800 801 802 803 804 805 806 807 808 809 810	 a. Describe life-cycle cost (include all associated DOTMLPF and policy costs). b. Describe sponsor's estimates of the appropriate funding level for developing, producing, and sustaining the desired capability. c. 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. d. Describe applicable cost analyses conducted to date. e. The structure of the paragraph and the two tables are mandated by HQDA G8 as promulgated in the HQDA G3 memo, 18 Oct 07, <i>Approval of Army Warfighting Capabilities</i> DCS G-3/5/7, Interim Implementation Guidance The full version of the memo is located in the ARCIC AKO Policy Site at URL: https://www.us.army.mil/suite/kc/5232873. An excerpt of the G8 section is enclosed below in the PDF file. An information paper put out by the Director, Capabilities Developments is also enclosed to help document sponsors properly frame resource
796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811	 a. Describe life-cycle cost (include all associated DOTMLPF and policy costs). b. Describe sponsor's estimates of the appropriate funding level for developing, producing, and sustaining the desired capability. c. 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. d. Describe applicable cost analyses conducted to date. e. The structure of the paragraph and the two tables are mandated by HQDA G8 as promulgated in the HQDA G3 memo, 18 Oct 07, <i>Approval of Army Warfighting Capabilities</i> DCS G-3/5/7, Interim Implementation Guidance The full version of the memo is located in the ARCIC AKO Policy Site at URL: https://www.us.army.mil/suite/kc/5232873. An excerpt of the G8 section is enclosed below in the PDF file. An information paper put out by the Director, Capabilities Developments is also enclosed to help document sponsors properly frame resource requirements. The PM provides this information to the capability developer.
796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812	 a. Describe life-cycle cost (include all associated DOTMLPF and policy costs). b. Describe sponsor's estimates of the appropriate funding level for developing, producing, and sustaining the desired capability. c. 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. d. Describe applicable cost analyses conducted to date. e. The structure of the paragraph and the two tables are mandated by HQDA G8 as promulgated in the HQDA G3 memo, 18 Oct 07, <i>Approval of Army Warfighting Capabilities</i> DCS G-3/5/7, Interim Implementation Guidance The full version of the memo is located in the ARCIC AKO Policy Site at URL: <u>https://www.us.army.mil/suite/kc/5232873</u>. An excerpt of the G8 section is enclosed below in the PDF file. An information paper put out by the Director, Capabilities Developments is also enclosed to help document sponsors properly frame resource requirements. The PM provides this information to the capability developer.



816	Mandatory Appendices
817	Annandin A Not Doody KDD Products At a minimum you should have a High Level
818 810	Appendix A - Net-Ready KPP Products. 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
820	doesn't require all architecture views
820	doesn't require an areintecture views.
822	a CICSI 6212.01F. Interoperability & Supportability of Information Technology and
823	National Security Systems, 15 Dec 08 (available at:
824	http://www.dtic.mil/cics_directives/cdata/unlimit/6212_01.pdf) significantly changed the
825	content of Appendix A, but many of the changes advocated are not available and the CJCSI
826	6212.01D has been grandfathered for 6 months continued use through 15 Jun 09.
827	
828	b. All views included should have accompanying text to highlight the salient point of the
829	architecture view as mandated by the DOD Architecture Framework (DODAF) available at:
830	http://www.defenselink.mil/cio-nii/docs/DoDAF_Volume_II.pdf.
831	
832	c. If the OV-1 is the only view included in the appendix, add the following statement "This
833	capability has no C4I interface with any other system or capability. The NR-KPP is not
834	applicable. The architecture enclosed supports and underpins the CONOPS discussion in
835	paragraph 3."
836	
837	d. If you are developing the full NR-KPP, the following products are mandatory and should
838	appear in appendix A in the order shown below for ease of review and evaluation:
839	• NR-KPP statement, copy and paste the KPP description, production threshold,
840	and production objective from the KPP table in paragraph 6. Do not paste the Tier 1
841	& 2 JCA column.
842	 NCOW-RM Compliance Statement (Net-Centric Operations & Warfare
843	Reference Model).
844	• Information Assurance (IA) Statement of Compliance. Verbiage for a CDD must
845	state that the "Program is in compliance" with appropriate regulations and directives.
846	The distinction between verbiage appropriate for a CDD and that of a CDD is not
847	captured in CJCSI 6212.01D.
848	• KIP Declaration. Use the table below. Only fill out the rows that apply to the
849	capability you are producing.
850	
	KIP Declaration Table
951	DISR (29 Jun 07).doc
852	
853	• All Views & Operational Architecture: AV-1, OV-1, OV-2, OV-3 (new
854	requirement, previously submitted only SV-6 that captures critical information from
855	<i>the OV-3</i>), OV-4, OV-5, OV-6C.
856	• Systems Architecture: SV-2, SV-4, SV-5, SV-6. The SV-5 is either an Excel file
857	or a Word table at the discretion of the System's Architect. The SV-6 must be
858	submitted as a separate Excel file. A blank SV-6 template is enclosed below based

859 on DODAF V1.5, April 2007. Systems Architecture is the PM's responsibility.
860 Close coordination is required to ensure products are developed to support staffing of
861 the capability document.



SV-6 Template DODAF 1.5.xls 863 864 865 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 866 867 DISR Online (NIPRNET), exported to disk, and published on DISR Online SIPRNET Registry. The PM is responsible for developing this product. 868 869 • OV-7, SV-11, & TV-2 are included as appropriate and relate to shared data and 870 data warehousing and future data standards. Review the DODAF for more fidelity and their use. 871 872 Architecture products (except TV's) must be stored in CADIE and metadata 873 tagged to meet the requirements of ARCIC Policy Letter # 12 and CJCSI 6212.01D.



875 876 *e*. Additional assistance is available on the <u>J6 wiki Portal</u>.

Appendix B – References. The attached template lists six standard references. Add other
references that are germane to the CDD. This is not a library listing.



References - Minimun

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Appendix C – Acronym List. Add only acronyms and definitions used in the 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.*

886

887 Other Appendices

888

Appendix D – Analysis (As required). If unable to complete the analysis discussion in the
 main CDD document (e.g., > two pages or less), then summarize the analyses here. 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. If you don't use this appendix, delete it from the TOC and final page of the

894 template (Appendix D listing).

895

- <u>Standard Comment Matrix</u> The comment matrix below is the recommended matrix for both worldwide (proponent level developmental staffing) and ARCIC validation staffing.



Recommended comment matrix for A