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**JOINT LOGISTICS WHITE PAPER
Version 0.9**



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8 March 2010

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Contents

35		
36		
37	Executive Summary	iii
38		
39	1. Purpose	1
40	2. Scope	3
41	Military Function.....	3
42	Guiding Principles	4
43	Strategic Guidance	5
44	Critical Assumptions	5
45	3. Military Problem	6
46	The Problem Statement.....	7
47	Operational Environment	7
48	Key Indicators of the Problem....	8
49	4. Solution	9
50	The Joint Logistic Enterprise	9
51	JLWP Central Idea.....	13
52	Integrate/Synchronize, and Optimize the JLEnt	14
53	Deliver/Position/Sustain.....	17
54	Unity of Effort.....	18
55	Networking the Joint Logistic Enterprise	19
56	5. Outcomes	21
57	Sustained Joint Logistic Readiness.....	21
58	Improved Trust and Confidence	21
59	6. JLWP Operational Guideline	22
60	7. Common Joint Logistic Operating Precepts	24
61	8. Implications of Adopting This Joint Logistic Framework.....	28
62	9. Risks of Adopting This Joint Logistic Framework	32
63	10. Conclusion	33

64	Appendices	
65	A. References	
66	B. Key Indicators of the Military Problem	
67	C. Joint Capability Area Definitions	
68	D. Joint Logistics Attributes and Definitions	
69	E. Joint Logistics Compass	
70	F. Deployment and Distribution	
71	G. Supply	
72	H. Maintain	
73	I. Logistic Services	
74	J. Operational Contract Support	
75	K. Engineering	
76	L. Medical Logistics	
77	M. Acronyms	
78		
79	Figures	
80	1. JLWP Relationship to Joint Operations Concept (JOpsC)	1
81	2. Logistics Tier II Joint Capability Areas	3
82	3. Joint Logistics Enterprise.....	9
83	4. Joint Logistics Enterprise supporting other organizations.....	10
84	5. Joint Logistics Enterprise End-to-End Process Framework.....	11
85	6. Joint Logistics White Paper Central Idea.....	13
86	7. Adaptive Logistics Network.....	16
87		

Executive Summary

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90 The future operating environment will be characterized by
91 increasing uncertainty, rapid change, complexity, and persistent conflict.
92 The Joint Force Commander (JFC) will conduct simultaneous global
93 combat, security, engagement, and relief and reconstruction activities in
94 this challenging environment. Joint Force Commands will become more
95 reliant on multinational, contracted, interagency, and nongovernmental
96 capabilities and partnerships. We will operate in a widening geo-political
97 environment with decreasing global access, prolific use of high end anti-
98 access weapons, sophisticated cyber threats, and growing nuclear,
99 biological, and chemical capabilities in the hands of elements willing to
100 employ them. To further complicate matters, the Department of Defense
101 will see an increase in the competition for dollars as constraints on
102 resources grow and other agencies also stake their claims for resources
103 based on the whole of government approach to crisis management.
104 While competition for resources is not new for the Defense Department,
105 pressures will increase to assure that economies in the logistic arena
106 become a reality in the future.

107 The Joint Logistics White Paper (JLWP) applies the Capstone
108 Concept for Joint Operations (CCJO) framework to describe how the
109 future joint force will perform logistic functions across the basic
110 categories of military activity. It identifies the capabilities required to
111 support these activities and the key attributes necessary to evaluate
112 capability development. The JLWP establishes a common framework for
113 thinking about future joint logistic operations in the 2016-2028
114 timeframe. It guides development of future logistic capabilities, doctrine,
115 and force structure. The JLWP is a source document designed to initiate
116 further assessments, studies, experiments and technology
117 demonstrations. It establishes a conceptual foundation for subordinate
118 Joint Integrating Concept (JIC) development. It keys on future
119 capabilities that must be executed collectively as a logistic community.

120 The JLWP poses the problem statement: *How do Joint Force*
121 *Commanders and DOD integrate/synchronize, and optimize joint,*
122 *interagency, contracted, and multinational logistics to establish and*
123 *maintain Joint Force Commanders' operational adaptability and freedom*
124 *of action in the design, execution and assessment of combat, security,*
125 *engagement, and relief and reconstruction missions in an environment*
126 *characterized by increasing complexity, uncertainty, rapid change, and*
127 *persistent conflict?*

128 A Joint Logistics Enterprise (JLEnt) is offered as the solution to the
129 problem. It is the means to optimizing our current world class
130 capabilities. The JLEnt is a multi-tiered matrix of key global logistic

131 providers and their aggregate capabilities. The JLEnt is also a framework
132 of logistic processes that must be optimized to support the JFC and
133 reduce global risk by allocating logistic resources and capabilities
134 according to national security needs.

135 The central idea is designed to provide the JFC freedom of action to
136 plan, execute, assess operations unencumbered by logistic concerns. If
137 the JLEnt can:

- 138 • **INTEGRATE** or **SYNCHRONIZE** JLEnt processes and capabilities in
139 order to **OPTIMIZE** them to best support the JFC.
- 140 • Provide **UNITY OF EFFORT** across end-to-end logistic processes in
141 support of the Joint Force Commander (JFC).
- 142 • **DELIVER, POSITION, and SUSTAIN** joint forces from any point of
143 origin to any point of employment.
- 144 • **NETWORK** the JLEnt in a real-time global information system with
145 accurate available data, total requirement and resource visibility,
146 common operational views, and shared perspective with intuitive
147 decision support tools.

148 Then the result will be:

- 149 • **SUSTAINED JOINT LOGISTIC READINESS** delivered to the Joint
150 Force Commander that enables operational adaptability and freedom
151 of action.
- 152 • **IMPROVED TRUST AND CONFIDENCE** that the JLEnt will provide
153 required capabilities and resources at the right time and place.

154 The JLWP proposes operational guidance to future logistic forces
155 on how they are to support joint forces operating as envisioned in the
156 CCJO. The JLWP operational guidance suggests a new way to plan,
157 execute, control, and assess logistic operations. There are ten Common
158 Joint Logistic Operating Precepts that were adapted from the CCJO to
159 show how logistic forces can apply CCJO precepts to their operations.

160 The Doctrine, Organization, Training, Materiel, Leadership,
161 Personnel, and Facilities (DOTMLPF) implications in the JLWP are broad,
162 but not as far reaching as the cross-service, interagency, and/or
163 multinational collaboration required to establish a JLEnt that has
164 responsibility and accountability for Enterprise resources, processes, and
165 capabilities.

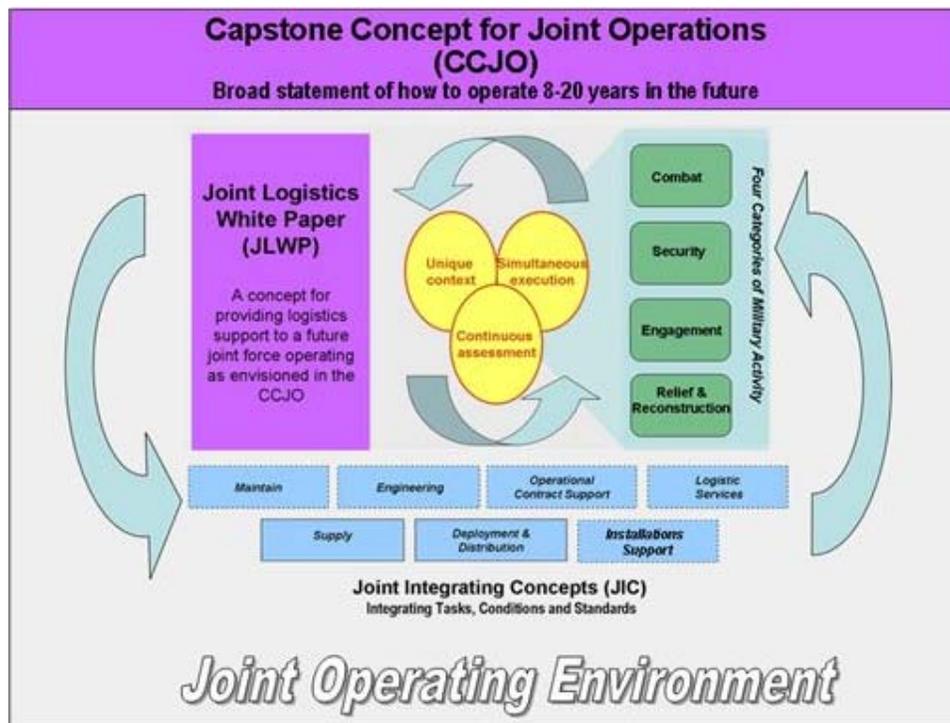
166 Adopting JLWP concepts and operational guidelines will create
167 greater adaptability and versatility to cope with uncertainty, complexity,
168 unforeseeable change, and persistent conflict.

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185 **1. Purpose**

186 The Joint Logistics White Paper (JLWP) presents a common
187 framework for providing logistic support to joint operations in the 2016-
188 2028 timeframe and guides development of future logistic capabilities.
189 The JLWP is a source document designed to initiate further assessments,
190 studies, experiments, and technology demonstrations. It establishes a
191 conceptual foundation for subordinate Joint Integrating Concept (JIC)
192 development. Interagency, multinational, commercial, and
193 nongovernmental (NGO) logistic providers may use this document to
194 assess and develop their capabilities for interoperability and to help
195 facilitate integration and synchronization opportunities within the global
196 logistics community.



197 **Figure 1 - JLWP Relationship to Joint Operations Concept (JOpsC) Family¹**

198 Figure 1 describes how the JLWP and its subordinate Joint
199 integrating Concepts (JIC) correlate to the 15 January 2009 Capstone
200 Concept for Joint Operations (CCJO). The CCJO is the overarching
201 concept of the Joint Operations Concepts (JOpsC) family. Its purpose is
202 to lead force development and experimentation by providing a broad

¹ The Joint Logistics (Distribution) Joint Integrating Concept version 1.0 was published 07 February 2006. A Joint Logistics (Supply) Joint Integrating Concept is under development and expected to be released in March 2010.

203 description of how joint forces are expected to operate in the future.² It
204 speaks in terms of broad precepts and ideas. The JLWP applies elements
205 of the CCJO solution to describe how the joint force will perform the
206 enduring military function of logistics. The Logistic JICs are guided by
207 the JLWP. They describe how each logistic capability area supports the
208 JFC in execution of the four CCJO categories of military activity³
209 (combat, security, engagement, and relief and reconstruction). The
210 logistic organizations supporting these categories of military activity
211 must address each challenge in its own unique context; be able to
212 simultaneously execute and/or quickly transition between categories
213 while continually assessing and adjusting their operations.

214 The JLWP provides a development framework and gives guidelines
215 to help determine *what* capabilities are needed to support the Joint Force
216 Commander⁴ and how logistic forces should operate. *Who* will execute
217 the JLWP solutions and *how* they will be executed will be born out in
218 further study and experimentation. The JLWP provides enough detail to
219 serve its stated purpose as a source document and gives enough latitude
220 to consider a wide range of alternatives. It requires experimental
221 validation. It will lead to capability gap solutions and will eventually
222 guide doctrinal evolution.

223 The stage for the JLWP is set by the *Joint Logistics Compass* (see
224 Appendix E). The Compass is an assemblage of guidance gathered from
225 Logistic Directors across the Department of Defense. That guidance was
226 compiled to create a vision of freedom of action for the Joint Force
227 Commander enabled by sustained logistic readiness, integrated logistic
228 capabilities, and shared resources. The bridge to this vision spans the
229 three to seven year time frame and consists of three central ideas
230 (planks). Those planks initiated a study on a common end-to-end
231 framework and measurement system, a program to help logisticians work
232 effectively in a joint, interagency and/or multinational environment, and
233 life cycle management. The JLWP takes the baton from the Compass
234 and carries it into the future.

235 The logistic community must work together to develop the joint
236 solutions proposed in this paper. Improvement in logistic capability,
237 capacity, processes, and organizations are essential to continued military
238 success in a future characterized by complexity, uncertainty, and

² The JLWP is based on the CCJO and JOE that was developed based on 2016 to 2028 projected operating environments.

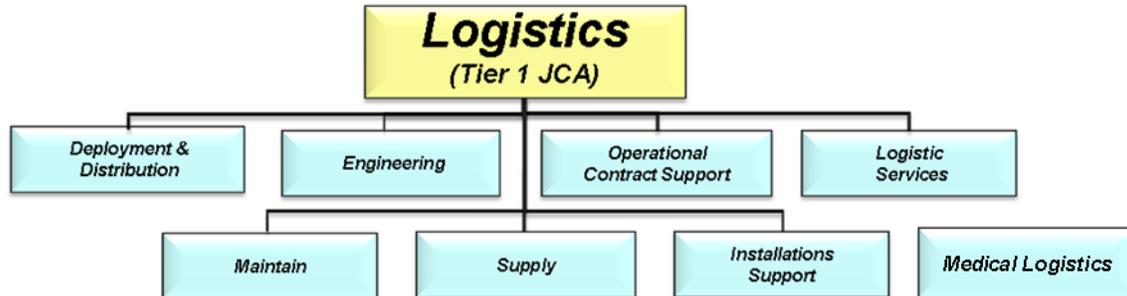
³ Humanitarian Assistance and Disaster Relief (HA/DR) are classified as a relief and reconstruction military activity

⁴ DOD logistic organizations will always be organized under a JFC, that JFC may be the supported commander in an operation or may be the supporting commander to another organization.

239 change. Failure to advance logistic capabilities will become increasingly
 240 costly. Failure to optimize logistic effectiveness could potentially cost the
 241 lives of our Servicemen and women and put our Nation's ability to
 242 execute its National Security Strategy at risk.

243 **2. Scope**

244 Logistics is one of nine Tier I Joint Capability Areas⁵ (JCA). It is
 245 defined as the ability to project and sustain a logistically ready joint force
 246 through the deliberate sharing of national and multinational resources to
 247 effectively support operations, extend operational reach and provide the
 248 Joint Force Commander (JFC) the freedom of action necessary to meet
 249 mission objectives. As shown in Figure 2, the JLWP describes the
 250 subordinate Tier II JCAs of Supply, Maintain, Deployment and
 251 Distribution, Logistic Services, Operational Contract Support,
 252 Engineering and facets of Installations Support.⁶ Medical logistics,
 253 although not categorized as a logistics capability area, is addressed in
 254 the JLWP to ensure continuity of an inherently logistic function. The
 255 JLWP's focus is on employing the full range of logistic processes and
 256 capabilities to support the JFC. The JLWP identifies areas in which joint
 257 logistic operations and capabilities must evolve and adapt. It identifies
 258 future joint concepts and provides guidelines necessary to support
 259 activities executing national and departmental strategic guidance.



260

Figure 2 – Logistics Tier II Joint Capability Areas⁷

⁵ For definitions and framework of JCAs, see Appendix C *Joint Capability Area Definitions*.

⁶ Installations Support is not addressed here because of its many unique characteristics that don't fit in the context of the JLWP.

⁷ Logistics is a Tier 1 Joint Capability Area (JCA). The remaining complement of Tier 1 JCAs are: Force Support, Battlespace Awareness, Force Application, Command and Control, Net-Centric, Protection, Building Partnerships, and Corporate Management and Support.

261 **2.a. Military Function**

262 Joint Publication 1-02, the *Department of Defense Dictionary of*
 263 *Military and Associated Terms*, defines logistics as planning and
 264 executing the movement and support of forces. It defines joint logistics
 265 as the coordinated use, synchronization, and sharing of two or more
 266 Military Departments' logistic resources to support the joint force. It
 267 includes aspects of military operations that deal with:

- 268 • design and development, acquisition, storage, movement, distribution,
 269 maintenance, evacuation, and disposition of materiel;
- 270 • movement, evacuation, and hospitalization of personnel;
- 271 • acquisition or construction, maintenance, operation, and disposition
 272 of facilities
- 273 • acquisition or furnishing of services

The JLWP proposes a perspective wider than the JP 1-02 definition of joint logistics. The future operating environment requires a broader view of joint logistics that includes partners outside the Department of Defense.

274 The JLWP uses the term “joint” in a broad sense with the purposeful
 275 intent to include all activities or organizations that contribute to the
 276 logistical function, be they within the DOD, the U.S. interagency, a
 277 commercial provider, a nongovernmental (NGO) entity, a
 278 multinational force or government, or private volunteer concerns.

279 **2.b. Guiding Principles and Imperatives**

280 Joint Publication 4-0 (JP 4-0) established *The Principles of Logistics*
 281 as a “guide for analytical thinking when assessing combatant
 282 commander (CCDR) courses of action.” JP 4-0 also established the *Joint*
 283 *Logistics Imperatives* as desired attributes of systems, processes,
 284 capabilities, and organizations. The logistic community should use these
 285 principles and imperatives as a guide to assessing solutions derived from
 286 the JLWP.

287 **Principles of Logistics**

- 288 • **Responsiveness** - providing the right support when and where
 289 needed
- 290 • **Simplicity** - a minimum of complexity in logistic operations
- 291 • **Flexibility** - the ability to improvise and adapt logistic structures
 292 and procedures to changing situations, missions, and operational
 293 requirements

- 294 • **Economy** - the amount of resources required to deliver a specific
- 295 outcome
- 296 • **Attainability** - the assurance that the minimum essential supplies
- 297 and services required to execute operations will be available
- 298 • **Sustainability** - the ability to maintain the necessary level and
- 299 duration of operational activity to achieve military objectives
- 300 • **Survivability** - the capacity of organizations to prevail in the face
- 301 of potential threats

302

Joint Logistic Imperatives

- 303 • **Unity of Effort** – The synchronization and integration of logistic
- 304 capabilities focused on the commander’s intent
- 305 • **Rapid and Precise Response** – The ability of logistic forces and
- 306 organizations to meet the needs of the joint force
- 307 • **Enterprise-Wide Visibility** – Assured access to logistic processes,
- 308 capabilities, resources, and requirements to gain the knowledge
- 309 necessary to make effective decisions

Military success in the future rarely will be the product of radically new ideas, but instead will typically result from adapting these [timeless] enduring truths to new requirements, conditions, and capabilities.

-ADM M.G. Mullen, CJCS

Forward to Capstone Concept for Joint Operations

310 The JLWP envisions future logistic capabilities shaped by
 311 evolutionary and revolutionary change. Much of what is proposed in the
 312 JLWP is process optimization (evolutionary), not dramatic technological
 313 (revolutionary) change. Regardless of degree of change, the
 314 aforementioned principles and imperatives, when used as guiding
 315 attributes, provide a strong foundation for measuring success as
 316 described by the Chairman.

317 **2.c. Strategic Guidance**

318 This paper is derived from National and Department-level strategic
 319 guidance. This includes the National Security Strategy (2006), National
 320 Defense Strategy (2008), National Military Strategy (2004), Capstone
 321 Concept for Joint Operations (2009), and Quadrennial Defense Review
 322 Report (2010).

323 **2.d. Critical Assumptions**

324 Below are some critical assumptions upon which the JLWP is
 325 dependent:

- 326 • Logistic planks identified in the *Joint Logistics Compass* continue
327 toward enabling JFC freedom of action.
- 328 • Fundamental tenets of current national strategy documents will
329 remain applicable in 2016-2028.
- 330 • United States Joint Forces Command (USJFCOM) document, “The
331 Joint Operational Environment—Into the Future”, accurately
332 describes the most likely security environment in the 2016-2028
333 timeframe.
- 334 • The United States (U.S.) industrial base will not have sufficient
335 capacity to sustain joint forces for multiple simultaneous global
336 combat, security, engagement, and relief and reconstruction
337 operations and will require assistance from JLEnt partners.
- 338 • Airlift, sealift, development of ground lines of communication, and
339 pre-positioning will remain the backbone of Department of Defense
340 (DOD) transportation capability for deployment, employment,
341 sustainment, and redeployment.
- 342 • DOD’s robust partnership with the U.S. commercial transportation
343 industry will continue. Other commercial, interagency, and
344 multinational logistic support partnerships will be established and
345 available when required.
- 346 • Seabasing will have a growing role in assembling, sustaining, and
347 projecting the joint force, but will require more study to define the
348 capability gap.
- 349 • Cyber or space based threats will degrade, mislead, or defeat DOD Net
350 Centric Enterprise Services and assured communications bandwidth.
- 351 • Current fossil fuel energy sources will not efficiently sustain the force.
- 352 • Sea lanes will generally remain open, but the seven ocean lane choke
353 points will be subject to intermittent interdiction and will impact
354 SEALOC operations. They remain a principle means of global trade.
- 355 • Future joint forces will consist of multinational and interagency
356 organizations (each with disparate levels of capability) and will have to
357 operate closely with nongovernmental organizations, other
358 governments, and commercial partners.
- 359 • Reduced military budgets will continue to require careful review of
360 requirements when developing future capabilities. Implementation of
361 concepts in the JLWP will require funding to develop, experiment,
362 study, and execute.

363 **3. Military Problem**

364 This section establishes the military problem statement, references
365 the operational environment in which logistic forces and organizations
366 must operate in order to support the JFC, and introduces key indicators

367 of the problem. The U.S. Joint Forces Command document, “The Joint
368 Operational Environment-Into the Future” (JOE) provides detailed
369 operating environment information that will not be repeated here.

370 **3.a. The Military Problem Statement**

How do Joint Force Commanders and DOD integrate/synchronize and optimize joint, interagency, contracted, and multinational logistics to establish and maintain Joint Force Commanders’ operational adaptability and freedom of action in the design, execution and assessment of combat, security, engagement, and relief and reconstruction missions in an environment characterized by increasing complexity, uncertainty, rapid change, and persistent conflict?

371 The problem statement presents a dilemma for the DOD and JFC.
372 The JLWP proposes ideas and provides guidelines in answer to the
373 problem. The statement is deeply rooted in ideas presented in the CCJO
374 and is intended to drive solutions. To elaborate, JFCs and DOD are
375 equally responsible for resolving this problem because of the strategic to
376 tactical (end to end) nature of logistic processes and capabilities. The
377 terms integrate and synchronize are both employed to allow for processes
378 or capabilities that cannot integrate, but can be synchronized.
379 Integration infers a level of control that may not be possible in every
380 circumstance, particularly when discussing multinational, interagency,
381 or nongovernmental operations. Synchronization is employed when
382 integration is not possible. Operational adaptability is the Joint Forces’
383 ability to conduct simultaneous combat, security, engagement, and relief
384 and reconstruction missions and freely transition among these activities.
385 Freedom of action, a common operating precept in the CCJO, when
386 placed in the context of the JLWP, is the ability of the JFC to design and
387 execute operations unencumbered by logistic concerns.

388 **3.b. Operational Environment**

389 The future operational environment will be increasingly complex
390 and dynamic with continually changing coalitions, alliances,
391 partnerships, and new (both national and transnational) threats
392 constantly appearing and disappearing. Joint logisticians will be required
393 to provide support to joint force(s) conducting a combination of
394 interrelated military activities at the same time and in the same space.
395 Joint operations will be multi-dimensional and will occur in urban
396 terrain and cyberspace more than in past conflicts. Climate change may
397 make the operating environment more complex. Irregular warfare may
398 be the norm rather than the exception. Operations will be conducted in
399 an interconnected and an increasingly global environment. Adversaries
400 will include a variety of actors from transnational organizations, states,

401 ad hoc state coalitions, and individuals who come together based on
402 common interests.

403 The environment may involve humanitarian assistance/disaster
404 relief (HA/DR) crises where logistic support is the main effort where the
405 Joint Force becomes the supporting force and a government agency is
406 the supported force. In addition to military forces and noncombatants,
407 there will be a large number of other government agencies, independent,
408 nongovernmental, or regional organizations in the operational area. Each
409 of these entities will have an agenda that may complement or compete
410 with another organization's activities or with overall joint operational
411 objectives. These agencies/organizations support and are supported by
412 coalition partners, other government agencies, contractors, indigenous
413 forces, and local civilian populations and must be considered in any
414 support concept.

415 The logistic challenge in this operational environment is to develop
416 anticipatory capabilities to address problems before they become
417 shortfalls. We must learn how the joint force can leverage its capabilities
418 in such a way as to create intractable military and strategic dilemmas for
419 adversaries so they avoid challenging the U.S. altogether or are swiftly
420 defeated should they attempt to engage.

421 **3.c. Key Indicators of the Problem**

422 "DOD has not developed a coordinated and comprehensive
423 management approach to guide and oversee implementation of joint
424 theater logistics across the department. Efforts to develop and implement
425 joint theater logistics initiatives have been fragmented among various
426 DOD components due largely to a lack of specific goals and strategies,
427 accountability for achieving results, and outcome-oriented performance
428 measures—key principles of sound management. Further complicating
429 DOD's ability to adopt a coordinated and comprehensive management
430 approach to joint theater logistics are the diffused organization of DOD's
431 logistic operations, including separate funding and management of
432 resources and systems, and changes in DOD's overall logistics
433 transformation strategy..."⁸

434 Listed in Appendix B are well documented, generally recognized
435 issues that must be successfully addressed in order to provide logistic
436 support to a future joint force in applying the CCJO solution and in
437 generating JOC effects across the basic categories of military activity.
438 These issues were identified by the Government Accountability Office
439 (GAO), Office of the Secretary of Defense, the Services, the Joint Staff,
440 USTRANSCOM, USJFCOM, and DLA. The intent is that ideas in the
441 JLWP will drive resolution of these indicators through JLEnt optimization

⁸ GAO-07-807 June 29, 2007

442 of processes and capabilities, improvements in logistic technology, an
443 improved JLEnt network, and increased efficient platform capacity. Each
444 of these gaps should be addressed in subsequent productions of JICs to
445 further define the requisite tasks, conditions, and standards necessary
446 for repair.

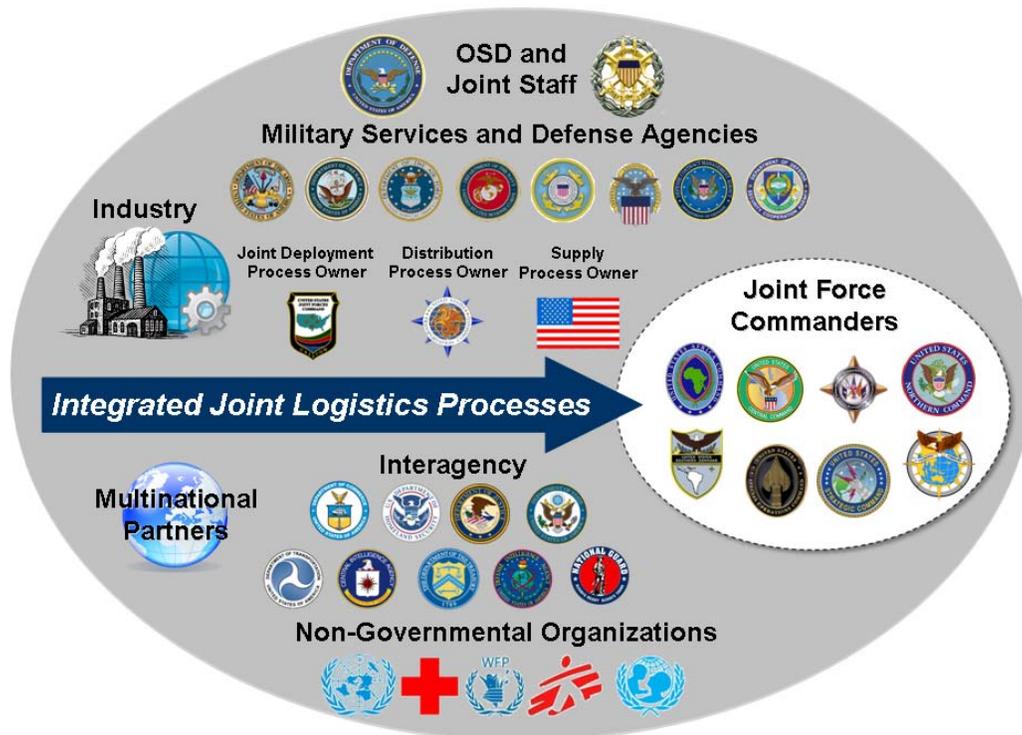
447 **4. Solution**

448 The JLWP calls for an Enterprise solution to execute the points
449 presented in the Central Idea (4.b). The following sections introduce the
450 Joint Logistics Enterprise (JLEnt) and what it is expected to provide to
451 the JFC in the form of a Central Idea.

452 **4.a. The Joint Logistics Enterprise (JLEnt)**

453 The JLEnt is a multi-tiered matrix of key global logistics providers
454 that will be bound by a mixture of collaboration, agreements, contracts,
455 doctrine, policy, legislation, and treaty to operate in the best interest of
456 the JFC or other supported organization. Figure 3 is an example of the
457 JLEnt when it serves the JFC as the supported commander; it is not
458 meant to imply that the JLEnt is solely represented by these
459 organizations.

461

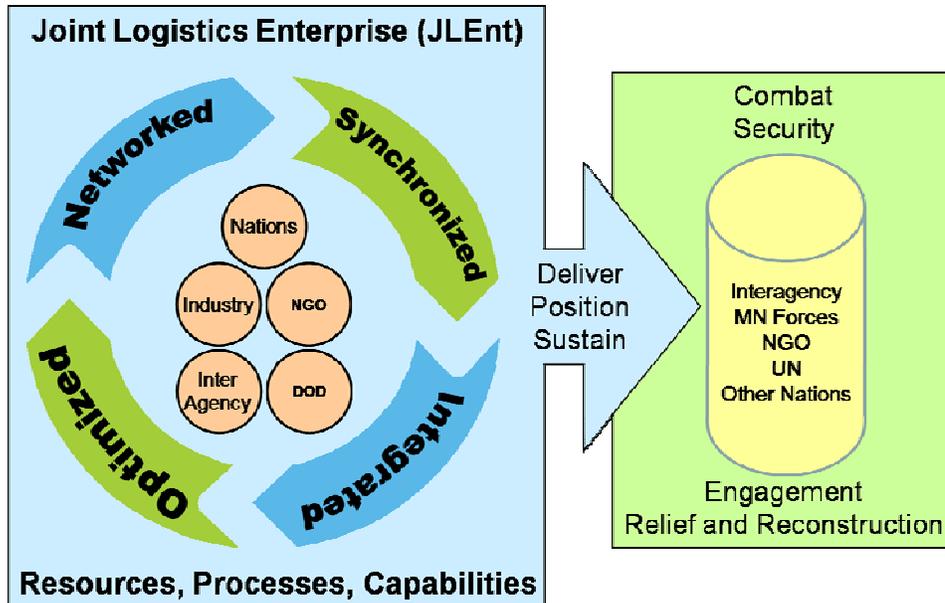


462 **Figure 3. Joint Logistics Enterprise (JLEnt)**

463 Figure 4 depicts the JLEnt and JFC as a supporting capability to
464 organizations outside DOD. Joint Force Commanders are key JLEnt

8 March 2010

465 partners because they control the logistical processes, capabilities, and
 466 resources at the point of need or employment. The JLEnt is a multi-
 467 tiered matrix in the sense that its partners will have varying levels of
 468 participation and that each situation will template different partners
 469 based on the nature and scale of operations. For example, a homeland
 470 disaster relief scenario will employ vastly different JLEnt partners than
 471 combat operations. The fundamental challenge in creating a JLEnt is
 472 determining how to integrate, synchronize, and optimize organizations,
 473 processes, capabilities, and resources and that are outside the DOD.



474
 475 **Figure 4 – JLEnt supporting other organizations**

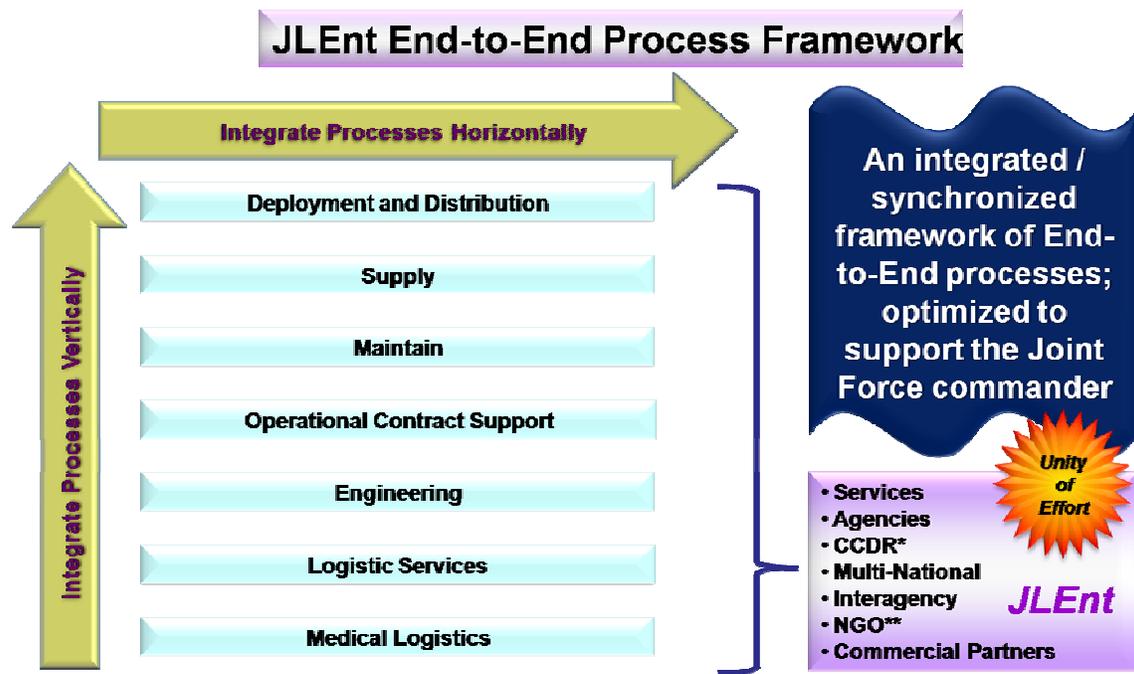
476 It is envisioned that members of the JLEnt will include organizations
 477 and partnerships from the military Services, combatant commands and
 478 joint task forces, other government agencies, and nongovernment
 479 organizations. Commercial partners will play a vital role in virtually all
 480 aspects of the Enterprise. To function on a global scale and to provide
 481 comprehensive, end-to-end capabilities, Enterprise membership will also
 482 be drawn from multinational partners. Enterprise participants will
 483 operate across the strategic, operational, and tactical continuum - many
 484 participants will be affiliated with either supported or supporting
 485 commands, and they will operate under a variety of command
 486 relationships. While this concept does not prescribe specific
 487 organizational constructs for the operation of the Enterprise, it does
 488 recognize the potential desirability and importance of vesting a single
 489 entity with accountability and authority to integrate/synchronize and
 490 optimize global logistic processes and capabilities. This concept envisions
 491 the attainment of a scalable joint capability that serves to enhance the
 492 planning, executing, controlling, and assessing of the full range of
 493 partner logistic processes and capabilities in order to produce an
 494 outcome resulting in increased JFC effectiveness. The Joint Logistics

495 Enterprise (JLEnt), introduced in this document operates within the
 496 Joint Logistics Environment described in Joint Publication 4.0. The
 497 Joint Logistics Environment exists within the operational environment
 498 and consists of the conditions, circumstances and influences that affect
 499 the employment of logistic capabilities.

500

501 Understanding the roles, responsibilities, and authorities of JLEnt
 502 partners is essential to planning, executing, controlling, and assessing
 503 logistic operations. JLEnt partners must collaborate to ensure the
 504 coordinated employment and sharing of resources and capabilities. They
 505 must agree to integration or synchronization of processes in order to
 506 optimize them to the common end of supporting HA/DR and military
 507 activities. The JLEnt must be underpinned by common procedures and
 508 language, joint training and doctrine, interoperable equipment,
 509 authoritative and reliable information, and the adaptive leadership
 510 necessary to conduct joint logistic operations.

511 Unity of effort within the JLEnt is critical to providing sustained
 512 logistic readiness and giving the JFC the trust and confidence to plan,
 513 execute, and assess operations unfettered by logistic concerns.



* Combatant Commander
 ** Non-governmental organization

514
 515

Figure 5 - JLEnt End-to-End Process Framework

516 The JLEnt is made up of a collaborative framework of logistic
 517 processes and capabilities that when optimized becomes more capable
 518 than the sum of its parts and can provide an unassailable strategic

519 advantage.⁹ This framework of processes and capabilities supports the
520 JFC and includes the processes and capabilities under the operational
521 control of the JFC. Figure 5 depicts that framework. Understanding the
522 JLEnt framework facilitates holistic end to end analysis of all joint
523 logistic capabilities, across all boundaries, in order to determine the
524 cause-and-effect events that impact effectiveness and efficiency.
525 Appropriate integration/synchronization, both vertically across capability
526 areas and horizontally within a capability area, permits process and
527 capability optimization. This framework allows the JLEnt to support
528 decisions based on the most effective means at the lowest cost without
529 regard to process or capability owner, Service, or agency. The JLWP
530 proposes further study to map logistic processes, identify integration or
531 synchronization points, and apply metrics that lead to a commonly
532 agreed upon optimized outcome for the JFC. This study must contribute
533 to a common understanding of the term “end-to-end” as employed in the
534 JLWP, as noted in GAO-07-807 (see insert), and reiterated in the *Joint*
535 *Logistics Compass*.

*Overall joint logistics capability is "the capability to build effective, responsive, and efficient capacity into the deployment and sustainment pipeline; exercise control over logistics from **end-to-end**; and provide certainty to the supported joint force commander that forces, equipment, sustainment, and support will arrive where needed and on time." To succeed, these joint logistics capabilities must be fully integrated. Further, they must support future joint operations that are continuous and distributed across the full range of military operations.*

GAO-07-807 Report in DEFENSE LOGISTICS (JUNE 2007)

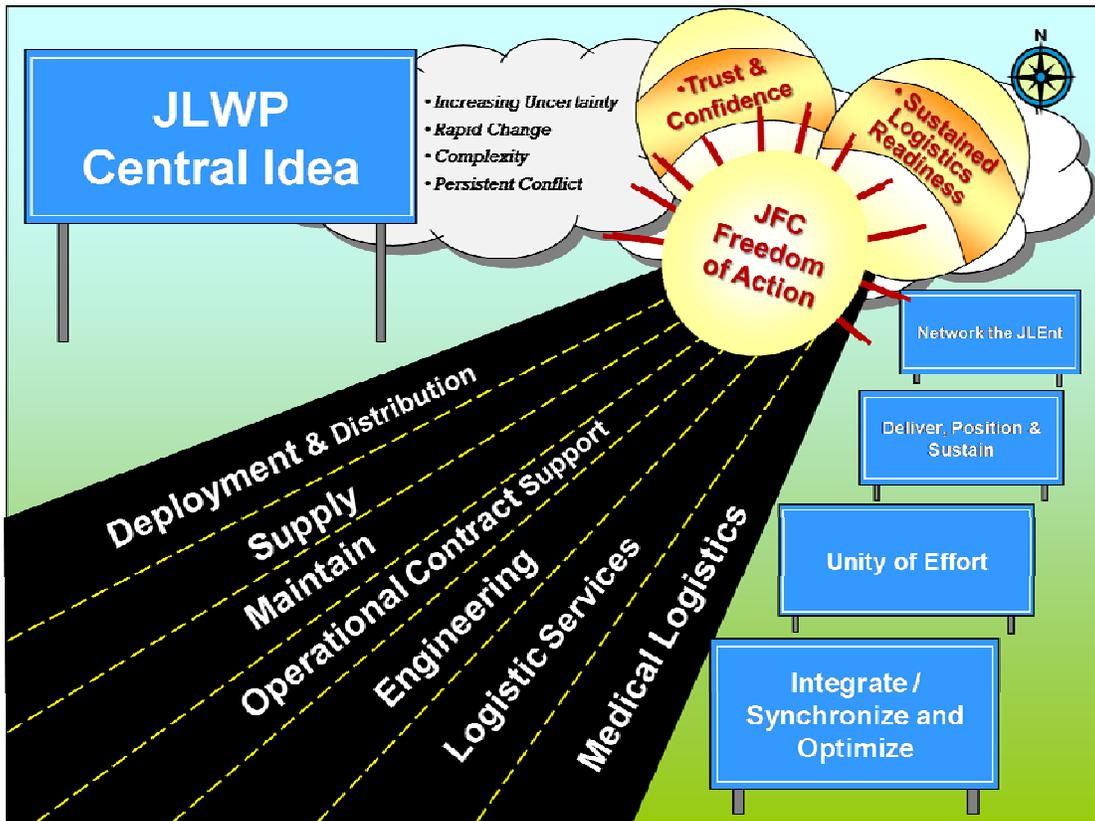
536 To ensure a more common understanding of terminology, "End-to-
537 End," in the context of the JLWP, is the continuum of JLEnt partner
538 capabilities, which must be optimized in support of the JFC. While Joint
539 Logistic processes and capabilities are acknowledged to be under the
540 authority of multiple partners, it is the individual and collective
541 responsibility of all the JLEnt partners to cooperate in a collaborative
542 manner to monitor, measure, execute, optimize, and be accountable for
543 their processes and capabilities based on how they maximize the JFC's
544 effectiveness.

545 In order to achieve the desired end state, the JLEnt processes,
546 business system (data) integration, and resourcing must be addressed.
547 As force providers, the Services must undertake a JLEnt wide venture to
548 establish a joint business capability. Operations must be designed to
549 ensure support to the lowest level activity with the mission and resources
550 to maintain, generate, and apply combat power or HA/DR.

⁹ CCJO, Pg iv

551 **4.b. JLWP Central Idea (Implementing the JLEnt)**

552 The purpose of the JLWP Central Idea is to answer the question
553 presented in the military problem statement. Much like the Joint
554 Logistics Compass, the Central Idea in Figure 6 depicts logistic capability
555 areas as a unified road to providing freedom of action to the JFC. To gain
556 that freedom of action the JFC must have trust and confidence that the
557 JLEnt will provide sustained logistic readiness. In order to achieve
558 sustained logistic readiness, a networked JLEnt must have unity of effort
559 to integrate or synchronize its processes and capabilities in order to
560 optimize them to best deliver, position, and sustain the JFC to the point
561 of employment.



562 **Figure 6 – JLWP Central Idea**

563 The most important facet in the Central Idea is optimizing JLEnt
564 processes and capabilities. Integrating or synchronizing processes and
565 capabilities is not an end in itself. They are a prerequisite to
566 optimization. Nothing is gained if the JLEnt accomplishes integration or
567 synchronization if it does not lead to optimizing outcomes for the JFC.
568 There are enormous challenges associated with integrating or
569 synchronizing DOD, interagency, multinational, nongovernmental and
570 private sector processes and capabilities. Jointness alone, according to
571 the JP 1-02 definition, is not enough to conduct operations as envisioned
572 in the CCJO and joint operating environment (JOE).

573 The JLWP Central Idea is a two part if-then proposition. If the
 574 JLEnt can execute the below tasks according to the Principles of
 575 Logistics listed in Chapter 2.b. the JFC will have the logistic support
 576 necessary to enable freedom of action and operational adaptability.

577 If the JLEnt can:

- 578 • **INTEGRATE** or **SYNCHRONIZE** JLEnt processes and capabilities in
 579 order to **OPTIMIZE** them to best support the JFC
- 580 • Provide **UNITY OF EFFORT** across end-to-end logistic processes in
 581 support of the Joint Force Commander
- 582 • **DELIVER, POSITION** and **SUSTAIN**¹⁰ joint forces from any point of
 583 origin to any point of employment
- 584 • **NETWORK** the Joint Logistics Enterprise in a real-time global
 585 information system with accurate available data, total requirement
 586 and resource visibility, common operational views and shared
 587 perspective with intuitive decision support tools

588 Then the result will be:

- 589 • **SUSTAINED JOINT LOGISTICS READINESS** delivered to the joint
 590 force commander that enables operational adaptability and freedom of
 591 action
- 592 • **IMPROVED TRUST AND CONFIDENCE** that the JLEnt will provide
 593 required capabilities and resources at the right time and place

594 **4.b.1 Integrate/Synchronize, and Optimize the JLEnt**

596 The lack of full integration/
 598 synchronization across the JLEnt
 600 end-to-end process framework
 602 inhibits JLEnt optimization. It is an
 604 obstacle to fully enabling the
 606 supported JFC. Integration
 608 /synchronization and subsequent
 610 optimization must include common
 612 metrics, business rules, and
 614 standardization. Our peacetime
 616 processes must easily transition to
 617 our wartime processes. Implementing these changes will result in better
 618 measures of performance to optimize joint logistic processes that ensure
 619 the JLEnt operates seamlessly from end-to-end and provides the
 620 supported JFC with sustained logistic readiness.

Full optimization of the Joint Logistics Enterprise requires a global view of all logistics requirements, all logistics capabilities and resources, and a process to mitigate global risk by allocating resources to fit national strategies instead of regional priorities.

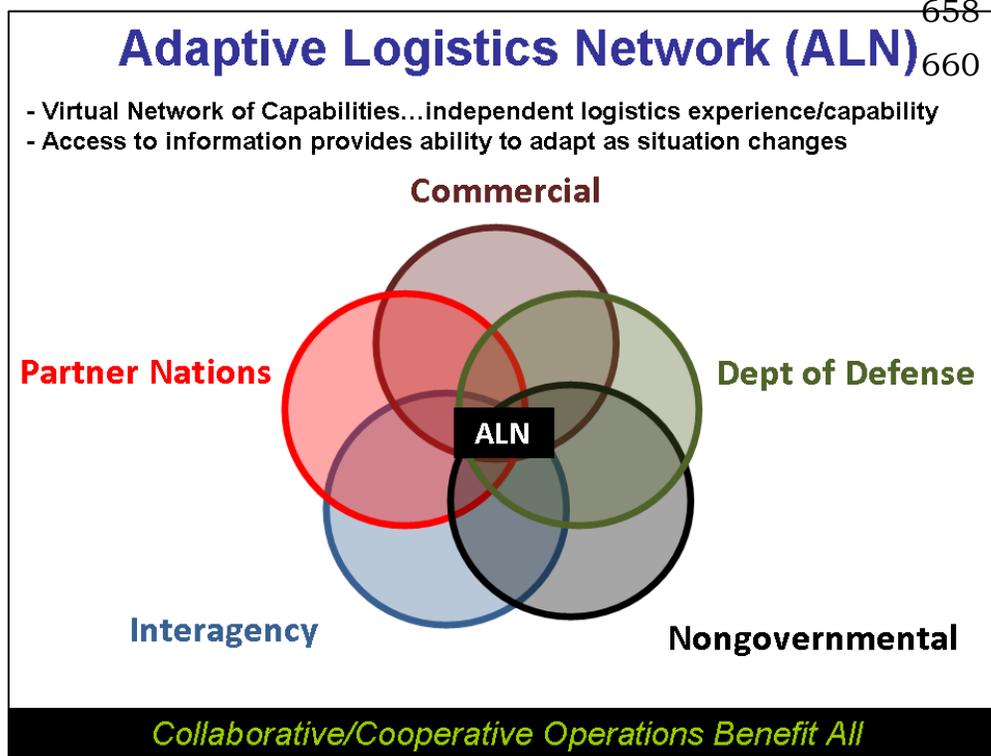
¹⁰ Retrograde, redeployment, and return of material are inherently part of deliver, position, and sustain and require continued studies to identify and optimize process roles, responsibilities and authorities

621 There must be recognition of the need for and challenges
622 associated with interoperability across the JLEnt. New methods to
623 improve interoperability with multinational and interagency partners
624 must be found. Barriers that prevent the joint force from achieving
625 benefits of cooperative actions with the national response framework,
626 other nations, and industry must be removed. A way must be found to
627 improve and widen integration with industry. To achieve this vision,
628 there must be reviews of the policies, procedures, doctrine, and law that
629 hinder opportunities. Logistic operations will require changes in culture,
630 human capital development, and training in contingency and adaptive
631 planning. The joint community must modernize its training and
632 development paths to develop increasingly skilled planners, then provide
633 them with tools that enable effective, agile, and adaptive planning.

634 The CCJO also recognizes an enduring need for America's military
635 to project power rapidly and sustain operations globally. This capability
636 remains critically dependent on sufficient lift and freedom of movement
637 over the global commons. The implication for joint logistics, as a vital
638 imperative in future joint force design, is to ensure capability efforts
639 focus on the ability to project and sustain forces globally. This will
640 necessitate that all of the JLEnt JCAs interface seamlessly and use
641 Enterprise-wide business rules, processes, financial standards/enablers,
642 data standards, shared decision-making, and performance metrics.

643 In certain situations, multinational treaty organizations may serve
644 as important future logistic enablers; not simply as coalition partners,
645 but as organizations with the ability to provide common doctrine, policy,
646 processes, and standardization that makes future multinational logistic
647 operations more efficient and effective.

648 Key to successfully optimizing JLEnt processes and capabilities
649 will be the development of an adaptive logistics network (ALN). As shown
650 in Figure 7, this is not a command and control system, but a
651 collaboration and information sharing capability available to JLEnt
652 partners, nations, NGOs, and commercial entities. A notable difference
653 between the traditional paradigm of military-centric logistic support and
654 support managed under an ALN concept is that ALN will emphasize and
655 enable close collaboration, cooperation and mutual support across the
656 JLEnt.



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Figure 7 - Adaptive Logistics Network

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Its most unique characteristic will be its ability to allow JLEnt partners to more easily access resources provided by local economies. It will reflect a shift towards a more collaborative means of supporting cooperative security or a national response framework, while minimizing military involvement. The ALN concept may portray a collection of communications processes, data and information sources, management tools, and authorities to enable the effective and efficient sharing of information to support agile and adaptive logistic operations. It should also be a central component of logistic planning and support management. It must be designed to reduce the cost of support operations by providing access to logistic information and resources. ALN must support a collaborative approach to logistics for future joint operations.

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People are fundamental to successful enterprise operation. This premise accentuates the importance of managing JLEnt partner careers. Skill enhancing career assignments become increasingly critical as logisticians learn to think about and understand the complex and dynamic challenges of operating the JLEnt. Joint logisticians (civilians, officers, and enlisted) must understand how to plan, coordinate, execute, leverage, assess, and gain synergy from capabilities inherent in Services, agencies, interagencies, nongovernmental and multinational organizations. Logisticians must be capable of speaking a shared

684 language based on core common processes. They must be trained to be
685 agile and knowledgeable of the common core processes, joint information
686 technology (IT) tools, and the Service unique tools regardless of
687 component. Joint logistic education and development must be imbedded
688 in joint, Service, and agency professional military and civilian career
689 courses, and functional schools. The outcome will be a trained
690 logistician, enabled to operate within a common joint frame of reference
691 and lexicon.

692 Future joint logistic forces must be prepared to operate as the
693 military element of an integrated national or multinational task force or
694 at least in close coordination with other agencies of government.¹¹ They
695 must be able to integrate or synchronize logistic capabilities with new
696 and varied partners and at lower echelons than ever before.

697 Lastly, in order to support the JFC, logistic forces must be able to
698 fight and survive on the battlefield. The distributed battlefield of the
699 future presents a special challenge for the logistician. Our ground and
700 air distribution platforms must be more survivable and simpler to
701 operate. Unmanned platforms must be fully investigated to determine
702 value to future operations. Outposts and operating sites must have the
703 ability to quickly establish and recover a defensive capability with
704 minimal manning that safely allows personnel to execute operations.

705 **4.b.2 Deliver/Position/Sustain**

706 The joint logistician of 2016-2028 must simultaneously meet the
707 global needs of one or more JFCs operating across the four basic
708 categories of military activity (combat, security, engagement, and relief
709 and reconstruction). To accomplish this, the JLEnt will be charged with
710 ensuring that joint forces, resources, capabilities, supplies, and
711 equipment are rapidly delivered to the point of need and/or employment,
712 precisely positioned before, during, and after actions with the right
713 quantities; and the logistic enablers to provide sustained logistic
714 readiness.

715 The ability to deliver, position, and sustain joint forces is
716 challenged by a future with reduced American industrial capacity, costly
717 resources, and diminishing overseas support for military operations. We
718 must develop effective rules, tools, processes, and capabilities to enable
719 joint, interagency, multinational, and contracted logistic support without
720 robust logistic footprints.

721 Maintaining global access for the joint warfighter is critical to
722 ensuring the JFC freedom of action and is a basic part of engagement as
723 seen in the CCJO. Our force posture can deter an adversary or at least
724 complicate their actions and diminish his probability of success.

¹¹ CCJO, pg 6

725 The ability to deliver, position, and sustain is critical to providing
726 the JFC, as a supported commander, the means to prevail. It is also
727 essential to ensuring success of relief and reconstruction missions where
728 the JFC may be the supporting commander.

729 Future logistic capabilities must support fully integrated,
730 expeditionary, modular, and networked joint forces that conduct
731 operations that are both continuous and distributed across the four
732 basic categories of military activity. Logistic capabilities must also be
733 developed to support small dispersed regular and irregular units with
734 little to no logistic footprint. Logistic forces must be interdependent,
735 interoperable, and share common processes for core logistic functions.

736 Pre-positioned materiel and forces
737 must be mobile, accessible, and
738 responsive with an optimized process to
739 expedite employment and determine
740 content. They must be designed to
741 support combatant commander theater
742 security cooperation and HA/DR
743 missions, not just contingency combat
744 operations.

Logistic capabilities must be developed to support small dispersed regular and irregular units with little to no local logistics footprint.

745 Future logisticians and warfighters share the responsibility for
746 reducing the logistic footprint. We need new ways to decrease the
747 requirements for our three biggest bulk commodities; fuel, water, and
748 ammunition. We must research innovative technologies to eliminate our
749 dependence on fossil fuels. We must take advantage of the many
750 methods to locally produce and recycle water for individual and bulk
751 consumption. Increased precision and lethality of weapons will offer
752 opportunities to reduce bulk ammunition requirements and optimize
753 support to the Joint Force.

754 An essential part of sustaining our national response capacity is
755 the ability to retrograde, redeploy, and return materiel. It is vitally
756 important that studies and experiments continue to define the many
757 facets of this problem then devise and implement process solutions. Our
758 planning process and doctrine must embrace retrograde and
759 redeployment as a vital step.

760 **4.b.3 Unity of Effort**

761 Unity of effort is the
762 integration or synchronization of
763 logistic processes and capabilities
764 in order to optimize them in
765 support of the JFC's intent.
766 Gaining unity of effort requires
767 identification of roles,
768 responsibilities, and authorities
769 for organizations planning,
770 executing, and controlling tasks along the end-to-end framework, while
771 building agreement around process outcomes. In the future, where DOD
772 may not be the lead agency, coordination and cooperation across the
773 JLEnt is essential to improved logistic support. The doctrine, processes,
774 cultures and capabilities of each Service, agency, nation, or organization
775 must be skillfully aligned to ensure success.

Unity of effort is the coordination and cooperation toward common objectives, even if the participants are not necessarily part of the same Service, nation or organization.

776 Unity of effort also requires integrated or synchronized processes
777 to transcend the strategic, operational, and tactical levels. At the
778 strategic level, legislators, agencies, and defense planners must establish
779 policies, authorities, funding methods, and agreements to enable flexible
780 operational and tactical execution. The strategic level must also be
781 capable of rapidly responding to changing needs at the operational and
782 tactical levels. The operational level logistician must anticipate tactical
783 requirements and be able to communicate them to the strategic level.
784 The diverse set of capabilities offered by all partners must be integrated
785 in a cohesive concept of support. At the tactical level, logistics must be
786 modular, tailorable, and scalable to ensure JFC freedom of action. The
787 three levels of operations are inseparable and must have streamlined
788 communications horizontally (among partners) and vertically (among the
789 levels).

790 Joint logisticians must adapt command, control and coordination
791 processes to the mission and to the capabilities of partners. Unity of
792 effort means logisticians must integrate disparate processes and
793 capabilities from a variety of sources into a cohesive force and
794 communicate, collaborate, and execute operations in a decentralized
795 environment.

796 **4.b.4 Network the Joint Logistics Enterprise**

797 The JLEnt will exist in a future computing environment that is
798 difficult to imagine given today's architectural difficulties in networking
799 joint logistics. Global computing will radically change the world and the
800 JLEnt must adapt to and leverage these advances.

801 The JLEnt will operate across the commercial domain (.com), the
802 Federal Information Sharing Environment (ISE)¹², and the Global
803 Information Grid (GIG) Enterprise Information Environment (EIE)¹³ to
804 include Multinational Information Sharing (MNIS)¹⁴. DOD will provide
805 assistance to JLEnt partners outside DOD so they have the ability to
806 interface with information networks compliant with the DOD Information
807 Enterprise Transition Plan (DIETP)¹⁵ without compromising system
808 security.

809 Information and command and control systems employed by the
810 JLEnt must have the ability to capture, store, and convert Petabytes¹⁶ of
811 data into actionable information. The JLEnt must dynamically support
812 redirection of material in financial processes and applications. To do this
813 the JLEnt network must adapt to a data environment that may far
814 outpace even our most futuristic projections. This demands a data
815 strategy that incorporates authoritative data sources using a philosophy
816 of posting, populating, and sharing data. The JLEnt environment must
817 be open, sharable, and filterable to fit the needs of the user.

818 The JLEnt must adapt to a network environment that increasingly
819 connects every aspect of our digital lives. The proliferation of semantic
820 markup and web services will make the web smarter—enabling
821 intelligent data searches based on natural language so the joint
822 logistician can find information without first knowing where to look for it
823 or even knowing that the knowledge is required. Best of breed
824 applications and technology must be used to develop intuitive joint
825 decision support tools and provide visibility over logistic requirements,
826 resources, processes, and capabilities. Consequently, the JLEnt must
827 closely monitor advances in technology and experimentations within the
828 defense, governmental, commercial and academic arenas.

¹² The President established the Office of the Program Manager for the ISE (PM-ISE) currently under the Office of the Director of National Intelligence (ODNI), to coordinate the development of a common National Response Framework which outlines how information is to be shared in response to all incidents.

¹³ The GIG 2.0 transforms the GIG to a single information infrastructure, standardized across all DOD components, with unity of command and singular Governance processes. The GIG 2.0 focuses on providing access to resources and services in accordance with the mission of the user, or organizational unit. The GIG 2.0 supports joint command and control (C2) and the ability to operate in a Joint manner in the cyber-domain; it aligns the DOD requirements Information Enterprise with our joint warfighting strategy.

¹⁴ MNIS provides community of interest (COI) services and applications for the future GIG EIE to facilitate collaboration among DOD components and foreign nations in support of planning and executing military operations, as well as HA/DR.

¹⁵ The DOD CIO publishes the DIETP on an as-needed basis and each release of the DIETP provides a snapshot in time during which the Department measures transformation progress in achieving the priorities of the DIEA. The DIETP effort fosters collaboration among Defense Information Enterprise priority leads and Components.

¹⁶ A **petabyte** is a unit of information or computer storage equal to one quadrillion bytes (short scale), or 1000 terabytes, or 1,000,000 gigabytes. It is abbreviated **PB**.

829 The JLEnt must leverage advancing technologies, moving rapidly to
830 adopt approved commercial and DOD capabilities such as Internet
831 Protocol Version 6 (IPv6) and cloud computing.

832 Currently there is no information management/exchange system
833 that works across the JLEnt. In order to create this interface, we must
834 establish protocols that enable routine and safe sharing of logistic
835 information. In order to maximize accessibility, it must facilitate data
836 exchange with subscription services to a logistic gateway capable of
837 serving multiple data standards. It must be tailored for use by each
838 combatant command and agency.

839 While the JLEnt may
840 not be a directive command
841 and control environment,
842 the JLEnt must nevertheless
843 demand technological
844 solutions with high

It is critical that we continue evolving concepts, capabilities, and procedures for operating in a degraded or defeated C2/network environment.

845 reliability and resilience. Increasing threats from cyber and space
846 domains can imperil the JLEnt. Cyber resilience, counterattack, and
847 forensics will be essential capabilities to develop. We must develop a
848 self-forming, self-healing network, able to dynamically reconfigure itself
849 without operator intervention and sustain itself under attack.

850 The JLEnt architecture is comprised of more than just technology;
851 it is also people and processes. The joint logistician must possess the
852 ability to operate the JLEnt effectively even in the absence of a
853 technology-dependent decision support environment. Therefore, it is
854 equally vital to invest in the professional development of joint logisticians
855 through education, training, certification, and experience.

856 **5. Outcomes**

857 A network enabled JLEnt that is working to optimize processes and
858 capabilities in order to best deliver, position, and sustain the Joint Force
859 Commander will provide the following outcomes:

860 **5.a. Sustained Joint Logistic Readiness**

Sustained joint logistic readiness for the Joint Force Commander must be undeterred by operational transitions, distance, irregular warfare, distributed forces, cyber attack, limited global access or any challenge presented in the projected joint operating environment.

861

862 Sustained joint logistic readiness achieves all the *Principles of Logistics*
863 and *Logistics Imperatives* listed in Chapter 2b, and is characterized by
864 the following attributes:

- 865 • Predictive and predictable
- 866 • Delivers right-sized logistic capability where and when needed
- 867 • Adjusts to operational transitions and tempo
- 868 • Uninterrupted, continuous, and consistent
- 869 • JLEnt processes and capabilities optimized to JFC needs

870 *Sustained Joint Logistic Readiness* provides the JFC freedom of action
871 and a level of operational adaptability not available to the current force.

872 **5.b. Improved Trust and Confidence**

873 The culmination of Joint Logistics Enterprise
874 support to the joint warfighter will be improved trust
875 and confidence that the Joint Logistics Enterprise
876 will provide required resources at the right time and
877 place. That confidence will give JFCs a measure of
878 assurance that will provide operational adaptability
879 and freedom of action. Integrating or synchronizing
880 JLEnt processes and capabilities in order to optimize them will mitigate
881 variations in performance to increase reliability. Increased JLEnt
882 reliability and responsiveness in delivering, positioning and sustaining to
883 the point of employment enhances the supported JFC's ability to plan,
884 execute, and assess with confidence. Reliability instills trust and
885 confidence in the customer and provides certainty that the Enterprise
886 will meet warfighter demands. If the JFC has accurate knowledge and
887 confidence that the JLEnt will deliver, position, and sustain, then the
888 JFC can freely adjust to changing conditions. Increasing the degree of
889 certainty when logistic requirements will be satisfied decreases
890 operational risk.

891 To gain and maintain trust with our JLEnt partners we must
892 ensure that assigned missions will be consistent with their intrinsic
893 capabilities and limitations. Partner capabilities must not be put at risk
894 for insufficient overall return. As a CCJO precept suggests, the lower that
895 component synergy routinely can be driven, the greater the prospect of
896 developing mutual confidence.

***Operations
move at the
speed of
trust!***

897 **6. JLWP Operational Guideline**

898 The national security
899 challenges depicted in the JOE
900 require a new way to plan,
901 execute, and assess
902 operations. The call out box in
903 this section provides an
904 operational guideline for how
905 the JLEnt should address
906 those challenges. JLEnt
907 partners and subordinate
908 organizations can apply them
909 to specific situations at tactical
910 as well as operational levels.

911 The CCJO central thesis
912 comprises three interrelated
913 ideas that together describe
914 broadly how the joint force will
915 operate:

- 916 • Address each situation on its own terms, in its unique political
917 and strategic context, rather than attempting to fit the situation to a
918 preferred template.
- 919 • Conduct and integrate a combination of combat, security,
920 engagement, and relief and reconstruction activities according to a
921 concept of operations designed to meet the unique circumstances of that
922 situation.
- 923 • Conduct operations subject to a continuous assessment of
924 results in relation to expectations, modifying both the understanding of
925 the situation and subsequent operations accordingly.

926 The JLWP adapts the CCJO central thesis to an operational
927 guideline for the JLEnt in order to keep logistic forces synchronized with
928 the JFC. Both the CCJO central thesis and the JLWP operational
929 guideline describe a process to manage the complexity, uncertainty, and
930 change that will define the future operating environment. They apply to
931 all logistic operations even though the ways and means of accomplishing
932 operations may vary widely according to the situation.

933 When designing joint operations, the JLEnt must understand each
934 operational situation on its own terms and apply its operational plan to
935 the specific conditions of each situation. That concept of operation
936 cannot be based on a rigid template, but instead must reflect the specific
937 conditions of the situation. This has significant implications for doctrine,
938 training, and education.

939 In framing a concept of operations conforming to this situational
940 understanding, the joint force commander and JLEnt must be prepared

1. *Address each logistics challenge on its own terms, in its unique context, rather than attempting to fit the situation to a preferred template.*
2. *Provide and integrate support into a combination of combat, security, engagement, and relief and reconstruction activities with a logistics plan designed to meet the unique circumstances of that situation.*
3. *Conduct logistic operations subject to continuous assessment in relation to expectations; modify both the understanding of the situation and subsequent operations accordingly.*

941 to continually assess and evolve their plan as the operation or campaign
 942 unfolds. Plans must incorporate explicit means of continuously assessing
 943 the results of operations in relation to expectations. It is important to
 944 note that operations will not occur in regular or distinct phases it is
 945 likely military activities will occur and transition simultaneously across
 946 the operational area.

947 In the future, joint operations become an adaptation based on
 948 learning about the situation through action. Executing and supporting
 949 operations become continuous activities informed by feedback.
 950 Regardless of the mission, the more quickly and appropriately the JLEnt
 951 can adapt itself to its situation, the more successful it will be.

952 **7. Common Joint Logistics Operating Precepts**

953 These common joint logistics operating precepts build on ideas
 954 presented in the CCJO and JLWP to help focus joint logistics capabilities
 955 and operations to
 956 better support the
 957 future joint force.
 958 Regardless of the
 959 combination of combat,
 960 security, engagement,
 961 and relief and
 962 reconstruction
 963 activities, these broad
 964 precepts will underlie
 965 all successful future
 966 joint operations. In
 967 effect, these precepts
 968 elaborate on the JLWP
 969 Operational Guidelines
 970 described in the
 971 previous chapter. None
 972 is fundamentally new,
 973 although the emphasis
 974 each receives and how
 975 it is implemented in the
 976 future may change.
 977 Subordinate JICs will
 978 apply these precepts in
 979 greater detail to more
 980 specific situations.

These precepts will underlie future joint operations:

- Achieve and maintain unity of effort within the JLEnt.
- Plan for and manage operational transitions over time and space.
- Focus on operational objectives whose achievement suggests the broadest and most enduring results.
- Combine joint capabilities to maximize complementary rather than merely additive effects.
- Avoid combining capabilities where doing so adds complexity without compensating advantage.
- Drive synergy to the lowest echelon at which it can be managed effectively.
- Operate indirectly through partners to the extent that each situation permits.
- Ensure operational freedom of action.
- Maintain operational and organizational flexibility.
- Inform domestic audiences and influence the perceptions and attitudes of key foreign audiences as an explicit and continuous operational requirement.

981 **Achieve and maintain unity of effort within the JLEnt.**
 982 Delivering, positioning, and sustaining the joint force is more important
 983 and difficult than ever before given the requirement to operate in

984 multiple domains simultaneously and in conjunction with other national
985 agencies, international partners and nongovernmental organizations.
986 The complex challenges of the future will require joint logistic forces to
987 achieve an unprecedented level of unity with other governmental and
988 nongovernmental actors. The JLEnt will integrate with partners whom
989 they have never integrated before and at lower echelons than ever before.
990 In many cases the JLEnt will need to integrate with partners who are
991 technologically less advanced. These non-standard relationships will
992 require the joint logistician to be extremely flexible.

993 Two basic situations apply. Where DOD is the lead agency, the
994 JLEnt will integrate its nongovernmental and multinational partners into
995 its command and control processes in support of the JFC. Where DOD
996 is not the supported agency, some other government agency or nation
997 likely will integrate the national effort. The JLEnt may have to adapt
998 itself to another agency's procedures. Even in this case, the JLEnt,
999 because of its resources and well established planning methods will
1000 provide significant support. Both basic situations will have implications
1001 for communications, organization, procedures and training.

1002 **Plan for and manage operational transitions over time**
1003 **and space.** This precept calls for the JLEnt to be able to continuously
1004 adapt to changing circumstances. The ability to transition from one
1005 military activity to another is essential to operational success. The
1006 future joint logistic force will have to recognize and transition quickly and
1007 smoothly in response to abrupt changes. The JLEnt must recognize that
1008 transitions may not occur uniformly across an operational area. For
1009 example, combat operations and relief and reconstruction activities can
1010 occur in the same battle space but at different times. Each military
1011 activity requires a dramatically different logistical support solution. The
1012 JLEnt's ability to transition quickly can allow the JFC to seize the
1013 initiative in a situation and garner favorable results.

1014 These transitions can involve transfer of authority from one
1015 organization to another, either within the joint force or between the joint
1016 force and another U.S. or international agency. They may involve
1017 organizational rotations, but almost always will require some reorienting
1018 of existing logistic forces.

1019 Transitions must be planned. Precise timing of the shifts cannot
1020 be predicted and surprises inevitably will occur. This will require efforts
1021 to anticipate potential situational transformations. Key to this effort will
1022 be developing mechanisms for quickly reorienting logistic forces despite
1023 the natural inertia of ongoing operations. Retaining key commanders
1024 and commands in place during transitions to avoid abrupt breaks in
1025 operational continuity will be especially vital.

1026 **Focus on operational objectives whose achievement**
1027 **suggests the broadest and most enduring results.** Just as the JFC

1028 focuses its efforts on a center of gravity the JLEnt must focus on those
1029 logistical tasks most essential to achieving operational objectives. In the
1030 case of relief and reconstruction it would mean focusing on those tasks
1031 that would most efficiently create or restore some basic level of
1032 functionality in local institutions and infrastructure. The future
1033 operating environment may not be conducive to simply overwhelming an
1034 operation with materiel superiority. The JLEnt must anticipate the
1035 effects of its logistic action.

1036 **Combine joint capabilities to maximize complementary rather**
1037 **than merely additive effects.** The Services have an evolved set of
1038 diverse capabilities. The essence of joint operations is to match each
1039 Service to its proper situation to contribute most effectively to success
1040 and combine capabilities to gain synergy and compensate for
1041 vulnerabilities.

1042 Achieving synergy requires an understanding of the particular
1043 capabilities and limitations that every member of the JLEnt brings to the
1044 operation. It requires the ability to visualize operations holistically in
1045 order to identify preconditions that enable each JLEnt partner to
1046 optimize its impact and determine how they might contribute. It requires
1047 the ability and willingness to compare alternative JLEnt partner
1048 capabilities from the perspective of combined effectiveness, unhampered
1049 by preconceived notions.

1050 Achieving joint logistic effects requires mutual trust that missions
1051 assigned to elements of the JLEnt will be consistent with their intrinsic
1052 capabilities and limitations; and that JLEnt partner obligations once
1053 accepted will be executed as promised.

1054 **Avoid combining capabilities where doing so adds complexity**
1055 **without compensating advantage.** Joint synergy is not a natural
1056 outcome of creating the JLEnt. It requires explicit effort and is achieved
1057 only at a cost in increased complexity and greater requirements for
1058 training, technical and technological interoperability, liaison, and
1059 planning. When a task is suited to the capabilities of one or two JLEnt
1060 partners, involving other partners merely increases complexity without
1061 adding benefit. Joint synergy should be a means to greater operational
1062 effectiveness and not an end in itself. The joint logistician must
1063 recognize the limits to joint synergy in any given situation and optimize
1064 joint effectiveness within those limits.

1065 **Drive synergy to the lowest echelon at which it can be**
1066 **managed effectively.** The complex challenges of the future operating
1067 environment will demand a more distributed logistic capability, which in
1068 turn will require joint synergy at lower echelons of command. Joint
1069 integration must be achieved routinely at lower echelons—down to every
1070 contributing process. Technological advances make it increasingly

1071 possible to integrate or synchronize processes and capabilities at lower
1072 echelons without incurring the risks and inefficiencies associated with
1073 allocating assets and capabilities. Continued movement towards lower
1074 echelon joint synergy will require JLEnt education and training and
1075 continued development of flexible and adaptable joint planning and
1076 coordination mechanisms. Joint synergy at the lowest levels becomes
1077 more effective through sharing common goals and encouraging
1078 subordinate initiative.

1079 **Operate indirectly through partners to the extent that each**
1080 **situation permits.** The essence of the JLEnt is to operate directly and
1081 indirectly through and with partners. The employment of local logistic
1082 partners is also an essential part of building local national capacity. The
1083 JLEnt can achieve its sustainment objectives by enabling and supporting
1084 various partners. The JLEnt will be challenged to determine how to
1085 support elements outside the confines of a U.S. military force and its
1086 organic support structure.

1087 **Ensure operational freedom of action.** The JOE points out a
1088 number of potential adversaries that will have the capability to contest
1089 U.S. domain supremacy in the air, maritime, land, space, and cyberspace
1090 domains. Future joint forces may increasingly find themselves fighting
1091 for local and temporary superiority as a prerequisite to undertaking
1092 decisive operations. The challenge this presents to the JLEnt is how to
1093 deliver, position, and sustain the force during these engagements to
1094 establish domain supremacy. The JLEnt must enable the JFC freedom
1095 of action during periods of cyber interdiction and/or during a loss of
1096 land, sea, or air lines of communication. This applies to both the area of
1097 operations and in the global commons. Joint logisticians are
1098 fundamental to enabling JFC freedom of action and must gain synergy
1099 from across the Enterprise to establish and maintain JFC freedom of
1100 action, to operate successfully, and survive where we don't have domain
1101 supremacy.

1102 **Maintain operational and organizational flexibility.** The JOE
1103 envisions a wide variety of potential challenges mandating an equally
1104 wide variety of potential organizational solutions. The JLEnt will have a
1105 modular structure that can routinely and smoothly aggregate and
1106 disaggregate into temporary joint formations in response to the nature
1107 and scale of operations. This requires logisticians to train as they will
1108 fight and create more flexible modular organizations with supporting
1109 doctrine, procedures, and technology.

1110 **Inform domestic audiences and influence the perceptions and**
1111 **attitudes of key foreign audiences as an explicit and continuous**

1112 **operational requirement.**¹⁷ In the globalized, information-intensive
1113 environment described in the JOE, gaining the support of key audiences
1114 for U.S. policies and actions will be critical to success in practically any
1115 situation. Because every action sends a signal, the JLEnt will plan and
1116 execute every operation not only for the logistical effect, but also for its
1117 effect on the perceptions and attitudes of key audiences. Logisticians
1118 play a major role in influencing perceptions because of their interaction
1119 with host nation support and local logistics providers.

¹⁷ The U.S. Information and Educational Exchange Act of 1948 (Public Law 402), popularly referred to as the Smith-Mundt Act, prohibits domestic distribution of information intended for foreign audiences.

1120 **8. Implications of Adopting this Joint Logistic** 1121 **Framework**

1123 In keeping with
1125 the CCJO, the JLWP
1127 anticipates a joint
1129 force with greater
1131 adaptability and
1133 versatility able to
1135 cope with the
1137 uncertainty,
1139 complexity, and
1141 persistent conflict
1143 that will characterize
1145 the future operating
1147 environment. The
1149 JLWP has significant
1151 implications for the
1153 way DOD organizes,
1155 trains, and equips its
1157 logistic forces. These
1159 include:

1161 **Build a**
1163 **balanced logistic**
1165 **force.** While combat
1167 will always remain a
1169 foremost military
1171 activity, future joint
1173 logistic forces must
1175 improve their
1177 capability and
1179 capacity to
1181 accomplish a wide
1183 variety of potential
1185 missions. Joint
1187 logistic organizations
1189 can become the
1191 “supported”
1193 operation, with its
1195 units acting as the
1197 “maneuver” forces to
1198 conduct relief and reconstruction or engagement missions. These
1199 activities are every bit as important as combat in successfully meeting
1200 the security challenges of the future. The expected frequency and

Institutional implications of adopting this concept include:

- Build a balanced logistics force.
- Improve knowledge of and capabilities for supporting irregular warfare and conducting operations in a nuclear environment.
 - Improve knowledge of and capabilities for supporting security, engagement, and relief and reconstruction activities.
 - Improve the ability to use logistics technology to full advantage
 - Create logistic forces capable of independently providing support at increasingly lower echelons.
 - Maintain the capability to project and sustain military power over global distances.
 - Improve the ability to support in urban environments.
 - Increase language and cultural capabilities and capacities.
 - Institute mechanisms to deliver, position, and sustain general-purpose forces quickly for new mission sets.
 - Improve the ability to integrate with other U.S. agencies and other partners.
 - Develop innovative and adaptive logisticians down to the lowest levels who are masters of joint logistics.
 - Develop senior leaders who are experts not only in the operational employment of joint logistic forces, but also in how joint logistics affects the development and execution of national strategy.
 - Improve Service and institutional adaptability to deal with rapid change.
 - Improve capability to plan and manage operational transitions over time and space.

1201 duration of these activities will increase and has a potentially dramatic
1202 impact on the required future logistic force structure.

1203 In order to ensure balanced forces we must have the proper mix of
1204 missions given to Active, Reserve, civilian expeditionary and contractor
1205 workforces. Another balancing consideration is redundancy. While an
1206 amount of redundancy adds depth and flexibility to the JFC's options, it
1207 should not be confused with duplication.

1208 A balanced logistic force must be: 1) Versatile – possess a balanced
1209 mix of multipurpose capabilities and sufficient logistics capacity to
1210 provide support across all four categories of military activity. 2)
1211 Expeditionary – able to operate, immediately upon arrival, in austere and
1212 unfamiliar physical and cultural environments. 3) Agile – possess the
1213 physical ability and mindset to rapidly shift from one military activity to
1214 another with minimal delay or degradation of services. 4) Sustainable –
1215 physically available, in the right place at the right time, and properly
1216 equipped with the right tools to support the JFC. 5) Interoperable – able
1217 to build unity of effort with other government agencies, indigenous forces
1218 and international partners.

1219 The importance of balance applies to force posture as well as to
1220 force composition. The geographical shifting of political and economic
1221 interactions critical to U.S. interests implies the need to shift U.S. global
1222 military posture. The JLEnt relies heavily on globally postured logistic
1223 capabilities and enroute infrastructure to deliver, position, and sustain
1224 the JFC.

1225 Balancing our Service logistic forces drives us to address the
1226 question of self-sufficiency versus interdependence. While the Services
1227 necessarily depend on one another, both intrinsically and as a byproduct
1228 of limited resources, the inherent friction and uncertainty of the
1229 operating environment also requires that military units maintain some
1230 level of self-sufficiency to survive and operate during periods when cross-
1231 domain support is unavailable.

1232 Optimizing the balance of the logistic forces has significant
1233 DOTMLPF implications that will require thorough analysis and
1234 experimentation.

1235 **Improve knowledge of and capabilities for supporting irregular**
1236 **warfare and conducting operations in a nuclear environment.** The
1237 JOE forecasts that joint forces will not have the luxury of contemplating
1238 future warfare free of nuclear conflict. We must have a level of logistic
1239 expertise that allows us to survive and sustain in a nuclear environment.

1240 **Improve knowledge of and capabilities for supporting security,**
1241 **engagement, and relief and reconstruction activities.** Logistics forces
1242 should take advantage of considerable historical experiences with these
1243 activities to seek improvement in doctrine, tactics, techniques and
1244 procedures for conducting them. The JLEnt will have to address these

1245 noncombat, but equally vital, activities with force structure, doctrine,
1246 processes and capabilities.

1247 **Improve the ability to use logistics technology to full**
1248 **advantage.** Logistics information systems yield an unprecedented
1249 shared awareness of joint force logistic processes, capabilities,
1250 requirements, and resources. Decision support tools, empowered with
1251 this shared awareness, enable well-prepared logistic professionals to
1252 effectively plan, execute, control, and assess joint logistics in a dynamic
1253 environment.

1254 **Create logistic forces capable of independently providing**
1255 **support at increasingly lower echelons.** Logistic forces will possess
1256 attributes like agility, speed of command and control, cultural sensitivity,
1257 and the ability to operate independently at lower echelons while
1258 possessing access to all the resources of the JLEnt.

1259 **Maintain the capability to project and sustain military power**
1260 **over global distances and within theaters.** The ability to operate
1261 indefinitely at the end of long lines of operation has been a historical
1262 requirement for U.S. forces. Joint forces will have a mix of air and sea
1263 strategic and operational lift capable of staging and delivering forces and
1264 materiel to their destinations, these destinations will include a
1265 combination of traditional airfield and port facilities, but will not be
1266 limited to them. They will have the ability to open airfields and ports,
1267 and construct the expeditionary infrastructure needed to support
1268 operations from land or sea in an austere theater. The JLEnt will have
1269 access to a robust intra-theater distribution capability that can deliver,
1270 position, and sustain the force to the point of need or employment.

1271 **Improve ability to support in urban environments.** Logistic
1272 forces will have an improved ability to face the challenges of urban
1273 combat. Studies and experimentation will provide capabilities to mitigate
1274 the heavy toll urban combat places on ground troops and equipment.
1275 The capabilities and precepts in the JLWP will help the JLEnt confront
1276 urban environments that are complicated by dense populations under
1277 duress and that interact in a myriad of social, economic, religious and
1278 other patterns in a complex infrastructure.

1279 **Increase language and cultural capabilities and capacities.**
1280 Increased emphasis on security, engagement, and relief and
1281 reconstruction activities implies more extensive contact and interaction
1282 with indigenous agencies and populations than does combat. Joint
1283 logistic forces will have a greater language and cultural proficiency. This
1284 higher level of cultural attunement will facilitate acquiring resources
1285 from non-traditional coalition, multinational, local, nongovernment, and
1286 commercial sources. Future logistic forces will have a capability to
1287 rapidly assemble liaison teams with the requisite expertise to effect
1288 multinational cooperation. Educational institutions will conduct

1289 targeted language and cultural familiarization courses for logistic
1290 leaders.

1291 **Institute mechanisms to deliver, position, and sustain general-**
1292 **purpose forces to quickly change missions.** Logistic forces, developed
1293 as proposed in the JLWP, will be able to support joint and Service
1294 general-purpose forces to transition quickly among fundamentally
1295 different types of operational activities. For example, units that have
1296 been engaged in combat may need to transition to a security mission.
1297 The JLEnt will have standing mechanisms that facilitate and accelerate
1298 these transitions to dramatically improve the adaptability of joint forces.
1299 They will have pre-configured logistic capability packages designed to
1300 rapidly assemble and integrate into joint forces to significantly improve
1301 transition responsiveness as forces move from one military activity to
1302 another.

1303 Global pre-positioning of unit equipment sets and materiel will be
1304 mobile, accessible, and responsive with an optimized process to expedite
1305 employment and determine content. They will be designed to support
1306 combatant commander theater security cooperation and HA/DR
1307 missions, not just contingency combat operations.

1308 **Improve the ability to integrate with other U.S. agencies and**
1309 **other partners.** The JLEnt will function in integrated national and
1310 multinational operations. They will execute operations that require close
1311 cooperation, in a variety of standard and nonstandard relationships,
1312 among partners with dissimilar organizational processes and cultures.
1313 The JLEnt will have developed capabilities, processes, business rules,
1314 financial interfaces, and tools/systems that enable the effective execution
1315 of logistics from a joint perspective. Efficiencies and economies will be
1316 gained through the adoption of common flexible processes and
1317 procedures. They will have organizational procedures and technologies
1318 that improve collaboration within ad hoc groups of diverse, often
1319 geographically dispersed members. The JLEnt will have frequent
1320 coordination and exercises with interagency and international partners
1321 to develop and practice common procedures. They will train as they
1322 intend to fight.

1323 **Develop innovative and adaptive logisticians down to the**
1324 **lowest levels who are masters of joint logistics.** The quality of our
1325 joint logistic leaders will be one of the universal advantages, if not the
1326 enduring advantage, of U.S. joint forces. These leaders, with the
1327 capability to address situations from a joint perspective, will exist in the
1328 quality and quantity required. The broadened range of situations that
1329 joint forces will confront will put a premium on the need for joint
1330 logisticians at all levels that are able to respond quickly, flexibly, and
1331 jointly, to the unexpected. The U.S. training and education system will
1332 produce those joint logisticians. The implication is that Service and joint

1333 schools will have adjusted, revised, and coordinated their curriculums to
1334 train and educate joint logisticians that understand and can operate in
1335 the joint environment.

1336 **Develop senior leaders who are experts not only in the**
1337 **operational employment of joint logistic forces, but also in how joint**
1338 **logistics affects the development and execution of national strategy.**

1339 In a future requiring integrated national effort, senior joint logisticians
1340 will focus on more than achieving assigned operational objectives; their
1341 joint logistic experience will contribute to the development of strategic
1342 objectives as well. They will be knowledgeable about the JLEnt role in
1343 the use of the military and all other instruments of national power. The
1344 senior joint logistician will know how the instruments of power interact
1345 with military/logistic forces. Development of this broader strategic
1346 understanding will begin early in the military education process and
1347 continue throughout every military officer's professional development.
1348 Incorporation of issues requiring strategic dialogue with civilian decision-
1349 makers will be routine in every major joint operation.

1350 **Improve Service and institutional adaptability to deal with**
1351 **rapid change.** Logisticians must be agile in effectively addressing new
1352 DOTMLPF requirements and lessons learned to support joint forces. This
1353 broad implication will require a more responsive logistic governance
1354 structure. Specifically, it requires one with an Enterprise level
1355 perspective, appropriate directive authority, and commensurate resource
1356 allocation authority.

1357 **Improve capability to plan and manage operational transitions**
1358 **over time and space.** The key to planning and managing operational
1359 transitions resides in providing commanders at all echelons with a
1360 common operational picture (COP) over the logistic environment. A joint
1361 logistic COP, visible to all commanders at all echelons, will expedite the
1362 decision making process and enhance the ability to quickly adapt. At the
1363 National/Strategic level, a real time COP capability over the logistic
1364 Enterprise will enhance oversight and facilitate planning and preparation
1365 for transitions. JLEnt integration into JFC planning processes will
1366 facilitate decisions at the operational and tactical level to prepare logistic
1367 capabilities for operational transition.

1368 **9. Risks of Adopting this Joint Logistic Framework**

1369 Adopting the framework proposed in this paper carries potential
1370 risks.

- 1371 • **Governance.** Establishing appropriate Enterprise-wide horizontal
1372 and vertical process integration across Services, agencies, combatant
1373 commands, interagencies, multinational entities, and governmental
1374 and nongovernmental organizations may blur command authorities
1375 and responsibilities for outcomes.

- 1376 • **Cyber Risk.** This concept proposes a continued great reliance on
1377 networked automated information systems. The increasing
1378 dependence of DOD on information technologies forebodes
1379 catastrophic consequences given disruption or destruction of those
1380 technologies.
- 1381 • **Globalization.** The JLEnt in this concept encourages a global
1382 Enterprise solution to sourcing JFC requirements. Continued
1383 globalization of the defense industrial capacity may cause logistics
1384 shortfalls as products and services migrate to low cost production
1385 centers decreasing supply and increasing competition.
- 1386 • **Potential Lack of Flexibility.** A logistic Enterprise that emphasizes
1387 precision sustainment, trades information for inventory, and focuses
1388 too much on efficiency in planning and executing logistics could lead
1389 to developing an inflexible force. This poses a risk that future logistic
1390 capabilities could lack the depth to support protracted conflicts and
1391 the agility to support distributed operations.
- 1392 • **Protection and Survivability Risks.** The JLEnt that includes
1393 interagency, commercial, and nongovernmental partners poses
1394 greater susceptibility to attack because of its disparate to non-existent
1395 self-defense capabilities.
- 1396 • **Disparate Multinational and Interagency Capability.** The approach
1397 presented here emphasizes unified action with multinational and
1398 interagency partners. However, integrating multinational and
1399 interagency partners into logistic support efforts presents challenges.
1400 Few multinational partners can logistically support their contingents
1401 in expeditionary operations. There is risk that the JFC will create
1402 unrealistic demands on the logistic capabilities of some JLEnt
1403 partners.

1404 None of the foregoing risks can be wholly eliminated—they are an
1405 inescapable byproduct of the future operating environment. They can be
1406 mitigated by application of balanced judgment to the institutional
1407 implications discussed above, and especially by education and training
1408 that prepare leaders and those they lead for the challenges these risks
1409 present.

1410 **10. Conclusion**

1411 In an environment characterized by increasing uncertainty, rapid
1412 change, complexity, and persistent conflict, logistic capabilities must be
1413 prepared to not only exceed today's performance standards, but to do so
1414 in an era of reduced manning, measured materiel resources, and
1415 constrained funding. The uncertain future will require technical
1416 improvements or adaptations to logistic capabilities that we cannot
1417 foresee. Therefore, we must be vigilant in monitoring the future

1418 environment to anticipate and rapidly address capability shortfalls. We
1419 must face this challenge as an opportunity for improvement.

1420 The JLEnt is the means to achieving this vision of improvement.
1421 To enable the JLEnt it must be networked in a real-time global
1422 information system with accurate available data, total requirement and
1423 resource visibility, common operational views and shared perspective,
1424 with intuitive decision support tools. This network must have the
1425 requisite reliability, accuracy, integrity and availability to ensure all
1426 partners can seamlessly interact. The way to achieve the desired vision of
1427 improvement is to integrate or synchronize JLEnt processes and
1428 capabilities in order to optimize support to the JFC. A networked JLEnt
1429 with optimized processes and capabilities can effectively and efficiently
1430 deliver, position, and sustain joint forces from any point of origin to any
1431 point of employment.

1432 The end state of implementing these logistic concepts and
1433 guidelines will be unity of effort across the JLEnt to optimize processes
1434 and capabilities for the common purpose of providing the JFC improved
1435 freedom of action and operational adaptability.

1436

Appendix A

1437

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1439

Appendix B

1440

Key Indicators of the Military Problem

1441 Listed below are well documented, generally recognized issues that must
1442 be successfully addressed in order to provide logistic support to a future
1443 joint force in applying the CCJO solution and in generating JOC effects
1444 across the basic categories of military activity. Issues were identified by
1445 the Government Accountability Office (GAO), Office of the Secretary of
1446 Defense, the Services, the Joint Staff, USTRANSCOM, USJFCOM, and
1447 DLA. It is the intent that ideas in the JLWP will drive resolution of these
1448 indicators through JLEnt optimization of processes, improvements in
1449 logistic technology, an improved JLEnt network, and increased efficient
1450 platform capacity. Each of these gaps should be addressed in
1451 subsequent production of JICs to further define the requisite tasks,
1452 conditions, and standards necessary for repair.

Insufficiently integrated logistic organizations and processes

- 1454 • Lack of clear definition of the extent of integration required
- 1455 • Lack of common definition of “end-to-end”
- 1456 • Lack of Department-wide strategic and operational process
1457 descriptions and business rules to guide logistic operations
- 1458 • Lack of common performance measures and standards
- 1459 • Insufficient performance measurement capability

Insufficiently integrated logistic planning

- 1461 • Lack of integrated logistic planning across DOD components, other
1462 government agencies, other nations, and nongovernmental
1463 organizations
- 1464 • Inadequate preparedness to operate with other government agencies,
1465 and multinational partners
- 1466 • Poorly integrated and inaccurate supply and demand planning
- 1467 • Lack of a joint logistic planning capability and process
- 1468 • Limited capability to determine and integrate end-to-end movement
1469 requirements for forces and sustainment
- 1470 • Lack of a capability to generate and manage interagency,
1471 multinational, and coalition logistic requirements
- 1472 • Insufficient guidance and ability to plan and support common user
1473 logistic requirements in an expeditionary environment for special
1474 operations, interagency, and multinational forces

1475 **Insufficient rules, tools, and authorities to exercise joint**
1476 **logistics**

- 1477 • Limited ability to manage integrated and aggregated joint logistic
1478 requirements
- 1479 • Less than optimal joint logistic control structure, organization, and
1480 associated authorities
- 1481 • Lack of modeling and simulation tools for logistic planning and
1482 execution

1483 **Shortage of logisticians trained in joint processes and**
1484 **operation**

- 1485 • Lack of logisticians trained in joint logistic operations and designated
1486 for joint logistic operations
- 1487 • Lack of organized approach to education and training to develop
1488 logistic planning competency
- 1489 • Lack of trained logisticians to perform movement control functions
- 1490 • Lack of trained logisticians to perform container management
1491 functions

1492 **Insufficient joint materiel management**

- 1493 • Insufficient commonality and standardization in materiel acquisition
- 1494 • Lack of commonality and standardization of Service assets
- 1495 • Redundant stock levels between wholesale and retail levels and
1496 between the Services
- 1497 • Inability to source critical or urgent requirements from other units
1498 (possibly from other Services) in proximity to point of employment,
1499 where practicable

1500 **Deficiencies in policies and processes**

- 1501 • Redundant and inconsistent logistic policies
- 1502 • Ad hoc retrograde, reconstitution, and return processes
- 1503 • Widely divergent maintenance processes and capabilities below depot
- 1504 • Widely divergent business rules supporting logistic functions
- 1505 • COCOMs and Services lack appropriate guidance, tools, and
1506 processes necessary to execute Contract Support Integration and
1507 Contractor Management (CSI/CM), to assess risk, and to dynamically
1508 plan assigned missions.
- 1509 • Deployable contracting and contractor management work forces are
1510 undersized, and guidance, tools, and processes are immature.

1511 Limitations in distribution capabilities and capacity

- 1512 • Limitations in inter-theater lift, including ability to operate through
1513 austere ports
- 1514 • Limitations in intra-theater lift, including vertical lift
- 1515 • Limitations in land transportation
- 1516 • Limitations in ability to manage and protect lines of communication
1517 (LOCs)
- 1518 • Lack of joint modular distribution system consisting of containers and
1519 platforms to allow for the rapid distribution of supplies from port to
1520 user

1521 Insufficient expeditionary materiel management capabilities

- 1522 • Lack of theater, regional or joint operating area approach to supply
1523 and inventory management
- 1524 • Lack of a flexible and adaptive warehousing and distribution network
- 1525 • Lack of a DOD comprehensive approach to War Reserve Materiel and
1526 pre-positioned stocks
- 1527 • Insufficient accountability, visibility, and transparency in container
1528 management

1529 Limitations in capabilities to manage and execute processes

- 1530 • Insufficient capacity to receive and support combat forces during early
1531 stages of a conflict
- 1532 • Lack of an integrated multi-modal common discrete requirement
1533 capability
- 1534 • Limited ability to control distribution flows
- 1535 • Ineffective process for prioritizing cargo for delivery, precluding
1536 effective use of scarce theater transportation assets
- 1537 • Limited ability to produce a lift-capacity assessment (including assets,
1538 LOCs and terminals) coupled with limited ability to discern and act on
1539 capacity-based movement demands

**1540 Insufficiently interoperable/integrated C2, logistic
1541 management, and financial systems**

- 1542 • Lack of network enterprise services
- 1543 • Logistic systems used to order, track, and account for supplies not
1544 well integrated and cannot provide the essential information to
1545 effectively manage theater distribution
- 1546 • Inability to provide net-centric C2 that is interoperable with joint and
1547 select multinational systems, scalable to mission requirements and
1548 easily deployable
- 1549 • Multiple and unwieldy financial systems, structures

1550 **Insufficient visibility over requirements, assets, and processes**

- 1551 • Lack of a common operational picture (COP)
- 1552 • (Army) Sustainment units lack capability to monitor real time,
1553 networked situational awareness which is supported by a COP at the
1554 platform level. This prevents the logistic operator from rapidly reacting
1555 to deviations to the plan and limits the ability to reduce the logistic
1556 footprint
- 1557 • (Navy) Limited cross-DOD logistic visibility and in-transit visibility of
1558 all logistic commodities (read Navy need for Logistic COP to include
1559 capability mapping)
- 1560 • Lack of logistic visibility into requirements, assets (in process, in
1561 storage, in transit), and processes
- 1562 • Lack of policy, process, and procedures for intra-theater ITV

1563 **Limited communications among logisticians**

- 1564 • Limited communications between various logistic systems
- 1565 • Distances too great for supply activities to effectively transmit data by
1566 radio
- 1567 • Lack of bandwidth to satisfy all system users

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Appendix C

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Joint Capability Area Definitions

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Joint Capability Areas (JCA): are collections of like DOD capabilities functionally grouped to support capability analysis, strategy development, investment decision making, capability portfolio management, and capabilities-based force development and operational planning.

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JCAs were first proposed in the 2003 Joint Defense Capabilities Study. The study called for dividing the Department of Defense's (DOD) capabilities into manageable capability categories (later called areas) as an essential early step to implementing a capabilities-based approach.

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The study recommended dividing capabilities along functional lines because there were fewer of them; they were more enduring, and less likely to change due to new technologies or emerging threats; they minimized redundancies in capability decomposition; provided clearer boundaries to assign systems; and improved management ability to develop and implement capabilities planning.

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The study further stated that the categories adopted by the DOD must enable all Services, Defense Agencies, and Combatant Commands to orient their planning on capabilities, vice platforms or units.

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This original framework was comprised of 22 tier 1 JCAs, 240 subordinate JCAs, and corresponding definitions. These initial JCAs were divided into four distinct capability categories; operational, functional, domain, and institutional.

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To improve the framework, the Deputy's Advisory Working Group (DAWG) approved (22 June 2007) the replacement of the original tier 1 JCAs with nine new functional tier 1 JCAs (Force Application, Command & Control, Battlespace Awareness, Net-Centric, Influence [later changed to Building Partnerships], Protection, Logistics, Force Support, and Corporate Management and Support).

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Below are definitions of the JCAs:

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- (Logistics Tier 1) **Logistics**—The ability to project and sustain a logistically ready joint force through the deliberate sharing of national and multinational resources to effectively support operations, extend operational reach and provide the joint force commander the freedom of action necessary to meet mission objectives.

- 1607 • (Logistics Tier 2) **Deployment and Distribution**—The ability to plan,
1608 coordinate, synchronize, and execute force movement and
1609 sustainment tasks in support of military operations. Deployment and
1610 distribution includes the ability to strategically and operationally
1611 move forces and sustainment to the point of employment and operate
1612 the JDDE.
- 1613 ○ (Logistics Tier 3) Move the Force—the ability to transport
1614 units, equipment and initial sustainment from the point of
1615 origin to the point of employment and provide JDDE
1616 resources to augment or support operational movement
1617 requirements of the JFC.
- 1618 ○ (Logistics Tier 3) Sustain the Force—the ability to deliver
1619 supplies, equipment and personnel replacements to the joint
1620 force.
- 1621 ○ (Logistics Tier 3) Operate the JDDE—the ability to control,
1622 conduct and protect JDDE operations and accomplish
1623 necessary JDDE capability development activities to operate
1624 across the strategic, operational, and tactical continuum
1625 with integrated, robust, and responsive physical,
1626 information, communication and financial networks.
- 1627 • (Logistics Tier 2) **Supply**—the ability to identify and select supply
1628 sources, schedule deliveries, receive, verify, and transfer product and
1629 authorize supplier payments. It includes the ability to see and manage
1630 inventory levels, capital assets, business rules, supplier networks and
1631 agreements (to include import requirements) as well as assessment of
1632 supplier performance.
- 1633 ○ (Logistics Tier 3) Manage Supplies and Equipment—the
1634 ability to maintain accountability and set retention levels of
1635 materiel and equipment.
- 1636 ○ (Logistics Tier 3) Inventory Management—the ability to
1637 control, catalog, forecast requirements, schedule
1638 procurement, manage distribution and overhaul (direct
1639 exchange/repairable exchange), and disposal of materiel.
- 1640 ○ (Logistics Tier 3) Manage Supplier Networks—the ability to
1641 source requirements from the industrial base to meet routine
1642 and surge requirements.
- 1643 • (Logistics Tier 2) **Maintain**—the ability to manufacture and retain or
1644 restore materiel in a serviceable condition.
- 1645 ○ (Logistics Tier 3) Inspect—the ability to determine faults or
1646 verify repairs or determine condition of an item of equipment
1647 based on established equipment maintenance and
1648 serviceability standards.

- 1649 ○ (Logistics Tier 3) Test—the ability to evaluate the operational
1650 condition of an end item or subsystem thereof against an
1651 established standard or performance parameter.
- 1652 ○ (Logistics Tier 3) Service—the ability to conduct preventive
1653 maintenance checks and scheduled maintenance to detect,
1654 correct or prevent minor faults before these faults cause
1655 serious damage, failure, or injury.
- 1656 ○ (Logistics Tier 3) Repair—the ability to restore an item to
1657 serviceable condition through correction of a specific failure
1658 or condition.
- 1659 ○ (Logistics Tier 3) Rebuild—the ability to recapitalize an item
1660 to a standard as nearly as possible to its original condition in
1661 appearance, performance, and life expectancy.
- 1662 ○ (Logistics Tier 3) Calibration—the ability to compare an
1663 instrument with an unverified accuracy to an instrument of
1664 known or greater accuracy to detect and correct any
1665 discrepancy in the accuracy of the unverified instrument.
- 1666 ● (Logistics Tier 2) **Logistic Services**—the ability to provide services
1667 and functions essential to the technical management and support of
1668 the joint force.
 - 1669 ○ (Logistics Tier 3) Food Service—the ability to plan,
1670 synchronize and manage subsistence support to the joint
1671 force to include dining facility management, subsistence
1672 procurement and storage, food preparation, field feeding and
1673 nutrition awareness.
 - 1674 ○ (Logistics Tier 3) Water and Ice Service—the ability to
1675 produce, test, store and distribute bulk, packaged and frozen
1676 water in an expeditionary environment.
 - 1677 ○ (Logistics Tier 3) Basecamp Services—the ability to provide
1678 shelter, billeting, waste management and common user life
1679 support management in an expeditionary environment.
 - 1680 ○ (Logistics Tier 3) Hygiene Services—the ability to provide
1681 laundry, shower, textile and fabric repair support.
- 1682 ● (Logistics Tier 2) **Operational Contract Support**—the ability to
1683 orchestrate and synchronize the provision of integrated contract
1684 support and management of contractor personnel providing that
1685 support to the joint force in a designated operational area.
 - 1686 ○ (Logistics Tier 3) Contract Support Integration—the ability to
1687 synchronize and integrate contract support being executed
1688 in a designated operational area in support of the Joint
1689 Force.

- 1690 ○ (Logistics Tier 3) Contractor Management—the ability to
1691 manage and maintain visibility of associated contractor
1692 personnel providing support to the joint force in a designated
1693 operational area.
- 1694 • (Logistics Tier 2) **Engineering**—the ability to execute and integrate
1695 combat, general, and geospatial engineering to meet national and JFC
1696 requirements to assure mobility, provide infrastructure to position,
1697 project, protect, and sustain the joint force, and enhance visualization
1698 of the operational area, across the full spectrum of military
1699 operations.
- 1700 ○ (Logistics Tier 3) General Engineering—the ability to employ
1701 engineering capabilities and activities, other than combat
1702 engineering, that modify, maintain, or protect the physical
1703 environment. Examples include: the construction, repair,
1704 maintenance, and operation of infrastructure, facilities, lines
1705 of communication and bases; terrain modification and
1706 repair; and selected explosive hazard activities.
- 1707 ○ (Logistics Tier 3) Combat Engineering—the ability to employ
1708 engineering capabilities and activities that support the
1709 maneuver of land combat forces and that require close
1710 support to those forces. Combat engineering consists of
1711 three types of capabilities and activities: mobility,
1712 countermobility, and survivability.
- 1713 ○ (Logistics Tier 3) Geospatial Engineering—the ability to
1714 portray and refine data pertaining to the geographic location
1715 and characteristics of natural or constructed features and
1716 boundaries in order to provide engineer services. Examples
1717 include: terrain analyses, terrain visualization, digitized
1718 terrain products, nonstandard tailored map products, facility
1719 support, and force bed down analysis.
- 1720 • (Logistics Tier 2) **Installations Support**—the ability to provide
1721 installation assets and services necessary to support U.S. military
1722 forces.
- 1723 ○ (Logistics Tier 3) Real Property Life Cycle Management – the
1724 ability to provide for the acquisition, operation, sustainment,
1725 recapitalization, realignment, and disposal of real property
1726 assets to meet the requirements of the force.
- 1727 ○ (Logistics Tier 3) Installation Services – the ability to deliver
1728 selected services not related to real property (or personnel
1729 services) to meet the requirements of the installation
1730 population and mission.

- 1731 • (Force Support Tier 3) **Force Health Protection**—the ability to
1732 sustain and protect the health and effectiveness of the human
1733 centerpiece of the American military.
- 1734 ○ (Force Support Tier 4) Human Performance Enhancement—
1735 the ability to restore, sustain, and optimize human
1736 capabilities and augment human activities to allow the force
1737 to operate at or beyond naturally occurring performance
1738 thresholds.
- 1739 ○ (Force Support Tier 4) Medical Surveillance / Epidemiology—
1740 the ability to collect data, perform health risk assessments,
1741 develop health risk communication and provide
1742 countermeasure options to mitigate risk.
- 1743 ○ (Force Support Tier 4) Preventive Medicine—the ability to
1744 provide interoperable and modular public health capabilities
1745 to deliver protective and preventive countermeasures that
1746 support a fit and healthy force.
- 1747 ○ (Force Support Tier 4) In-Transit Care—the ability to provide
1748 medical care and stabilization during transport of ill and
1749 injured.
- 1750 ○ (Force Support Tier 4) Casualty Management—the ability to
1751 provide incident site first response care, essential care
1752 (Forward Resuscitative), and definitive care in JOA and
1753 supporting theaters.

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Appendix D

1755

Joint Logistics Attributes and Definitions

1756 This appendix describes JCA attributes used to assess capability and
1757 process improvements. These attributes were approved by the Logistics
1758 Senior Warfighter Forum (SWarF) in 2008. Attributes are not developed
1759 for the Installations Support JCA because they were aligned under the
1760 Force Support capability area when the logistic attributes were
1761 developed. These attributes are followed by JLWP terminology
1762 definitions.

1763

Common Attributes

- 1764 • *Agile*—the ability to react quickly and adapt to dynamic conditions
1765 and missions, scalable to provide the required capacity and effects.
- 1766 • *Economy*—the amount of resources required to deliver a specific
1767 outcome. Economy is achieved when support is provided using the
1768 fewest (or most cost-effective) resources within acceptable levels of
1769 risk. At the tactical and operational levels, economy is reflected in the
1770 number of personnel, units and equipment required to deliver
1771 support. Among the key elements of the logistic principle of economy
1772 is the identification of unnecessary duplications and redundancies.
- 1773 • *Effective*—the ability to produce the intended effect or end state via
1774 the application of the most suitable and efficient means.
- 1775 • *End-to-End process framework*—a multi-tiered matrix of processes
1776 that at the top level ranges from concept development at inception
1777 and to disposition at the end. There are multiple subordinate end-to-
1778 end frameworks for every joint capability area, process owner, and
1779 organization.
- 1780 • *Expeditionary*—organized and postured for rapid global deployment
1781 and employment. Capable of strategic and operational movement via
1782 air, sea, rail and at times land, followed by immediate employment in
1783 support of forward deployed elements.
- 1784 • *Integrated*—composed of elements that function together seamlessly
1785 with unity of effort. Capable of substitution without loss of capability
1786 or effectiveness.
- 1787 • *Precision*—the ability to control the accuracy with which delivery of
1788 forces, requirements, and materiel occurs at the right time, the right
1789 place, and the right amount. Precision also addresses the ability of
1790 the JDDE to minimize deviation from acceptable standards as it
1791 reacts to dynamically changing conditions and requirements.
- 1792 • *Responsive*—able to reply or react or answer to queries or requests
1793 with timeliness appropriate to the situation.

- 1794 • *Responsiveness*—providing the right support when it’s needed and
1795 where it’s needed. Responsiveness is characterized by the reliability of
1796 support and the speed of response to the CDR needs.
- 1797 • *Survivability*—the capacity of the JDDE to prevail in the face of
1798 potential destruction. To ensure continuity of support critical
1799 deployment and distribution assets and infrastructure must be
1800 identified and plans developed for its protection. Survivability is
1801 directly affected by protective equipment, dispersion, design of
1802 operational logistic processes and the allocation of forces to protect
1803 critical deployment and distribution assets and infrastructure.
1804 Examples of critical JDDE assets and infrastructure includes aircraft,
1805 ships, trucks, trains, airfields, seaports, railheads, LOCs, bridges,
1806 intersections, movement operations centers, and installations.
- 1807 • *Tailorable*—able to be modified or adjusted within a certain range to
1808 better meet the needs or demands of the circumstances.

1809 **Deployment and Distribution**

- 1810 • *Capacity*—the ability to control the physical quantity, size, mix,
1811 configuration, and readiness of JDDE assets and infrastructure.
1812 Capacity is not a static attribute; it includes the flexibility to expand
1813 or contract Enterprise elements in response to dynamic mission and
1814 requirements changes.
- 1815 • *Reliability*—the ability to provide the degree of assurance or
1816 dependability that the JDDE will consistently meet its support
1817 requirements to specified standards. Reliability instills trust and
1818 confidence of the customer in the certainty that the Enterprise will
1819 meet warfighter demands under clearly established and recognized
1820 conditions.
- 1821 • *Velocity*—the ability to control the speed and direction requirements
1822 are fulfilled by the JDDE. Requirements must be fulfilled at the right
1823 speed. This means that synchronization of the speeds of the various
1824 aspects of the distribution process is required in order to maximize
1825 effectiveness. Velocity also incorporates the ability of elements of the
1826 JDDE to forecast, anticipate, and plan distribution execution. A JDDE
1827 that has sufficient velocity meets performance expectations and
1828 satisfies mission requirements as defined by the supported
1829 commander’s concept of operations.
- 1830 • *Visibility*—the ability to determine the status, location, and direction
1831 of flow for all forces, requirements and materiel in the JDDE. Joint
1832 end-to-end visibility is required over operational capabilities and
1833 capability packages, organizations, people, equipment, and
1834 sustainment moving through the pipeline. It also includes the organic
1835 military mobility forces and commercial augmentation that move
1836 people and things through the pipeline, the financial transactions that

1837 support them, and the nodes and links comprising the pipeline.
1838 Visibility requires the availability of timely, accurate, and usable
1839 information essential to the maintenance of a COP within the overall
1840 distribution Enterprise information network.

1841 **Supply, Maintain, Logistic Services, and Operational** 1842 **Contract Support**

- 1843 • *Attainability*—the assurance that the minimum essential supplies and
1844 services required to execute operations will be available. Attainability
1845 is the point at which the CCDR or JFC judges that sufficient supplies,
1846 support, distribution capabilities, and LOC capacity exist to initiate
1847 combat operations at an acceptable level of risk. It is also that point at
1848 which logistic capabilities exist at a level that will allow the transition
1849 of operations between phases. Some examples of minimal
1850 requirements are inventory on hand (days of operations), critical
1851 support and service capabilities, theater distribution assets (surge
1852 capability), combat service support sufficiency and force reception
1853 throughput capabilities.
- 1854 • *Flexibility*—the ability to improvise and adapt logistic structures and
1855 procedures to changing situations, missions and operational
1856 requirements. Flexibility is reflected in how well logistics respond in
1857 an environment of unpredictability. The logistician’s ability to see and
1858 predict requirements in an ever changing environment gives the joint
1859 logistician more options in supporting operational needs.
- 1860 • *Simplicity*—a minimum of complexity in logistic operations. Simplicity
1861 fosters efficiency in planning and execution, and allows for more
1862 effective control over logistic operations. Clarity of tasks, standardized
1863 and interoperable procedures, and clearly defined command
1864 relationships contribute to simplicity.
- 1865 • *Sustainability*—the ability to maintain the necessary level and
1866 duration of operational activity to achieve military objectives.
1867 Sustainability is a function of providing for and maintaining those
1868 levels of ready forces, materiel, and consumables necessary to support
1869 military effort. Sustainability is focused on the long-term objectives
1870 and requirements of the supported forces. Sustainability provides the
1871 CCDR with the means to enable freedom of action and extend
1872 operational reach. Effective sustainment influences the depth to
1873 which the joint force can conduct decisive operations allowing the
1874 CCDR to seize, retain and exploit the initiative.

1875 **Engineering**

- 1876 • *Enduring/Persistence*—the ability to accomplish missions and
1877 functions over extended time without degrading productivity,
1878 capacity, and effectiveness.

- 1879 • *Precise*—the ability to provide the required capability (or mix of
1880 capabilities) at the correct/required time and location.

1881 **Force Health Protection**

- 1882 • *Accessible*—readily obtained, used, seen, or known.
- 1883 • *Acceptable*—able to satisfy a need, requirement, or standard.
- 1884 • *Accurate*—reflecting reality correctly; in exact conformity to fact;
1885 errorless.
- 1886 • *Adaptable*—able to change or adjust to different circumstances or
1887 conditions.
- 1888 • *Appropriate*—suitable or fitting for a specific purpose or use.
- 1889 • *Complete*—whole or intact, with all needed parts and elements.
- 1890 • *Comprehensive*—inclusive of all relevant factors, issues, and
1891 capabilities.
- 1892 • *Decentralized*—possessing lower echelon elements that are empowered
1893 to function quickly, independently, or autonomously when
1894 appropriate in order to take advantage of short duration opportunities
1895 to advance mission accomplishment.
- 1896 • *Deployable*—structured in such a way as to be able to be transported
1897 to the field environment and rapidly readied for function in
1898 accomplishing its mission
- 1899 • *Durable*—able to accomplish its functions over time without
1900 significant deterioration.
- 1901 • *Ergonomic*—able to maximize productivity and minimize chronic
1902 injury by reducing operator fatigue and discomfort through intelligent
1903 workplace equipment design.
- 1904 • *Flexible*—able to adapt or be modified in order to effectively meet
1905 changing conditions or requirements.
- 1906 • *Interchangeable*—capable of substitution without loss of function and
1907 effectiveness.
- 1908 • *Interoperable*—composed of systems, capabilities, and organizations
1909 that are functional in harmony across all joint force elements. Able to
1910 exchange knowledge and services among units and commands at all
1911 levels.
- 1912 • *Intuitive*—able to be understood accurately through sensing and
1913 perception rather than by objective observation and hard, rational
1914 logic.
- 1915 • *Practical*—able to use common sense, judgment, and reason to find a
1916 simple, direct, and efficient path to the desired end.
- 1917 • *Predictive*—capable of knowing or predicting future conditions in order
1918 to be prepared to operate effectively when they arrive.

- 1919 • *Persistent*—capable of extended functioning in an environment and
1920 delivering intended effects—even in adverse circumstances.
- 1921 • *Relevant*—able to have a practical, germane, and substantial effect on
1922 the matter at hand.
- 1923 • *Reliable*—able to be used for an extended time under specified
1924 operating conditions without loss of critical function or capability.
- 1925 • *Safe*—secure from liability, harm, injury, danger, or risk of mishap or
1926 error.
- 1927 • *Scalable*—designed to be capable of being modified in magnitude
1928 according to the needs of the circumstances.
- 1929 • *Secure*—the ability to protect or ensure the privacy or secrecy of a
1930 system. Implies the ability to guard from danger, risk, or loss from
1931 danger or harm and to make safe from penetration or interception by
1932 unauthorized persons.
- 1933 • *Shared*—held in common (whether conceptually or in electronic or
1934 other media) among individuals, groups, or organizations.
- 1935 • *Standardized*—conforming to established criteria of size, weight,
1936 quality, strength, or functionality to permit substitution without loss
1937 of original function.
- 1938 • *Synchronized*—functioning in a coordinated fashion with specific
1939 actions across multiple agents occurring at the proper time and in the
1940 proper sequence.
- 1941 • *Timely*—delivered or performed when needed to be most effective in
1942 the situation.
- 1943 • *Total Asset Visibility (TAV)*—the ability to know the location,
1944 functionality, and availability of all required resources, whether
1945 human, equipment, supplies, or systems.

1946

1947

JLWP Definitions

- 1948 • *End-to-End (Distribution)*—Joint distribution operations boundaries
1949 begin at the point of origin and terminate at the combatant
1950 commander's designated point of need within a desired operational
1951 area, including the return of forces and materiel.
- 1952 • *End-to-end (Supply)*—The integration/synchronization of all JSE Plan,
1953 Source, Make/Maintain, Deliver, and Return processes; the forward
1954 and reverse flow of materiel, services, information and finances; and
1955 the related JSE capabilities between source of supply and point of
1956 employment.
- 1957 • *Joint Logistics Enterprise*—a matrix system of key global logistic
1958 providers, Combatant Commands, Services, Agencies, the national
1959 industrial base, multinational, nongovernmental/governmental,

- 1960 commercial contractors, etc. and consists of the aggregate capabilities
1961 of their equipment, procedures, doctrine, leaders, technical
1962 connectivity, information, shared knowledge, organizations, facilities,
1963 training and materiel necessary to provide logistic solutions to the
1964 JFC. Furthermore, the JLEnt is a collaborative network of capabilities
1965 that when synchronized is greater than the sum of the Service parts
1966 and can provide an unassailable American strategic advantage (CCJO
1967 page 4) and is critical to achieving the unity of purpose and unity of
1968 effort required to support the JFC.
- 1969 • *Joint Supply Process Owner*—The JSPO is responsible for the
1970 capabilities, rules, tools, and processes associated with all phases of
1971 satisfying a JFC supply requirement, and is organized around the
1972 integration and synchronization of the five primary management
1973 processes of plan, source, make/maintain, deliver, and return.
 - 1974 • *Networked*—the ability to access and use information from all sources
1975 in order to create and share a COP. Able to synchronize across many
1976 links to plan, control, move, and execute through coordinated action.
 - 1977 • *Point of need*—physical location(s) designated by the JFC as receiving
1978 point(s) for forces or commodities, for subsequent employment,
1979 emplacement, or consumption.
 - 1980 • *Point of employment*—the point at which the resource or capability is
1981 consumed or employed.
 - 1982

1983

Appendix E

1984

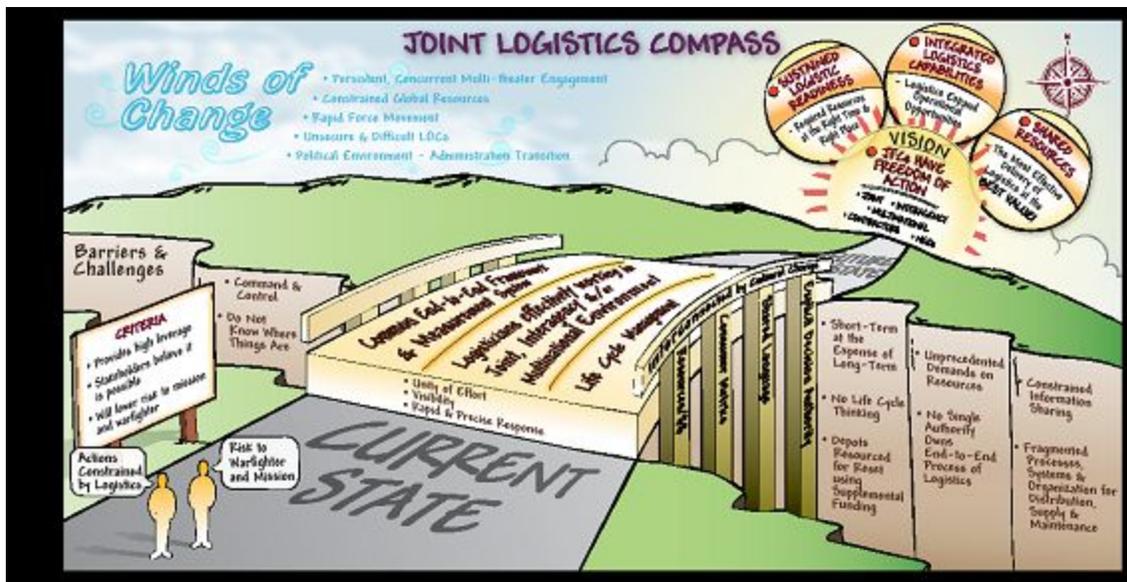
Joint Logistics Compass

1985 An electronic copy of the Joint Logistics Compass can be found at:

1986 https://www.intelink.gov/wiki/Portal:Joint_Staff_J4

1987 Scroll down to “Documents & Pages” and click on “Joint Staff J4
1988 Compass”.

1989



1990

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Appendix F

1992

Implementing the JLWP Central Idea by Tier II JCA

1993

Deployment and Distribution

1994 The deployment and distribution
1995 capability is executed by the joint
1996 deployment and distribution Enterprise
1997 (JDDE). The JDDE is the composite of
1998 equipment, procedures, doctrine, leaders,
1999 technical connectivity, information, shared
2000 knowledge, organizations, facilities,
2001 training, and materiel necessary to conduct joint operations. JDDE
2002 operations comprise a significant portion of joint logistic operations by
2003 providing agile and optimized delivery, positioning, and sustainment of
2004 joint forces from points of origin to required points of employment. The
2005 JDDE must have unity of effort across the JLEnt and be able to conduct
2006 operations with end-to-end visibility, velocity, and a high degree of
2007 precision.

...deliver, position, and sustain the Joint Force Commander exactly when and where needed.

2008 There are three overarching joint deployment and distribution
2009 imperatives:

- 2010 1) design and build the right capacity into the pipeline;
2011 2) exercise sufficient movement control over the pipeline with
2012 the ability to coordinate and synchronize joint deployment
2013 and distribution operations; and
2014 3) deliver, position and sustain the JFC exactly when and
2015 where needed.

2016 The JDDE depends on integrated air, sea, and land deployment
2017 and distribution capabilities. For future joint deployment and
2018 distribution operations to be successful there must be sufficient
2019 movement capacity, supporting infrastructure, and appropriate
2020 individual JDDE
2021 movement control
2022 mechanisms that
2023 are both visible and
2024 enabled through
2025 the JDDE.

2026 Future JFCs
2027 will rely upon the
2028 JDDE to quickly
2029 expand existing
2030 peacetime
2031 distribution



Experimental Craft HSV-X1 Conducts Air Operations

2032 networks. The JDDE must be able to enable closure of early-deploying,
2033 expeditionary joint forces across strategic and theater movement
2034 segments in a single movement from their point of origin to a point
2035 designated by the JFC bypassing, if necessary, traditional ports of
2036 debarkation. Some forces must be able to deploy, operate, and be
2037 sustained from sea bases. The JDDE must be able to rapidly establish
2038 and maintain aerial and sea ports of debarkation and related
2039 infrastructure whenever and wherever needed.

2040 To do so, the JDDE must develop and maintain standing, scalable,
2041 tailorable, and modular theater opening deployment and distribution
2042 enabling packages (leaders, organizations, equipment, procedures,
2043 communications, etc.) that will deploy ahead of, or with the same
2044 rapidity as, the forces they support. These capability packages must have
2045 the ability to integrate with existing theater logistic networks.

2046 Supported commanders must be able to optimize force movement
2047 and sustainment by configuring and deploying integrated, modular,
2048 tailorable, and scalable joint forces in a manner that will minimize
2049 requirements for time-intensive theater joint reception, staging, onward
2050 movement, and integration (JRSOI). This will also expedite redeployment,
2051 retrograde, and reset of joint force capability.

2052 Joint deployment and distribution operations must be inextricably
2053 integrated or synchronized with the global supply chain. The JDDE must
2054 enable continuous sustainment from providers to consumers across all
2055 discontinuous lines of communication. This requires a lean and agile
2056 supply chain capable of balancing inventory levels and positioning stock
2057 along a robust and agile distribution pipeline. The JDDE and the supply
2058 chain must have the ability to deliver, position, and sustain distributed
2059 forces through surge and steady state security operations in an anti-
2060 access environment. The JDDE must be able to employ precision
2061 delivery platforms capable of reaching distributed forces across contested
2062 lines of communication without the advantage of large forward operating
2063 bases. JDDE partners must coordinate supply chain sustainment
2064 distribution services among U.S. forces and host nation support,
2065 interagency, multinational partners, nongovernmental organizations, and
2066 contractors.

2067 Joint movement control across the JDDE is achieved with the
2068 ability to coordinate and synchronize actions and is enabled by
2069 integrating JDDE capability elements (which include processes, business
2070 rules, systems, tools, and organizations) into the JFC formations. These
2071 Enterprise capabilities must be integrated to plan, schedule, apportion,
2072 allocate, route, direct, validate, and adjudicate priorities, and redirect
2073 common-user movements, per the supported commander's intent.
2074 Integrated movement control must facilitate joint force arrival, assembly,
2075 and selective offload distribution functions, especially in theaters lacking
2076 robust ashore ports of debarkation.

2077 The JDDE must employ robust deployment and distribution
2078 movement control capabilities, supported in a net centric environment,
2079 as part of the future global logistic system in order to facilitate an
2080 integrated and collaborative approach to decision-making. This system
2081 must seamlessly and securely share information from both classified and
2082 unclassified networks. In order to do so, the JDDE must leverage the
2083 networked command and control capabilities of its Enterprise partners.
2084 The ability to coordinate and synchronize actions of JDDE organizations
2085 is paramount to JDDE effectiveness and is essential to the management
2086 of JFC deployment and distribution requirements.

2087 Real-time asset visibility tools must provide supported
2088 commanders the ability to coordinate with the JDDE to meet their needs
2089 and priorities. Coordination and synchronization of joint logistics will
2090 enable the JDDE to track, redirect, and reconfigure (consistent with the
2091 supported commander's intent) forces, equipment, supplies, and
2092 support, even while en route, to avoid pipeline nodes and links that are
2093 congested, threatened, damaged, or under attack.

2094 A totally networked end-to-end JDDE must be capable of
2095 conducting inter and intra theater distribution as a single seamless
2096 function. The JDDE must anticipate, forecast, sense, respond, and
2097 deliver using collaborative processes that allow self synchronization
2098 through integrated movement control mechanisms. These efforts will
2099 achieve the unity of effort necessary for success in joint distribution
2100 operations ensuring the JLEnt will deliver the "right things" to the "right
2101 place" at the "right time."

2102 If the JDDE performs as desired, the results will include enhanced
2103 delivery of forces to, - and sustainment of, - the JFC; a rapid introduction
2104 and integration of right-sized theater distribution capabilities seamlessly
2105 linking the joint force with the distribution system; and improved trust
2106 and confidence that the JDDE will deliver.

2107

Appendix G

2108

Implementing the JLWP Central Idea by Tier II JCA

2109

Supply

2110 The ability of the JLEnt to
2111 deliver joint supply capability is
2112 central to future JFCs' ability to
2113 prevail on the battlefield. Supply
2114 operations must be responsive,
2115 flexible, sustainable, survivable,
2116 attainable, and focused on the
2117 JFC. In order to continue
2118 provision of a world class supply
2119 capability in the future, supply
2120 operations must take an
2121 Enterprise approach. Much like
2122 the JDDE, supply must establish
2123 a joint supply Enterprise (JSE). The JSE must contribute to the
2124 evolution of a truly holistic supply chain comprised of Service,
2125 multinational, interagency, commercial, and other partners. The JSE
2126 must also operate with constructive interdependence across the
2127 distribution, maintenance, and supply end-to-end frameworks to
2128 optimize joint supply readiness and provide perfect order fulfillment¹⁸ for
2129 the JFC.



Vertical Replenishment Operations

2130 The JSE will need a joint supply process owner (JSPO) to integrate
2131 or synchronize JSE end to end processes in order to optimize support to
2132 the JFC. The JSPO is responsible for the capabilities, rules, tools, and
2133 processes associated with all phases of satisfying a JFC supply
2134 requirement, and is organized around the integration and
2135 synchronization of the five primary management processes of plan,
2136 source, make/maintain, deliver, and return. The definition of supply
2137 end-to-end framework is: The integration/synchronization of all JSE
2138 Plan, Source, Make/Maintain, Deliver, and Return processes; the
2139 forward and reverse flow of materiel, services, information and finances;
2140 and the related JSE capabilities between source of supply and the point
2141 of employment. In this end-to-end environment, it is the responsibility of
2142 all the JSPO and JSE to cooperate in a collaborative manner to monitor,
2143 execute, and improve their processes towards measurable JSE
2144 performance outcomes. Further, JSPO and JSE partners should be held

¹⁸ Perfect Order Fulfillment: Is simply a metric to measure delivery of the right product, to the right place, to the right organization, in the right condition, at the right time.

2145 accountable for these measurable performance outcomes based on the
2146 JFC's assessment of their effectiveness.

2147 The JSE must fuse authoritative logistic data, develop shared
2148 knowledge and common metrics, strive for standardized
2149 use/commonality of materiel, and develop logistic modeling and
2150 simulation tools. The JSPO will need an instrumented, interconnected,
2151 and intelligent network that links with logistic information systems of the
2152 JSE partners in order to deliver sustained logistic readiness.

2153 Integrated supply planning and networked operations must
2154 provide a common framework for deciding sources of supply, inventory
2155 levels, and transportation modes. JLEnt logistic modeling and
2156 simulation tools that forecast unit deployment and sustainment
2157 requirements must optimize storage and strategic lift assets and
2158 prioritize flow of materiel in the supply chain.

2159 Joint logisticians must adopt a global, regional and theater
2160 approach to inventory management (e.g. joint regional inventory materiel
2161 management strategy). All inventories must be managed as a wholesale
2162 asset until issued at the point of employment. This global wholesale
2163 inventory system will eliminate transfers of ownership, redundant
2164 inventories, and multiple funding mechanisms.

2165 We must build mobile distribution platforms capable of performing
2166 warehousing and distribution operations in diverse environments and at
2167 varying operational tempos.

2168 The challenges and complexities of the future operating
2169 environment require a JSE and JSPO that can close gaps in JLEnt
2170 supply operations and optimize supply processes from end-to-end.

2171

Appendix H

2172

Implementing the JLWP Central Idea by Tier II JCA

2173

Maintain

2174 Maintenance capabilities enable JFC readiness. Future joint forces
2175 must have complete transparency and integration/synchronization
2176 across maintenance, supply and distribution processes in order to
2177 optimize maintenance capabilities. Tools and test equipment must more
2178 precisely pinpoint and predict malfunctions. We must develop common
2179 inter-Service, interagency, and multinational procedures and language
2180 for basic process of repairing and requisitioning. Predictive diagnostics

2181 or autonomies must replace
2182 cyclical maintenance. Future
2183 weapons systems must be
2184 “smart platforms” with
2185 increased mean-time between
2186 failures. These systems must
2187 self-report malfunctions,
2188 automatically order repair
2189 parts, and initiate a
2190 maintenance work order to
2191 correct deficiencies. These



Flight Crew Readies A-10 Thunderbolt

2192 smart platforms must be
2193 linked into command and
2194 control systems so that supply, maintenance, and distribution processes
2195 initiate a work order, requisition and deliver the part to a maintenance
2196 facility at a location nearest to where the equipment is operating,
2197 regardless of unit affiliation. Maintenance organizations must become
2198 more modular and Service interoperable. Maintenance automated
2199 information management systems must have the built in authorities to
2200 process cross-service, multinational, and interagency maintenance
2201 transactions. We need to integrate an inter-Service serialized item
2202 management system in order to provide total asset visibility, enhancing
2203 the capability to gather, organize, and assess equipment information
2204 more effectively.

2205 Maintenance planning during the acquisition process must be
2206 performance based and focus on availability, reliability, maintainability,
2207 and total ownership cost to enhance life cycle management.
2208 Institutionalization of these key life cycle management themes must
2209 become a central focus in the acquisition process. We must develop key
2210 performance parameters that consider maintenance, sustainment, and
2211 energy demand requirements throughout equipment life cycle.
2212 Alternative energy propulsion systems must be researched and

2213 implemented. We must develop generic vehicle architectures that are
2214 open, scalable, and modular. These architectures must be shared across
2215 the Services, multinational and commercial partners. This will lead to
2216 common electronic interfaces, maintenance procedures, and repair parts
2217 across the JLEnt. We must develop common avionics integration
2218 standards to do the same.

2219 We must tailor resources to enable the JFC to deploy and employ
2220 multiple echelons of maintenance capacity while minimizing
2221 redundancies. Maintenance activities must be modular, agile and
2222 adaptive in order to integrate a capability into small units conducting
2223 distributed operations. Public and private sector maintenance
2224 capabilities must be integrated and interdependent.

2225 The JFC's maintenance managers must have information-driven
2226 decision making enablers with timely, accurate and scalable information
2227 of JLEnt maintenance capacity in order to support joint operations.

2228

Appendix I

2229

Implementing the JLWP Central Idea by Tier II JCA

2230

Logistic Services

2231 The joint logistician must be
2232 able to rapidly deliver, position, and
2233 sustain a single joint modular
2234 containerized expeditionary and
2235 forward operating base camp
2236 capability to the JFC. We must
2237 develop life support standards that
2238 lead to common equipment with
2239 scalable service levels to eliminate
2240 redundancy, lower costs, and speed
2241 delivery and set up. Standardized
2242 and scalable morale, welfare, and
2243 recreation assets must be integrated
2244 into expeditionary base camp
2245 packages. The joint base camp must
2246 include integrated modular and
2247 scalable food service assets, water
2248 and ice production, and hygiene
2249 services. Base camp packages must
2250 incorporate common, modular, and
2251 scalable force protection capabilities
2252 that include everything from
2253 sandbags to command and control facilities and equipment.



Marine Logistic Services in Action

2254 The modular base camp capability must be multi-functional to
2255 support all four categories of military activity. The joint logistician must
2256 integrate all logistic capabilities to ensure full service to the commander.
2257 Lastly, the base camp capability must be fully exportable with all the
2258 equipment and organizational requirements to operate independently on
2259 arrival without augmentation from the JFC's maneuver units. This must
2260 include power generation and distribution, roads and grounds
2261 maintenance, waste management, and a mayoral capability.

2262 Further experimentation and study is needed to develop the
2263 requirements and attributes of an at-sea base camp capability to support
2264 joint reception, staging, and onward movement or as a platform for
2265 conducting and/or logistically supporting military operations. This
2266 capability should allow at-sea transfer of equipment and personnel,
2267 selective offload of equipment and organizations, flow-on and flow-off
2268 options, and the ability to offload without putting into port.

2269 Our logistic footprint must decrease in size to support distributed
2270 operations in austere environments and/or to make the joint force more
2271 agile. Key to achieving a reduced footprint is reducing the requirement
2272 for bulk commodities such as fuel and water. We can do this by:

- 2273 • Reducing fossil fuel consumption
- 2274 • Producing energy locally
- 2275 • Recycling waste into energy
- 2276 • Producing, distributing, and recycling water locally
- 2277 • Trading inventory for information

2278 Food service managers must support joint forces around the clock
2279 and in close proximity with the adversary. Inventories and equipment
2280 must be self contained and capable of rapid set up, operation, and tear
2281 down. Food service must meet JFC requirements with a suite of flexible
2282 rations to support a range of feeding requirements from distributed
2283 operations to home station. Small units must have an organic and
2284 expeditionary capability to store and prepare rations, produce water, and
2285 eliminate waste in an austere environment.

2286 Advanced technologies for onsite water production and distribution
2287 must be simplified for use at expeditionary locations. Equipment must
2288 be self contained, light, and easy to set up and operate.

2289 The future mortuary affairs (MA) capability must be modular,
2290 scalable, self-contained and highly mobile. MA support must be fully
2291 synchronized with operations and utilize advanced information-based
2292 systems to facilitate identification, evacuation, and tracking of human
2293 remains.

2294 Logistic services must have the doctrine, equipment, personnel,
2295 and funding to rapidly expand and contract capability at the pace of the
2296 joint force.

2297

Appendix J

2298

Implementing the JLWP Central Idea by Tier II JCA

2299

Operational Contract Support (OCS)

2300 OCS planning and deployable capabilities must grow substantially
2301 and adopt a pre-crisis (Phase 0) approach to planning and fielding a
2302 rapidly scalable, robust “5th force” (contractors) that may equal or
2303 exceed the military footprint. Contracts and contractor automated
2304 visibility (COP) and accountability must become the norm and include
2305 mechanisms to enable the JFC greater flexibility to support current
2306 operations.

2307 Contracted support is integrated into the joint force to deliver
2308 sustained services or supplies when and where needed. Contracting and
2309 contractor management systems must be networked at all echelons of
2310 command. This capability must have appropriate oversight and
2311 management tools to tie contractors to task order detail. The future OCS
2312 capability must operate as a fully integrated sourcing system, with
2313 greater self-synchronization and precision. The adaptive planning
2314 process must drive the assessment of contract support integration and
2315 contractor management requirements across all joint capability areas
2316 through realistic durations and
2317 phased of operations.

2318 Today, OCS policy,
2319 doctrine and processes are
2320 immature and must rapidly
2321 evolve and respond to
2322 warfighting demands. The
2323 future environment will be
2324 characterized by increased
2325 competition for local and
2326 strategic resources. The enemy
2327 will target contracted support
2328 forcing the JFC into balancing
2329 risk to mission and risk to



**Contracted field service representatives
Balad Air Base, Iraq**

2330 forces when planning the use of contractor support. The future operating
2331 environment demands OCS capabilities that can de-conflict, integrate,
2332 synchronize and coordinate common contract support across
2333 interagency, multinational, and other governmental and
2334 nongovernmental organizations. OCS support must be optimized to
2335 achieve economies of scale and still provide effective support. It must
2336 employ all aspects of legal support, transparent and non-transparent
2337 contract support integration, and contractor management systems.

2338 Public law¹⁹ and DOD Directive 3020.49 recognized that OCS is an
2339 immature capability area and has recommended that a program
2340 management approach to the execution of OCS is appropriate. This
2341 approach is defined as “the process of planning, organizing, staffing,
2342 controlling and leading the OCS efforts to meet the JFC’s objectives.” By
2343 applying the appropriate program management principles to OCS,
2344 contracted support of deployed military operations become more
2345 effective, efficient and compliant with law. Program management of OCS
2346 involves improving the way we synchronize, coordinate and integrate
2347 OCS capabilities among diverse communities in a structured fashion to
2348 achieve exponentially greater return on our collective investment. It also
2349 is a means for ensuring OCS is institutionalized across the total force.

2350 The continual introduction of hi-tech equipment, coupled with
2351 force structure and manning reductions, and high operating tempo mean
2352 that military forces will often be augmented with contracted support. We
2353 have every indication this level of dependency on contractors will
2354 continue well into the future. As a result, the contingency contracting
2355 workforce and operating forces required to provide contracting oversight
2356 must be adequately sized, and, contract support integration and
2357 contractor management must be fully integrated into military planning
2358 and operations. OCS training, education, and exercises must become
2359 more robust for both acquisition and non-acquisition personnel. A cadre
2360 of OCS planning experts must be developed at the COCOM and service
2361 staffs.

2362 Future OCS must be technology-enabled and linked to financial
2363 systems. They should be fully networked with C2, intelligence, and
2364 common operational pictures. It must enable the JFC and supporting
2365 contracting and contractor management organizations to ‘sense and
2366 respond’ rapidly in order to adjust and execute contracted support.
2367 Networked OCS capabilities must evolve to provide near real time
2368 contract and contractor visibility, capability, and capacity. Productivity
2369 tools must enable theater business clearance, reach back support, rapid
2370 and efficient contract close out, and include workload metrics and
2371 balancing. OCS lessons learned and operational needs processes must
2372 create a comprehensive, joint, multinational and interagency coordinated
2373 approach that cultivates experimentation, best practices, and innovative
2374 solutions.

¹⁹ Public Law 109-364, John Warner FY 2007 National Defense Authorization Act, Section 854, “Joint Policies on Requirements Definition, Contingency Program Management and Contingency Contracting

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Appendix K

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Implementing the JLWP Central Idea by Tier II JCA

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Engineering

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Engineers provide the essential capabilities of combat, general and geospatial engineering in support of the basic categories of military activity: combat, security, engagement, and relief and reconstruction. The future role of engineers in ensuring successful military operations will only increase in the face of the rapidly changing and complex environment facing the JFC in the 21st century.

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Engineering capability will remain critical in achieving global access by ensuring adequate infrastructure and capacity to receive, prepare, employ, and sustain the force. Engineering capabilities must have the ability to deploy and operate from seabases in support of the JFC.

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This will require the development of engineering force packages and equipment capable of operating from a seabase environment. For forced and early entry operations, engineers assure the mobility essential to friendly forces while denying opposing forces similar options. Engineering capabilities set conditions for friendly forces to expand and adjust force flows, build combat power at will, promote onward movement, and achieve the campaign's objectives rapidly. During the onward movement phase, engineer capability centers on establishing initial lines of communications, expanding bed down capacity, and broadening the theater force protection and mobility baseline and infrastructure, with sustainment and improvement of this infrastructure the focus during the employment phase. Engineering capability throughout all operational phases provides protection and mobility to the force, while simultaneously providing the geospatial foundation on which to build a COP to enhance awareness, understanding, and effective synchronization of the operational environment. Finally, engineering capability focuses on drawdown activities to include base closure and environmental precautions or safeguards.

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New systems will be required so that the joint engineering force can be optimized and tailored to meet these missions and objectives. Networking with "sense and respond" logistic applications will be critical to ensure the best management and timely delivery of mission essential materiel to the engineer force while also keeping engineering equipment mission capable. Coupled with collaborative planning tools, this will create a system that spans from materiel forecasting to execution and provide real-time inventory visibility and the interface between suppliers and users necessary to achieve agility in engineering operations. The development, acquisition and fielding of common engineering platforms

2417 and systems is essential to the effectiveness of the future engineer force.
2418 The overarching goal remains having the right piece of engineer
2419 equipment available for executing the mission with optimal efficiency and
2420 maximum effectiveness.

2421 The future joint
2422 engineering force must be
2423 more responsive and
2424 capable of rapid and
2425 flexible employment against
2426 a dynamic and fluid array
2427 of worldwide peacetime and
2428 wartime missions. Joint
2429 Engineer forces will have
2430 an increasing role in the
2431 nation-building and non-
2432 lethal military assistance
2433 necessary to sustain and
2434 support friendly
2435 governments in support of



Engineers conduct bridging operations in Iraq

2436 the U.S. National Security Strategy. This force will often be acting in an
2437 independent role supporting non-military instruments of national power
2438 engaged in shaping, conflict avoidance, stability, and reconstruction
2439 missions. These complex missions will require a “whole of government”
2440 approach to bring all elements of national power to bear in response to a
2441 wide range of threats, both natural and man-made. Success in
2442 responding to these challenges will require the skillful integration of
2443 engineering capabilities resident across the Services, interagency,
2444 nongovernmental and commercial partners as well as international, host
2445 nation and coalition engineering resources. The aforementioned
2446 operations will present unique challenges due to differing training,
2447 construction standards, techniques and practices. Security and
2448 connectivity challenges will stress the joint engineer force’s ability to
2449 engage in adaptive planning and maintain communications with
2450 Interagency and commercial partners. Additionally, Interagency and
2451 commercial partners may lack the organizational structure and
2452 resources to deploy and sustain their personnel in operations with the
2453 same speed and flexibility as U.S. military engineering forces, requiring
2454 joint engineers to develop and maintain commensurate capabilities in its
2455 forces. Growing future joint engineering capabilities will require new
2456 policies and procedures to achieve unity of effort in engineering missions
2457 between DOD and other organizations while providing mobility,
2458 protection, construction, or other essential engineering services.

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Appendix L

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Implementing the JLWP Central Idea by Forces Support Tier II JCA Medical Logistics

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2463 Medical logistics provides life cycle management of specialized
2464 medical products and services needed to deliver military healthcare to
2465 both the generating and operating force. Medical logistics is relevant to
2466 Joint Logistics because it provides visibility and understanding of logistic
2467 requirements necessary to effectively coordinate and synchronize health
2468 readiness (HR) operations.

2469 HR is a complex, joint
2470 capability required for every
2471 joint force activity and is
2472 intensive in the use of
2473 specialized products and
2474 services. Medical logistics
2475 requirements are driven by
2476 demands from HR activity
2477 performed by medical
2478 elements dispersed across
2479 the joint force. Medical
2480 materiel requirements vary
2481 significantly in terms of items
2482 and quantities based on
2483 mission, population,
2484 geography, endemic and
2485 hostile threat. They are also subject to rapid changes in technology and
2486 clinical processes and often difficult to accurately predict. Medical
2487 logistics requirements and resources are therefore intensively managed
2488 in order to plan, synchronize, optimize, and sustain materiel support.
2489 HR requirements must be presented and balanced with JLEnt support to
2490 the JFC.



**Health Care Professionals Rely on
Medical Logistics in the Combat Zone**

2491 Future medical logistics will be shaped by the challenges of
2492 delivering HR to joint forces operating in complex and uncertain
2493 environments. Medical doctrine, leader development, and materiel
2494 solutions must support the JFC with medical forces whose composition
2495 and employment techniques are modular, scalable, and agile. These
2496 modular elements must be suited to missions of their respective Service,
2497 but tailorable enough to meet the diversity of JFC mission requirements.
2498 This system must have the ability to continuously sense and assess
2499 medical threats and make adjustments to adapt to changes in the
2500 operating environment. HR force structures must be capable of making

2501 rapid changes in medical force composition, allocation, and rapidly
2502 responding to fluctuating patterns of materiel demands.

2503 Medical planners must have a COP and perspective in order to
2504 plan medical logistics sustainment. The medical community must
2505 develop solutions for documented gaps such as inadequate doctrine and
2506 guidance for joint medical interoperability, personnel shortfalls,
2507 insufficient joint training, inadequate demand forecast tools, and lack of
2508 a fully integrated HR information architecture. It must achieve the
2509 desired joint effects through a deliberate and formal governance and
2510 strategy management process that promotes innovation, partnerships,
2511 and operational excellence. The outcome must be future medical logistics
2512 capabilities that enable joint collaboration in the acquisition and life
2513 cycle management of materiel solutions for HR and promote
2514 standardization, interoperability, and sustainability in the delivery of
2515 healthcare. We must develop better modeling and simulation tools for
2516 forecasting joint medical materiel requirements. Defense standard
2517 medical logistics systems must build an integrated, net-centric medical
2518 Enterprise architecture and data strategy that links medical materiel life
2519 cycle management processes in both institutional and operational
2520 settings and captures/anticipates medical logistics demands with
2521 minimal effort by clinical personnel at the customer level. This system
2522 must enable joint force surgeon support to medical logistic planning. It
2523 must relieve the tactical level units of more complex management
2524 functions, provide accurate, actionable medical logistics information for
2525 decision-making within the HR command and control structure and
2526 support the seamless exchange of information with the JLEnt.

2527 A DOD JSPO must develop a process that minimizes investment in
2528 materiel inventory or layers of management. The JSPO must reduce
2529 redundancy, promote synchronization of medical supply chain activities
2530 across organizational boundaries, and optimize performance.
2531 Operational medical logistics units, institutional medical facilities, and
2532 DOD distribution centers must all be capable of serving as nodes for
2533 storage and distribution of medical materiel within a joint financial
2534 framework that eliminates financial transactions before the point of
2535 employment. Such partnerships must include new organizational
2536 solutions to blend Service and JSPO capabilities within an Enterprise
2537 framework.

2538 When these solutions are successfully implemented they will
2539 provide sustained health readiness to the JFC and meet the medical
2540 outcome expectations set by commanders and the American people.

2541

Appendix M

2542

Acronyms

2543

Acronym	Definition
ALN	Adaptive Logistics Network
ASD(L&MR)	Assistant Secretary of Defense for Logistics and Materiel Readiness
APOD	Aerial port of debarkation
CCJO	Capstone Concept for Joint Operations
CONOPS	concept of operations
CONUS	continental United States
CS	Cooperative Security
C2	command and control
DFARS	Defense Federal Acquisition Regulation Supplement
DIETP	DOD Information Enterprise Transition Plan
DLA	Defense Logistics Agency
DOTMLPF	doctrine, organization, training, materiel, leadership and education, personnel, and facilities
DPO	distribution process owner
DX/RX	Direct Exchange/Repairable Exchange
EIE	Enterprise Information Environment
FAR	Federal Acquisition Regulation
GAO	Government Accountability Office
GCSS	Global Combat Support System
GIG	Global Information Grid
HR	Health Readiness
IPv6	Internet Protocol Version 6
ISE	Federal Information Sharing Environment
IT	information technology
IW	Irregular Warfare
JCA	joint capability area
JCIDS	Joint Capabilities Integration and Development System
JDDE	Joint Deployment and Distribution Enterprise
JFC	Joint Force Commander
JIC	Joint Integrating Concept
JLEnt	Joint Logistics Enterprise
JLOTS	Joint Logistics over the Shore
JLWP	Joint Logistics White Paper
JOC	Joint Operating Concept
JOE	Joint Operating Environment
JOpsC	Joint Operations Concept
JOpsC - DP	Joint Operations Concept Development Process
JROC	Joint Requirements Oversight Council
JRSOI	joint reception, staging, onward movement, and integration
JSE	Joint Supply Enterprise
JSPO	Joint Supply Process Owner
JTF	Joint Task Force
LOC	lines of communication
MA	Mortuary Affairs
MNIS	Multinational Information Sharing

Acronym	Definition
NGO	nongovernmental organization
NSAV	Non-Standard Aviation
OCONUS	outside the continental United States
OCS	Operational Contract Support
OSD	Office of the Secretary of Defense
PVO	private voluntary organization
QDR	Quadrennial Defense Review
SPOD	seaport of debarkation
TAV	total asset visibility
USAF	United States Air Force
USD(AT&L)	Under Secretary of Defense for Acquisition, Technology, and Logistics
USJFCOM	United States Joint Forces Command
USMC	United States Marine Corps
USN	United States Navy
USTRANSCOM	United States Transportation Command

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