

2.0 JOINT KNOWLEDGE DEVELOPMENT AND DISTRIBUTION CAPABILITY

2.1. Concept:

The vision of the Joint Knowledge Development and Distribution Capability (JKDDC) is to be the premier provider of relevant, timely, and globally accessible joint knowledge, preparing individuals to support combatant commanders and national security. The JKDDC responsibilities for achieving this vision fall into three primary implementation areas:

- Provide knowledge management leadership in support of the Joint Learning Continuum development
- Develop a global knowledge network as part of the Joint Learning Portal development
- Develop methods for and assist in the assessment of joint individual education and training in support of formal Training Transformation (T2) Block Assessments

Functioning as change agents for joint individual education, training, and self-development, the components of the JKDDC’s Joint Management Office facilitate collaboration among all user agencies to identify relevant knowledge and appropriate distribution systems for meeting combatant commander needs. In accordance with the spiral development concept, the JKDDC will strive to continually update its business process to facilitate better and earlier participation of subject matter experts in front-end analyses, while ensuring it remains consistent with T2 Program objectives. The intent is to accelerate development and identify distribution paths for relevant joint course materials. Where gaps exist in individual education and training, the JKDDC will lead resolution efforts for integration and development of the appropriate tools, methods, and technologies to fill the needs. A Joint Learning Portal (JLP) may be a logical outgrowth of the current JKDDC aspect of T2.

Table of Contents

2.0	Joint Knowledge Development and Distribution Capability	1
2.1.	Concept:	1
2.2.	Capability Component: Joint Knowledge Development and Distribution Capability Joint Management Office.....	2
2.2.1.	Action: Provide Leadership in Joint Knowledge Management	2
2.3.	Capability Component: Requirements and Assessments Support.	7
2.3.1.	Action: Align the JKDDC requirements generation process for individual education and training with the Joint Learning Continuum and DoD T2 guidance, and assist the development and execution of joint individual education and training assessments for the T2 Block Assessments.	7
2.4.	Capability Component: Knowledge Development.	11
2.4.1.	Action: Transform development and management of knowledge.	11
2.5.	Capability Component: Knowledge Distribution.	16
2.5.1.	Action: Develop a global knowledge distribution capability.	16
2.6.	Capability Component: Advanced Concepts.	21
2.6.1.	Action: Provide leadership in the exploration of concepts and research and development (R&D) technologies in support of knowledge development and distribution.	21

2.2. Capability Component: Joint Knowledge Development and Distribution Capability Joint Management Office.

2.2.1. Action: Provide Leadership in Joint Knowledge Management

2.2.1.1. Capability: Joint Knowledge Development and Distribution Capability.

2.2.1.2. Capability Component: Joint Knowledge Development and Distribution Capability Joint Management Office.

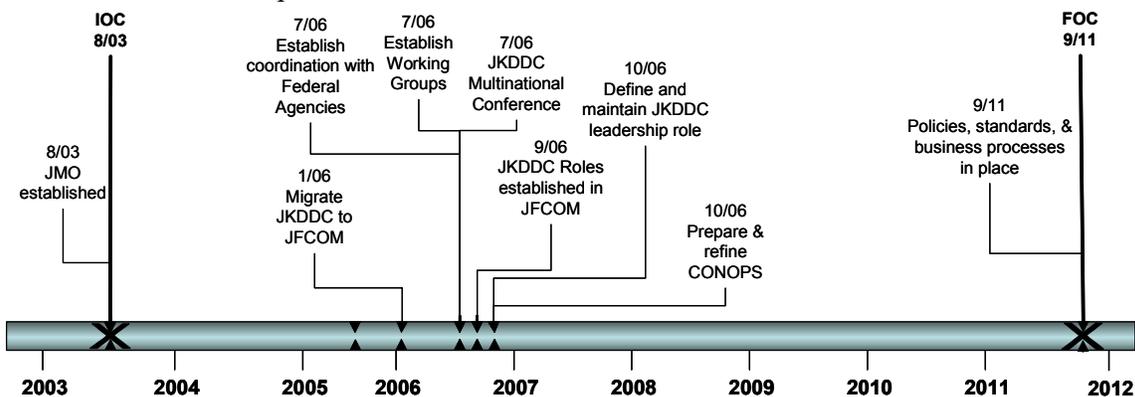
2.2.1.3. Lead Agency: Joint Staff/ J7 (after migration: USJFCOM).

2.2.1.4. Collaboration Agencies: Office of the Deputy Under Secretary of Defense for Readiness, Office of the Under Secretary of Defense for Policy, Joint Staff, combatant commands, Services, combat support agencies, and senior service colleges.

2.2.1.5. 2002 Strategic Plan Action Number: 4.1.2.

2.2.1.6. 2004 Implementation Plan Action Number: 2.2.1.

2.2.1.7. Roadmap:



Action 2.2.1. Figure 1

2.2.1.8. Overall Intent: As part of the overall DoD T2 strategy, the JKDDC is designated a change agent to work collaboratively with COCOMs and partner agencies to foster transformational joint individual education and training practices. The JKDDC JMO helps to provide priority and focus for creating the knowledge needed for the joint warfighter's individual development. The Services have significant equity in this individual development, and the JMO will collaborate with them, via the JKDDC working groups, to help integrate their efforts in joint individual training. The JKDDC JMO will migrate to and become fully integrated with the USJFCOM to ensure a high level of interaction with senior COCOM leadership. The JMO will develop, in coordination with collaboration agencies, a concept of operations (CONOPS) that provides a clear definition of its mission, with examples of the JKDDC roles and responsibilities, as it relates to the T2 Program and individual joint training. The JKDDC also will expand its outreach into interagency, intergovernmental, and multinational

venues.

2.2.1.9. Transition the JMO from Joint Staff J7 management to USJFCOM.

2.2.1.9.1. Intent: The USJFCOM JFWC will fully integrate the JKDDC JMO during FY 06, coordinate efforts to improve individual joint education and training processes, and oversee progress of JKDDC towards its milestones.

2.2.1.9.2. Key Milestone: January 2006

2.2.1.9.3. Measure of Success: Seamless transfer of OPR from Joint Staff J7 to USJFCOM with no disruption in JKDDC support activities.

2.2.1.10. Prepare JKDDC CONOPS to reflect USJFCOM knowledge management strategies and to ensure participation and collaboration across COCOMs and the joint community.

2.2.1.10.1. Intent: Coordinate with T2 leadership to ensure that Joint Management Office strategy for accomplishing knowledge management leadership is consistent with overall T2 strategy and objectives.

2.2.1.10.2. Key Milestone: October 2006, update biennially

2.2.1.10.3. Measure of Success: Following coordination with collaboration agencies, JKDDC strategy and CONOPS are approved and signed by USJFCOM. The approval of the CONOPS will serve as a signal to execute JKDDC's program objectives.

2.2.1.11. Lead DoD efforts in Joint Knowledge Management through effective outreach with stakeholders and external agencies.

2.2.1.11.1. Intent: The JKDDC will ensure that partnerships formed during the initial stand-up phase become fully integrated within USJFCOM during the FY 2006 migration. Major events planned during the migration will serve to showcase the improved capability of JKDDC JMO to support the joint community with individual education and training materials.

2.2.1.11.2. Key Milestones:

2.2.1.11.2.1. Milestone 1. July 2006

2.2.1.11.2.1.1. Measure of Success: Interagency and intergovernmental relationships are established to investigate collaborative and sharable knowledge requirements, content, and delivery capabilities.

2.2.1.11.2.2. Milestone 2. July 2006

2.2.1.11.2.2.1. Measure of Success: A working group is established to identify knowledge needs of interagency, intergovernmental, and multinational personnel,

groups, and agencies when they are working with joint forces.

2.2.1.11.2.3. Milestone 3. October 2006

2.2.1.11.2.3.1. Measure of Success: First annual US military conference co-hosted and conducted by JKDDC focused on multinational individual joint knowledge requirements, issues, and solutions geared toward systemic problem solving and identification of global requirements.

2.2.1.11.2.4. Milestone 4. September 2006

2.2.1.11.2.4.1. Measure of Success: JKDDC JMO roles and responsibilities fully established within USJFCOM as a leader in DoD Joint Knowledge Management.

2.2.1.11.2.5. Milestone 5 (FOC). September 2011

2.2.1.11.2.5.1. Measure of Success. Joint knowledge management, individual education and training policies, and improved business practices are in place and establish standards for tagging knowledge for discovery through a common portal.

2.2.1.12. Define the JKDDC leadership role in joint education and training knowledge management.

2.2.1.12.1. Intent: The JKDDC will seek to define its role across the joint community as the leader in joint knowledge management through effective collaboration. The JKDDC JMO will incorporate feedback from collaborations into the update of JKDDC guiding documents, which include charters and memoranda of agreement/ understanding among partnering organizations. Emphasis will be placed on expanding the existing purview while ensuring continuity with existing JKDDC focus on COCOM requirements for core curriculum development.

2.2.1.12.2. Key Milestone: October 2006

2.2.1.12.3. Measure of Success: Success will be achieved when JKDDC guiding documents are revised to reflect expanded JKDDC roles and responsibilities including draft strategic goals and objectives and memoranda of understanding (MOUs), and the appropriate authorities approve the documents.

2.2.1.13. Initial Operational Capability (IOC)/Full Operational Capability (FOC)

2.2.1.13.1. IOC: Completed August 2003

2.2.1.13.2. FOC: September 2011

2.2.1.14. Dependencies and Linkages: These milestones are dependent upon approval by USJFCOM in collaboration with Joint Staff/J7. Other actions associated with the JKDDC are dependent upon the commencement of this action.

2.2.1.15. Blocks I, II, III, and IV Projected Outcomes.

Supporting Action 2.2.1.	Block I		Block II		Block III		Block IV	
	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011
Transition the JMO to USJFCOM		█						
Revise Strategic Plan/ CONOPS biennially		█	█		█		█	
Lead Joint Knowledge Management outreach				→	→	→	→	→
Define and maintain JKDDC leadership role in Joint education and training				→	→	→	→	→
	Outcomes		Outcomes		Outcomes		Outcomes	
	<ul style="list-style-type: none"> JMO IOC achieved Facilities identified and occupied Contract support team identified and funded Organizational structure identified and adopted Relationships among external organizations defined and codified in documentation Internal guiding policy, responsibilities, and processes identified and codified in documentation Terms of Reference published JMO FOC 		<ul style="list-style-type: none"> Overarching concept of operation developed Begin developing mature business model Improved program management of individual training requirements Improved efficiency in the development and delivery of individual joint training and education JKDDC guidance documents revised and approved Strategy and CONOPS approved JFCOM responsible for JKDDC Interagency, intergovernmental, and multinational knowledge needs identified Initial interagency relationships established Annual conferences focus on multinational problems JMO responsibilities and roles established 		<ul style="list-style-type: none"> Cost effective integration and management of individual and collective training under USJFCOM Continue developing mature business model for transforming individual training Improved efficiency in the development and delivery of individual joint training and education Strategy and CONOPS approved Interagency relationships expanded Annual conferences focus on multinational problems 		<ul style="list-style-type: none"> Demonstrated improvement in individual training and education through mature JKDDC business practices Knowledge management and individual education and training policies establish standards for tagging knowledge for discovery through a common portal Improved efficiency in the development and delivery of individual joint training and education Strategy and CONOPS approved Interagency relationships expanded Annual conferences focus on multinational problems Action FOC 	

Action 2.2.1. Table 1

2.2.1.16. Current Status: Initial Operational Capability (IOC) was achieved with the

establishment of the JMO in August 2003. The JMO reached its early maturation capability in July 2005 after completion of IOC for development and distribution components. To consolidate T2 management functions and ensure achievement of Full Operational Capability (FOC), USJFCOM is developing a plan of action and milestones (POA&M) that will migrate the JKDDC JMO to USJFCOM. The Joint Staff/J7 will continue oversight of the JMO until the transition to USJFCOM is completed in FY 2006. JMO guiding documents, including the charter, memoranda of agreement/understanding, terms of reference, and program plan, and current roles and responsibilities will remain in place and govern operations pending future guidance from USJFCOM.

2.2.1.17. POC: Director, Joint Knowledge Development and Distribution Capability
Joint Management Office, (703) 575-2008, Email: jkddc@jkddcjmo.org

2.3. Capability Component: Requirements and Assessments Support.

2.3.1. Action: Align the JKDDC requirements generation process for individual education and training with the Joint Learning Continuum and DoD T2 guidance, and assist the development and execution of joint individual education and training assessments for the T2 Block Assessments.

2.3.1.1. Capability: Joint Knowledge Development and Distribution Capability.

2.3.1.2. Capability Component: Requirements and Assessments Support.

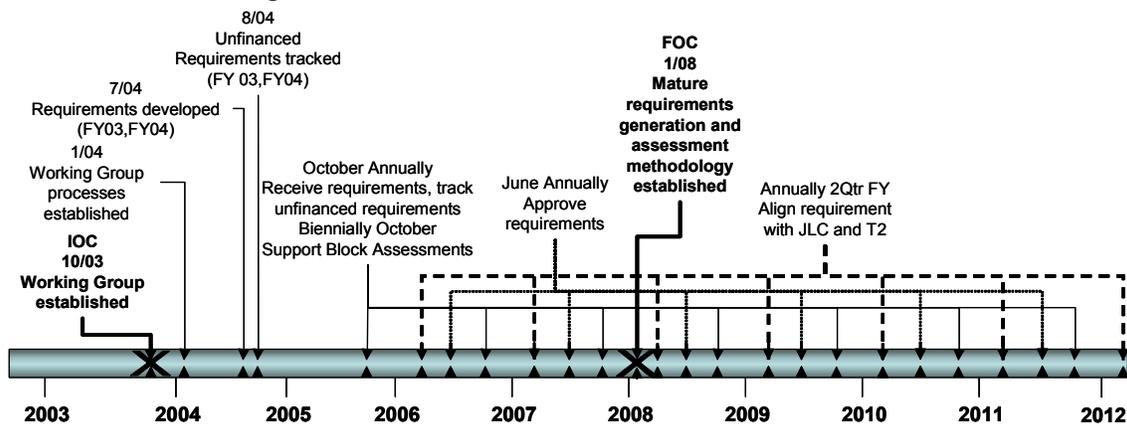
2.3.1.3. Lead Agency: Joint Staff/J7 (after migration: USJFCOM).

2.3.1.4. Collaboration Agencies: Office of the Deputy Undersecretary of Defense for Readiness (Readiness and Training Policy and Programs), Joint Staff, Joint Forces Command, other combatant commands, North American Aerospace Defense Command, the Services (active and Reserve components), combat support agencies, National Guard Bureau, senior service colleges, National Defense University, the Special Operations University, and Combined Forces Command.

2.3.1.5. 2002 Strategic Plan Action Number: 4.1.1, 4.1.2, 4.2.1., 4.2.2.(f) and (g)

2.3.1.6. 2004 Implementation Plan Action Number: 2.3.1.

2.3.1.7. Roadmap:



Action 2.3.1. Figure 1

2.3.1.8. Overall Intent: The Requirements and Assessments Support Component of the JKDDC JMO will continue coordinating and facilitating the requirements generation and implementation process for the JKDDC Working Group that addresses combatant commander needs for individual and staff training. The requirements generation process, established under the management oversight of the Joint Staff/J7, will be revised as warranted during the migration of JKDDC to USJFCOM. During this migration, requirements will continue to be generated and prioritized through the JKDDC Working Group and vetted through the Joint Integrated Process Team for approval by the Senior

Advisory Group. The Component will ensure that requirements generation is congruent with the Joint Learning Continuum and DoD T2 strategy. The T2 Block Assessment plan requires training value assessments to be conducted by the JKDDC and the Joint National Training Capability (JNTC) to evaluate individual, unit, and staff training performance; and to determine individual and event training value. In addition, the Component will assist the JKDDC JMO in identifying common methods to certify the individual competency of active and Reserve component members, and coordinate requirements generation with interagency and multinational organizations.

The JKDDC JMO's Requirements and Assessments Support Component is establishing a formal process with both JNTC and JAEC for identifying the roles, responsibilities, methodologies, and procedures for T2 Block Assessment requirements. The Component will continue to advise the JKDDC JMO on requirements metrics in support of T2 Block Assessments.

2.3.1.9. Coordinate and facilitate Annual Requirements Generation Actions.

2.3.1.9.1. Intent: Continue coordination and facilitation of the JKDDC Working Group. The Working Group consists of representatives from the organizations in paragraph 2.3.1.4.

2.3.1.9.2. Key Milestone: October and June annually

2.3.1.9.3. Measure of Success: Receive requirement requests by October and obtain approval of prioritized requirements by June of each year.

2.3.1.10. Align requirements with the Joint Learning Continuum and DoD T2 strategy.

2.3.1.10.1. Intent: In collaboration with Joint Staff J7 and USJFCOM and other stakeholders of the requirements generation process, align the individual training and education requirements with the Joint Learning Continuum and DoD T2 strategy.

2.3.1.10.2. Key Milestone: Second quarter FY 2006 and updated annually

2.3.1.10.3. Measure of Success: Requirements are congruent with JLC and DoD T2 strategy and validated by Council of Colonels at the annual Worldwide Joint Training and Scheduling Conference.

2.3.1.11. Track unfinanced requirements for courseware development and distribution.

2.3.1.11.1. Intent: Capture funding gaps in joint individual education and training that are identified through the requirements generation process. Analyze unfunded requirements to determine whether they may be addressed as part of the next year's requirements or if they are of significant importance to signal a need for additional or alternative near-term funding. Any unfunded requirements carried forward will be re-evaluated as part of the next year's requirements process. Tracking of unfinanced requirements is linked to the requirements development process that repeats annually. The JKDDC working groups will collaborate on the analysis and prioritization efforts.

2.3.1.11.2. Key Milestone: October annually

2.3.1.11.3. Measure of Success: All unfunded requirements captured and documented for consideration in subsequent fiscal year. Process repeats for each fiscal year's requirements.

2.3.1.12. Support the T2 Block Assessments.

2.3.1.12.1. Intent: In conjunction with the other T2 Capabilities, establish a methodology for and coordinate the assessments of joint individual education and training and provide reports and recommendations to JAEC for incorporation into the biennial T2 Block Assessments.

2.3.1.12.2. Key Milestone: October 2005 and repeated on biennial basis thereafter

2.3.1.12.3. Measure of Success: Metrics established for joint individual education and training assessments. Assessments conducted and reports and recommendations provided to JAEC for incorporation into the T2 Block Assessment.

2.3.1.13. Initial Operational Capability (IOC)/Full Operational Capability (FOC)

2.3.1.13.1. IOC: Completed October 2003

2.3.1.13.2. FOC: January 2008

2.3.1.13.2.1. Measure of Success: A mature requirements generation and assessment methodology is established for providing and improving access to and management of knowledge in support of the Joint Learning Continuum. Block assessment methodology is sufficiently mature and validated to support the Block Assessment FOC in October 2009.

2.3.1.14. Dependencies and Linkages: This action is dependant upon the development and characteristics of the Joint Learning Continuum, T2 strategy, and the Block Assessment plan and schedule.

2.3.1.15. Blocks I, II, III, and IV Projected Outcomes.

Supporting Action 2.3.1.	Block I		Block II		Block III		Block IV	
	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011
Annual Requirements Generation and Approval	[Bar]		[Bar]		[Bar]		[Bar]	
Align requirements with JLC and T2			[Arrow]					
Track unfinanced requirements for courseware development and distribution		[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]
Support T2 Block Assessments	IOC	[Bar]		[Bar]		FOC	[Bar]	[Bar]
	<p>Outcomes</p> <ul style="list-style-type: none"> Initial requirements generation process established for joint individual training and education Working Group Established under Joint Staff J7 to support COCOM requirements for individual training and education FY03, 04, 05, and 06 requirements developed and cross-walked with COCOM Training Capabilities Gaps 		<p>Outcomes</p> <ul style="list-style-type: none"> Requirements received and priorities approved annually October and June respectively Requirements generation process expanded to support emergent requirements Requirements generation process aligned with JLC and T2, and validated by Council of Colonels FY07 and 08 requirements developed and cross-walked with COCOM Training Capabilities Gaps Unfunded requirements captured and documented each FY Block Assessment metrics established for Joint individual education and training, and assessments conducted Block Assessment conducted and reported 		<p>Outcomes</p> <ul style="list-style-type: none"> Requirements received and priorities approved annually October and June respectively Requirements generation process supports emergent requirements Requirements generation process aligned with JLC and T2, and validated by Council of Colonels FY09 and 10 requirements developed and cross-walked with COCOM Training Capabilities Gaps Unfunded requirements captured and documented each FY Mature requirements generation and assessment methodologies established in support of JLC and Block Assessments Block Assessment conducted and reported FOC achieved 		<p>Outcomes</p> <ul style="list-style-type: none"> Requirements received and priorities approved annually October and June respectively Requirements generation process supports emergent requirements Requirements generation process aligned with JLC and T2, and validated by Council of Colonels FY11 and 12 requirements developed and cross-walked with COCOM Training Capabilities Gaps Unfunded requirements captured and documented each FY Block Assessment conducted and reported 	

Action 2.3.1. Table 2

2.3.1.16. Current Situation/Status: FY06 requirements generation and metrics for T2 Block 1 Assessment completed.

2.3.1.17. POC: Director, Joint Knowledge Development and Distribution Capability Joint Management Office, (703) 575-2008, Email: jkddc@jkddcjmo.org

2.4. Capability Component: Knowledge Development.

2.4.1. Action: Transform development and management of knowledge.

2.4.1.1. Capability: Joint Knowledge Development and Distribution Capability.

2.4.1.2. Capability Component: Knowledge Development.

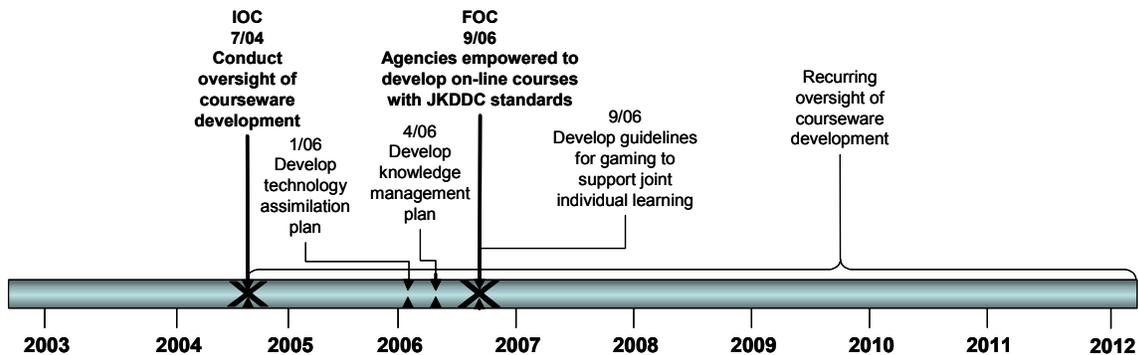
2.4.1.3. Lead Agency: Joint Staff/ J7 (after migration: USJFCOM).

2.4.1.4. Collaboration Agencies: Combatant commands, Services (active and Reserve components), combat support agencies, National Guard Bureau, National Defense University, and senior service colleges.

2.4.1.5. 2002 Strategic Plan Action Number: 4.1.2., 4.2.2.(f) and (g)

2.4.1.6. 2004 Implementation Plan Action Number: 2.4.1.

2.4.1.7. Roadmap:



Action 2.4.1. Figure 1

2.4.1.8. Overall Intent: The long-term goal is to develop individual JKDDC knowledge courseware in support of Department of Defense capabilities-based criteria. The JKDDC initially established a courseware development capability. The next step is to transfer the responsibilities and capabilities for courseware development from JKDDC to external organizations. The JKDDC JMO's Development Component will collaborate with external organizations (Services, Centers of Excellence, etc) to identify methodologies, plans, and standards for the transfer. This component will work with USJFCOM in coordination with the DoD Joint Staff/J7 to establish a knowledge development process for JKDDC responsiveness to short-fused emergent requirements.

2.4.1.9. Conduct oversight of courseware development.

2.4.1.9.1. Intent: Task orders in place to manage and oversee the analysis, design, development, testing, and acceptance of joint individual education and training courseware for each fiscal year. The fiscal year development lifecycle commences following requirements definition and approval. As part of these efforts, work with sponsors, lead development agents, collaborating agents, and vendors during the

development lifecycle.

2.4.1.9.2. Key Milestone: July 2004 and continuously thereafter.

2.4.1.9.3. Measure of Success: Task orders in place to commence management and oversight of the analysis, design, development, testing, and acceptance of joint individual education and training products. This represents Initial Operational Capability for the Knowledge Development component.

2.4.1.10. Provide a plan to assimilate leading-edge development and delivery technologies that can rapidly harvest and collate knowledge content and information, and rapidly produce effective courseware accessible by individuals anytime, anywhere.

2.4.1.10.1. Intent: Incorporate the best of breed technologies including Advanced Distributed Learning (ADL), Sharable Content Object Reference Model (SCORM) conversion tools, authoring systems, and learning content management systems into the development of tailored training and education materials. This component will promulgate processes in an effort to accelerate and transform the development and delivery of distributed learning content beyond what is achieved using traditional instructional systems design practices.

2.4.1.10.2. Key Milestone: January 2006

2.4.1.10.3. Measure of Success: Process flows, guidelines, and standards defining JKDDC methodology are distributed for joint knowledge provision through the assimilation and management of knowledge objects.

2.4.1.11. Develop a plan to serve as the knowledge management source for all joint individual training requirements to include a repository of knowledge elements and the instructions to access them.

2.4.1.11.1. Intent: The JKDDC will lead the joint community in complying with DOD Instruction 1322.hh, *Development, Management, and Delivery of Distributed Learning* (when approved), which will govern the registration and discovery of sharable content objects (SCOs). The promulgation of the JKDDC plan for providing the joint community with access to a JKDDC repository of joint knowledge is essential to JKDDC outreach to knowledge developers who seek SCOs for reuse as well as learners desiring access to online SCORM-compliant courses.

2.4.1.11.2. Key Milestone: April 2006

2.4.1.11.3. Measure of Success: Business rules and guidelines are published for accessing JKDDC repository of knowledge objects and SCOs.

2.4.1.12. Develop guidelines for incorporating gaming to support joint individual learning.

2.4.1.12.1. Intent: To ensure that learning effectiveness is maximized during JKDDC

learning activities, a number of learning objectives will be accomplished using on-line games and simulations. This objective will address how the effectiveness of JKDDC course offerings could be enhanced through the use of instructional strategies involving on-line gaming.

2.4.1.12.2. Key Milestone: September 2006

2.4.1.12.3. Measure of Success: Guidelines and standards are published for achieving learning objectives through the incorporation of gaming strategies.

2.4.1.13. Initial Operational Capability (IOC)/Full Operational Capability (FOC)

2.4.1.13.1. IOC: Completed July 2004

2.4.1.13.2. FOC: September 2006

2.4.1.13.2.1. Measure of Success: Other agencies and organizations are empowered to develop on-line courses using JKDDC standards, guidelines, and templates.

2.4.1.14. Dependencies and Linkages: The accomplishment of this action is dependent upon each of the JKDDC actions being accomplished. In addition, the development of the core curriculum with linkages to individual competencies is dependent on initiatives by the Joint Staff to develop joint core competencies prior to FOC of this component action.

2.4.1.15. Blocks I, II, III, and IV Projected Outcomes.

Supporting Action 2.4.1.	Block I		Block II		Block III		Block IV	
	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011
Conduct oversight of courseware development								
Provide a plan for assimilating leading edge development and delivery technologies								
Establish processes to transition courseware to owner organizations								
Develop a plan to serve as the knowledge management source for all joint individual training requirements								
Develop guidelines for incorporating gaming to support joint individual learning.	IOC				FOC			

Outcomes	Outcomes	Outcomes	Outcomes
<ul style="list-style-type: none"> Processes approved for Task Order Requests, design and development efforts, transfer of courseware to distribution, transition of courseware to owner organizations, and sustainment of courseware Knowledge Development IOC achieved Majority of FY03 and 04 courseware completed 	<ul style="list-style-type: none"> Task orders in place for management and oversight FY05 and 06 course development requirements accepted, remaining FY03 & 04 courses completed Standards established for knowledge object development and management Technology assimilation plan completed Knowledge management plan with rules and guidelines published Gaming guidelines and strategies published Agencies empowered to develop on-line courses using JKDDC standards (FOC Achieved) 	<ul style="list-style-type: none"> Task orders in place for management and oversight FY07, 08, and 09 course development requirements completed Agencies develop on-line courses using JKDDC standards 	<ul style="list-style-type: none"> Task orders in place for management and oversight FY10 and 11 course development requirements completed Agencies develop on-line courses using JKDDC standards

Action 2.4.1. Table 1

2.4.1.16. Current Situation/Status: Knowledge Development IOC achieved. Development roles and responsibilities defined. High-level and detailed development and distribution processes documented. Task Orders for consulting services and for analysis, development, and distribution awarded. Development of 20 courses identified by FY03 and FY04 requirements were completed in December 2005. Transition to strategies for courseware development based on the assimilation of knowledge objects into sharable content objects occurred as part of the December 2005 completion of two courses from the FY05 requirements list.

2.4.1.17. POC: Director, Joint Knowledge Development and Distribution Capability Joint Management Office, (703) 575-2008, Email: jkddc@jkddcjmo.org.

2.5. Capability Component: Knowledge Distribution.

2.5.1. Action: Develop a global knowledge distribution capability.

2.5.1.1. Capability: Joint Knowledge Development and Distribution Capability.

2.5.1.2. Capability Component: Knowledge Distribution.

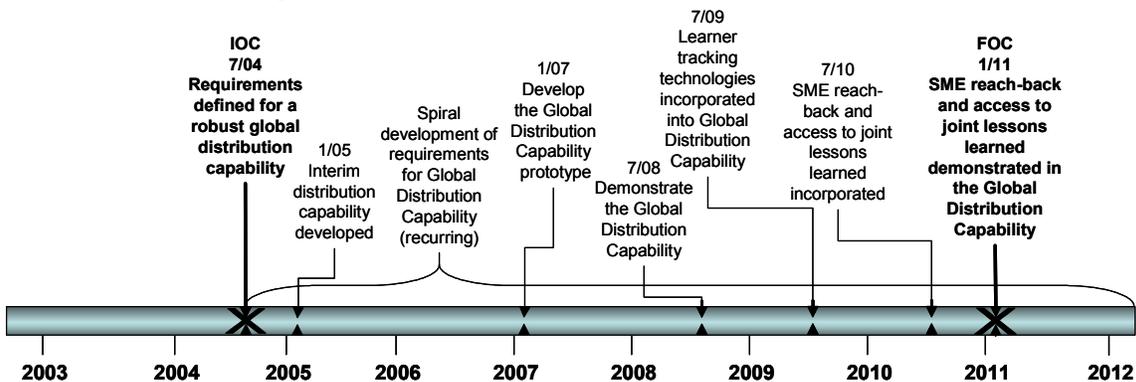
2.5.1.3. Lead Agency: Joint Staff/J7 (after migration: USJFCOM).

2.5.1.4. Collaboration Agencies: Office of the Secretary of Defense/Director of Operational Test and Evaluation (OSD/DOT&E), combatant commands, Services (active and Reserve components), combat support agencies, National Guard Bureau, National Defense University, and JNTC JMO.

2.5.1.5. 2002 Strategic Plan Action Number: 4.1.2., 4.2.2.(g)

2.5.1.6. 2004 Implementation Plan Action Number: 2.5.1.

2.5.1.7. Roadmap:



Action 2.5.1. Figure 1

2.5.1.8. Overall Intent: Distributed technologies are providing new and significantly effective ways to address both individual and collective education and training requirements. The JKDDC is the premier resource and clearinghouse for joint individual training and education development and delivery options. It serves as the central organization and independent broker for leveraging course content and technical delivery systems across all COCOMs and Services. Its goal is to aggressively develop and promote a transformational distribution system and reduce redundancies. To achieve this, the JKDDC JMO, in collaboration with the JNTC JMO, is focused on establishing a global distribution network that has the flexibility to incorporate improved new or emerging technologies and retire less efficient or obsolete systems without loss of data. In the near term, with JNTC as the lead, JKDDC will participate in the development of a common operational architecture that provides inter-operability of live, virtual, and constructive training systems. Primarily, JKDDC will coordinate the integration of SCORM, High Level Architecture (HLA), and the JNTC Simulation Federation

Architecture. The JKDDC JMO's Knowledge Distribution Component will ensure that the distribution system connects seamlessly to interagency, intergovernmental, and multinational systems to permit the leveraging of technical capabilities and best practices from partnership sources. The Component also will ensure that the global distribution system allows for an exchange of knowledge across the joint community of active, Reserve and National Guard, and DoD civilian personnel.

2.5.1.9. Define requirements for a robust global distribution capability.

2.5.1.9.1. Intent: Gather requirements for development of the Global Distribution Capability for joint individual education and training courseware

2.5.1.9.2. Key Milestone: July 2004 (IOC) (completed) and updated in accordance with the T2 spiral development process

2.5.1.9.3. Measure of Success: Requirements for the Global Distribution Capability are documented in Initial Capabilities Document (ICD).

2.5.1.10. Develop the Global Distribution Capability prototype.

2.5.1.10.1. Intent: Develop a prototype network architecture in collaboration with JNTC that is fully interoperable with Services learning management systems and the DISA global information grid.

2.5.1.10.2. Key Milestone: January 2007

2.5.1.10.3. Measure of Success: Distribution of JKDDC knowledge objects and courseware across Internet, Non-secure Internet Protocol Router Network (NIPRNET), Secure (SIPRNET), and other networks as necessary to reach the intended audience.

2.5.1.11. Demonstrate the Global Distribution Capability.

2.5.1.11.1. Intent: Using an evolutionary spiral development model, develop a global network for the distribution of joint individual education and training. Effort will focus on providing global, anytime access to joint individual education and training content, and initial incorporation of technologies to automate tracking of user data into both systems and courseware.

2.5.1.11.2. Key Milestone: July 2008

2.5.1.11.3. Measure of Success: Demonstrate that the Global Distribution Capability is fully interoperable and compliant with DISA standards for knowledge access across the global information grid.

2.5.1.12. Incorporate standards-based learner tracking technologies into the global distribution capability.

2.5.1.12.1. Intent: Begin initial integration of the Global Distribution Capability with

existing approved DoD systems based on established technology standards to ensure system interoperability. This effort will focus on integration with service personnel management systems to enable the automated tracking of user education and training data, and the automated registration and authentication of system users.

2.5.1.12.2. Key Milestone: July 2009

2.5.1.12.3. Measure of Success: Automated tracking functionality developed and integrated into the Global Distribution Capability and demonstrated. Standards-based information sharing functionality incorporated into the Global Distribution Capability, service personnel management systems, and other approved DoD systems as necessary to enable interoperable operation. Requirement updates documented and provided as input for subsequent development spirals. Efforts are coordinated with JAEC Action 4.6.1.

2.5.1.13. Incorporate subject matter expert (SME) reach-back and access to joint lessons learned capabilities

2.5.1.13.1. Intent: Enable warfighter access to subject matter experts and Joint lessons learned based on immediate knowledge requirements.

2.5.1.13.2. Key Milestone: July 2010

2.5.1.13.3. Measure of Success: Technology inserted to allow on-line collaboration with joint lessons learned subject matter experts in both synchronous and asynchronous modes.

2.5.1.14. IOC: Completed July 2004

2.5.1.15. FOC: January 2011

2.5.1.15.1. Intent: The distribution capability will integrate with technologies and electronic systems used to support the Joint Training System, joint- and service-distributed learning systems, service personnel management systems, and other DoD systems to allow for the tracking and use of information relating to individual joint education and training experience. Other unique functions will include: automated learner tracking and assessment, allowing joint individual education and training experience to be tracked in service personnel management systems; advanced content management and archiving capabilities that reduce costs and accelerate new courseware development through the reuse of existing training content; and knowledge management capabilities that integrate with the Joint Training System and other DoD systems.

2.5.1.15.2. Measure of Success: Subject matter expert and joint lessons learned reach-back capability developed and incorporated into the Global Distribution Capability. Demonstration of subject matter expert access through on-line collaboration with the learner and incorporation of lessons learned in the courseware development process.

The Global Distribution Capability enables users to access joint individual education and training content anytime on a global scale. Services are able to identify participants, measure success, and track completions.

2.5.1.16. Dependencies and Linkages: This action is dependent upon the Requirements Support Component providing support in the identification and prioritization of content requirements from stakeholders; the Knowledge Development Component providing the content to be distributed; and the Advanced Concepts Component providing support by identifying required technologies, methods, strategies, and tools, and by performing risk assessments to ensure the technology maturity necessary to meet development guidelines. This action is linked to Action 3.3.2. for live, virtual, and constructive (LVC) training infrastructure and interoperability, Action 3.5.1. for LVC joint training policy, Actions 3.4.1. and 4.5.1. for lessons learned, and Action 4.6.1. for learner tracking technologies.

2.5.1.17. Blocks I, II, III, and IV Projected Outcomes.

Supporting Action 2.5.1.	Block I		Block II		Block III		Block IV	
	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011
Define requirements for a robust global distribution capability and update IAW spiral development process	[Bar from FY2004 to FY2005]		[Bar from FY2006 to FY2011 with arrow]					
Develop interim distribution capability	[Bar from FY2004 to FY2005]							
Develop the Global Distribution Capability prototype	[Bar from FY2004 to FY2005]							
Demonstrate the Global Distribution Capability			[Bar from FY2007 to FY2008]					
Incorporate standards-based learner tracking			[Bar from FY2007 to FY2009]					
Incorporate SME reach-back capabilities and access to joint lessons learned	IOC				[Bar from FY2009 to FY2010]			FOC

Outcomes	Outcomes	Outcomes	Outcomes
<ul style="list-style-type: none"> • Knowledge Distribution IOC achieved • Initial joint courseware available via interim distribution capability • Global distribution capability development underway 	<ul style="list-style-type: none"> • Update spiral development requirements for global distribution capability • Initial requirements for development of the Global Distribution Capability (GDC) documented in Initial Capabilities Document (ICD) • ICD approved by Joint Requirements Oversight Council • Technology Development Strategy completed and approved 	<ul style="list-style-type: none"> • GDC successfully demonstrated • Knowledge Management capabilities incorporated with the GDC • Initial interoperability and integration with approved Department of Defense systems completed • Automated tracking functions developed and integrated into the GDC and demonstrated • Update spiral development requirements for the GDC • Standards-based information sharing functions incorporated into GDC 	<ul style="list-style-type: none"> • SME and joint lessons learned reach-back developed and incorporated into GDC and demonstrated. • Update spiral development requirements for GDC. • Developed courseware and reach-back capabilities available via GDC anytime and on a global scale • FOC achieved

Action 2.5.1. Table 1

2.5.1.18. Current Situation/Status: Knowledge Distribution roles and responsibilities defined. Knowledge Distribution Sub-Group established, and initial identification of requirements for robust global capability complete. Interim Distribution Capability stand-up completed in January 2005, leveraging multiple existing DoD content distribution capabilities provided by the Services and the Combat Support Agencies. Concept of Operations Version 1 for the Global Distribution Capability developed.

2.5.1.19. POC: Director, Joint Knowledge Development and Distribution Capability Joint Management Office, (703) 575-2008. Email: jkddc@jkddcjmo.org

2.6. Capability Component: Advanced Concepts.

2.6.1. Action: Provide leadership in the exploration of concepts and research and development (R&D) technologies in support of knowledge development and distribution.

2.6.1.1. Capability: Joint Knowledge Development and Distribution Capability.

2.6.1.2. Capability Component: Advanced Concepts.

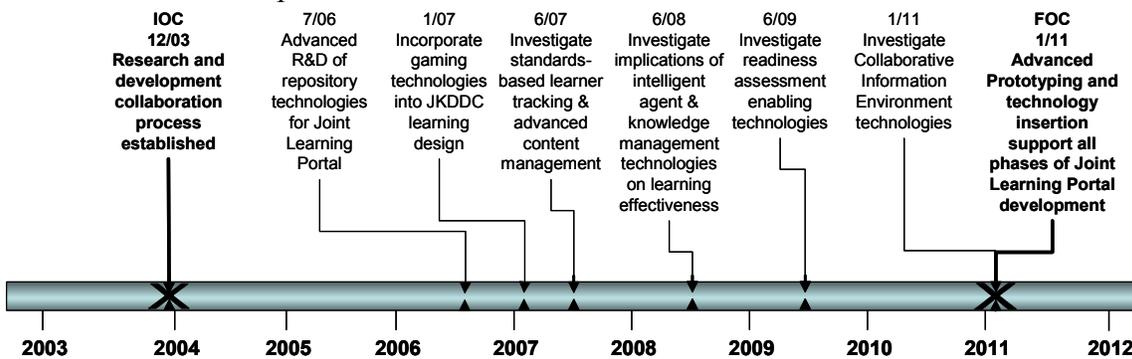
2.6.1.3. Lead Agency: Joint Staff/ J7 (after migration: USJFCOM).

2.6.1.4. Collaboration Agencies: Office of the Deputy Under Secretary of Defense for Readiness; Office of the Director of Operational Test and Evaluation; Office of the Under Secretary of Defense for Acquisition, Technology and Logistics; Joint Forces Command; other combatant commands; Combat Support Agencies, Services; National Guard Bureau; and National Defense University.

2.6.1.5. 2002 Strategic Plan Action Number: 4.1.2., 4.2.2.(f)

2.6.1.6. 2004 Implementation Plan Action Number: 2.6.1.

2.6.1.7. Roadmap:



Action 2.6.1. Figure 1

2.6.1.8. Overall Intent: The Advanced Concepts Component will lead the JMO effort to develop a long-range plan to select, test, and procure relevant knowledge distribution technologies to establish and maintain an advanced concepts capability that will sustain the JKDDC as the premier provider of joint knowledge. Specifically, the Component will take the lead in researching and prototyping the Joint Learning Portal as an advanced concept for knowledge discovery and delivery from a single gateway.

2.6.1.9. Perform advanced research and development of repository technologies required in support of the Joint Learning Portal.

2.6.1.9.1. Intent: This effort will leverage existing Advanced Distributed Learning (ADL) Co-Laboratory infrastructure (including testbed, tools, technology, knowledge,

methods, strategies, and human resources) to demonstrate a robust repository capability in support of knowledge discovery from a central repository.

2.6.1.9.2. Key Milestone: July 2006

2.6.1.9.3. Measure of Success: Repository functions demonstrated in conformance with DoDI 1322.hh, *Development, Management, and Delivery of Distributed Learning* and the ADL Registry.

2.6.1.10. Investigate technological innovations and advise the Knowledge Development Component and Knowledge Distribution Component on the transition and adoption of new technologies, methods, strategies, and tools.

2.6.1.10.1. Intent: Complement distribution and knowledge development processes by rapidly transitioning technology, methods, strategies, and tools to enable affordable, transformational joint individual education and training products and delivery systems collaborating with the science and technology community. Efforts will focus on the investigation, demonstration, and assessment of new technologies. These include gaming and prototype content, tools, and services that can improve the development and distribution of joint individual education and training for use by Services (active and Reserve components), coalition partners, and interagency, intergovernmental, international and nongovernmental organizations. Recommendations for technology insertion will be governed by an analysis of alternatives, to include cost-benefit and impact on learning effectiveness, identified in the technology assessment capability plan. Technology insertion will also take place at logical points to the JKDDC Portal infrastructure, to increase its effectiveness to serve the JKDDC Joint Management Office, collaboration partners, the joint warfighter, and all others who use the portal.

2.6.1.10.2. Key Milestones:

2.6.1.10.2.1. Milestone 1: Incorporate gaming technologies into JKDDC learning design. January 2007

2.6.1.10.2.1.1. Measure of Success: Application Programming Interfaces for the Global Distribution Capability completed; results and recommendations impacting learning effectiveness of advanced technologies documented; and collaborations identified for advanced technology demonstrations.

2.6.1.10.2.2. Milestone 2: Investigate standards-based learner tracking and advanced content management. June 2007

2.6.1.10.2.2.1. Measure of Success: Investigation efforts completed; results and recommendations documented; alternatives evaluated for accomplishing learner profile and assessments tracking. Prototype Application Programming Interface demonstrated for learner tracking, digital gaming, and discovery and reuse of knowledge objects across digital libraries and personnel tracking systems. Tracking efforts are coordinated with JAEC (Action 4.6.1.).

2.6.1.10.2.3. Milestone 3: Investigate implications of intelligent agent and knowledge management technologies on learning effectiveness. June 2008

2.6.1.10.2.3.1. Measure of Success: Investigation of efforts that make use of knowledge management and intelligent agents for adaptive learning, performance tracking, and job aiding completed; results and recommendations documented; and prototypes demonstrated.

2.6.1.10.2.4. Milestone 4: Support Block Assessments through the investigation of methodology for linking individual training outcomes to personnel systems. June 2009

2.6.1.10.2.4.1. Measure of Success: Investigation for automating assessment of joint readiness from personnel data systems efforts completed; and results and recommendations documented. Interoperability prototype demonstration links individual and joint readiness assessment tools, prototypes, personnel data systems, and the Joint Training System.

2.6.1.10.2.5. Milestone 5: Investigate Collaborative Information Environment technologies for achieving global distribution of subject matter expertise and practitioner knowledge to the warfighter. January 2011

2.6.1.10.2.5.1. Measure of Success: Investigation for enabling real time communication among communities of practice, subject matter experts, practitioners, educators, and instructors completed; and results and recommendations documented. Prototype demonstration links learners, subject matter experts, practitioners, educators, and instructors.

2.6.1.11. IOC: Completed December 2003 with the establishment of the research and development collaboration process

2.6.1.12. Full Operational Capability: January 2011

2.6.1.12.1. Measure of Success: R&D leadership demonstrated through advanced prototyping and technology insertion demonstrations in support of all phases of Joint Learning Portal development.

2.6.1.13. Dependencies and Linkages: This action is dependent on collaborating agencies working with the Joint Management Office to research and develop initiatives and opportunities for technology insertion throughout the evolutionary cycle.

Outcomes	Outcomes	Outcomes	Outcomes
<ul style="list-style-type: none"> Processes developed for achieving research and development objectives Initial Operational Capability achieved through Advanced Concepts Planning Guidance for Collaboration Agencies Agreement with ADL to provide support for establishment and maintenance of JKDDC Repository 	<ul style="list-style-type: none"> Sharable Content Object Reference Model adaptive sequencing in joint individual education and training content demonstrated Initial report of findings on learning effectiveness afforded by adaptive instruction Repository functions demonstrated and conform to DoDI and ADL registry Investigation Reports on interoperability standards for learner profile tracking and content management completed Prototype Application Programming Interface for learner tracking, digital gaming, and knowledge object discovery and reuse demonstrated Criteria established for estimating learning effectiveness of emerging technologies 	<ul style="list-style-type: none"> Investigation reports on knowledge management and intelligent agents impact on learning effectiveness completed and provided for Block III Assessment Knowledge management and intelligent agent prototypes demonstrated in the learning environment Investigation of Joint Readiness Assessment completed Interoperability prototype for readiness assessment tools demonstrated 	<ul style="list-style-type: none"> Investigation of real time communication technologies completed. Prototype for real time learner-subject matter expert-practitioner knowledge transfer demonstrated. Full Operational Capability achieved

Action 2.6.1. Table 1

2.6.1.15. Current Situation/Status: Initial Operational Capability achieved based on research and development requirements identified and documented for transfer to science and technology community. Initial Advanced Concepts Planning Guidance completed with Advanced Concepts processes, roles, and responsibilities defined including capability established through the ADL Co-Laboratory for technology assessment and integration. Provisions for additional research and development funding requirement will be achieved through JNTC collaboration and the Program Objective Memorandum process.

2.6.1.16. POC: Director, Joint Knowledge Development and Distribution Capability Joint Management Office, (703) 575-2008, Email: jkddc@jkddc.org.