

Defense Acquisition Workforce

LIFE CYCLE LOGISTICS TEAM EVALUATION CRITERIA

1. You must possess a Masters Degree in the field of logistics management or in a related area, (e.g., business, engineering, management) from an accredited college or university
2. You must have at least 6 years of experience as a logistics management functional in either a government or industry position (for Group B)

Years of Experience

3. You must have specialized experience directly relating to the specific duties of the position to be filled and must demonstrate that you have the required knowledge, skills, and abilities to perform successfully. This includes specialized experience in either cost and pricing or major weapons systems program management or operations or contingencies.
4. At least 1 year of specialized experience for equivalent to the Government or the federal service.

Superior Intellect

5. You must have achieved DAWIA certification in Life Cycle Logistics Management or have the ability to obtain this certification within 18 months of appointment if coming from the Government or the Department of Defense (DoD) workforce.

Knowledge, Skills, and Abilities

1. Experience in detail in the management of logistics management programs and projects. Movements are related to the program and project. This includes experience with you.

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3. Performance Support: Experience in the management of logistics management programs and projects. Movements are related to the program and project. This includes experience with you.
4. Learning Asset Management: Experience in the management of logistics management programs and projects. Movements are related to the program and project. This includes experience with you.

5. Leadership and Resource Management: Experience in the management of logistics management programs and projects. Movements are related to the program and project. This includes experience with you.

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Highly Skilled

5. Leadership and Resource Management: Experience in the management of logistics acquisition and sustainment organizations within the defense (government) and commercial sectors; include team leadership as well as supervisory leadership. Specifically address experience in the management of an organization's resources relating to its programs and operations, including resource allocation, programming, budgeting and execution processes.

Leadership Abilities



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SHAPING THE LIFE CYCLE LOGISTICS WORKFORCE TO ACHIEVE DESIRED SUSTAINMENT OUTCOMES

Bill Kobren

Successful implementation of DoD life cycle management policies requires an innovative logistics workforce with unparalleled knowledge, skills, abilities, creativity, and interdisciplinary insights to achieve desired sustainment outcomes in an increasingly resource-constrained environment. The defense acquisition workforce in general, and the life cycle logistics community in particular, must therefore be equipped and incentivized to develop, implement, and oversee increasingly more effective and cost-efficient performance-based life cycle product support strategies to sustain DoD weapon systems at every stage of their life cycle. This will be achieved in large measure through an innovative, integrated, joint logistics human capital development initiative that prepares the defense life cycle logistics workforce to deliver effective and efficient weapon system support and sustainment in the coming decades.

Analogous to the crewmembers of the fishing vessel *Andrea Gail* in the 2000 film of the same name, the Department of Defense (DoD) logistics community faces a “perfect storm” of creatively having to support an inventory of rapidly aging weapon systems (many of which are well past their originally envisioned design lives) in the face of potentially declining *sustainment* funding, higher than anticipated equipment operational tempo rates (often in harsh operating environments), and supported by an increasingly mature civilian workforce. While in the short run, a large measure of the success DoD has experienced in supporting these aging systems is directly attributable to the experience, maturity, and expertise of the *logistics workforce*, the fact remains that a significant portion of that workforce is or will be retirement-eligible over the next 5 years. Further complicating the situation is the prospect of reduced weapon system procurement and sustainment funding resulting from the global economic slowdown, anticipated troop withdrawals from Iraq, and a

new administration at least initially focused on a variety of non-defense priorities. In fact, Estevez (2007) wrote, “DoD future funding [was already] under great pressure, with Congress signaling a priority for other national programs. Supplementals will shrink and [potentially even] disappear before [the] force is reset and re-equipped [to support the] national military strategy.”

DoD logistics costs, primarily focused on weapon system maintenance, supply, and transportation, have steadily increased over the last 8 years, largely, but not exclusively, in support of ongoing operations in Iraq and Afghanistan, reaching \$178 billion a year in 2007 (Estevez, 2008). Given current political, revenue, and economic realities, expenditures of this magnitude are likely to be unsustainable over the long-term.

Successful implementation of effective *life cycle management* policies—particularly in view of the fact similar initiatives in earlier decades often lacked strong enforcement mechanisms, requisite funding, long-term management commitment, or for a variety of other reasons, failed to deliver desired cost and readiness improvements—requires not only strong policies, but just as importantly entails an innovative logistics workforce with unparalleled knowledge, skills, abilities, creativity, and interdisciplinary insights to achieve desired sustainment outcomes in an increasingly resource-constrained environment. The defense acquisition workforce in general, and the *life cycle logistics* community in particular, must therefore be equipped and incentivized to develop, implement, and oversee increasingly more effective and cost-efficient performance-based life cycle product support strategies to sustain both legacy and new DoD weapon systems at every stage of their life cycle. Is it achievable? If so, what exactly would it look like? The answer lies in an innovative, integrated, joint logistics *human capital* development initiative that recognizes the new economic, political, and military realities America and the Department of Defense face, while at the same time prepares the life cycle logistics workforce to deliver effective and efficient weapon system support and sustainment in the coming decades.

BACKGROUND

Life cycle management itself is not a new concept, as the Air Force Logistics Command (now Materiel Command) history office so eloquently stated nearly 30 years ago:

... [The] most vital function was seeing that logistics, including supportability and costs, throughout the life of the system were considered whenever decisions were made about the form of the system. It generally was far less difficult, costly, and time consuming to make design changes before a weapon system entered production than to make modifications in the completed system... Incorporating logistics considerations into the design of weapon systems was, in fact official policy dating back to 1964. The Department of Defense obligated the Services to conceive weapon systems with logistics in mind, emphasizing the cost of the system over its entire life, not just

the cost of an item at the end of the production phase. This concept of integrated logistics support was, of course, not even new even in 1964; it represented the continuation of the long-standing interplay between the research and development process, and the logistics dimension. (Termena, Peiffer, & Carlin, 1981)

DoD assigns life cycle management responsibility to the program manager:

The Program Manager (PM) is the designated individual with responsibility for and authority to accomplish program objectives for development, production, *and sustainment* [italics added] to meet the user's operational needs. (DoD Directive 5000.01, 2003, Pt. 3.5)

Current DoD Life Cycle Management guidance (or Total Life Cycle Systems Management) states:

The PM shall be the single point of accountability for accomplishing program objectives for total life-cycle systems management including sustainment. . . PMs shall consider supportability, life cycle costs, performance, and schedule comparable in making program decisions. Planning for Operation and Support and the estimation of total ownership costs shall begin as early as possible. Supportability, a key component of performance, shall be considered throughout the system life cycle. (DoD Directive 5000.01, 2003, Pt. E.1.29)

DoD reiterated the importance of Life Cycle Management principles by acknowledging the long-term benefits of addressing long-term sustainment planning, including cost containment early in a system's life cycle in August 2006 when the Joint Requirements Oversight Council (JROC) strengthened current DoD Total Life Cycle Systems Management (TLCSM) policy by issuing JROC Memorandum 161-06 "Key Performance Parameter (KPP) Study Recommendations and Implementation." The JROC memorandum established a mandatory Materiel Availability KPP for all ACAT I Major Defense Acquisition Programs (MDAP) and selected ACAT II and III programs, along with two Key System Attribute (KSA) requirements for materiel reliability and ownership cost. This guidance was codified in the May 1, 2007, Chairman of the Joint Chiefs of Staff Manual (CJCSM) 3170.01C, *Operation of the Joint Capabilities Integration and Development System (JCIDS)*, which stated "a Sustainment KPP (Materiel Availability) and two mandatory supporting KSAs (Materiel Reliability and Ownership Cost) will be developed for all JROC Interest programs involving materiel solutions. For non-JROC Interest programs, the sponsor will determine the applicability of this KPP."

Shortly thereafter, the Deputy Under Secretary of Defense for Logistics and Materiel Readiness (L&MR) issued a March 10, 2007, policy memo entitled "Life Cycle Sustainment Outcome Metrics" providing detailed guidance to the logistics and sustainment community, including a series of 14 life cycle sustainment enablers

to assist program managers, life cycle logisticians, and systems engineers in meeting the new KPP and KSA requirements. Implementation of these policies was critical in institutionalizing a methodology for establishing enforceable sustainment requirements early in program development, while simultaneously directly supporting earlier guidance, which mandated program managers “consider supportability, life cycle costs, performance, and schedule comparable in making program decisions.” (DoD Directive 5000.01, 2007, Pt. E.1.1.29)

In July 2008, the Under Secretary of Defense for Acquisition, Technology and Logistics issued another critically important policy memorandum, reiterating that “implementing life cycle management is a top priority for the Department of Defense. To achieve that objective, we must seamlessly integrate our acquisition and life cycle sustainment policies ... [and] institutionalize implementation of mandatory life cycle sustainment metrics; align resources to achieve readiness levels; track performance throughout the life cycle; and implement performance-based life cycle product support strategies.” (Young & Fowler, 2008)

PBL offers the best strategic approach for delivering required life cycle readiness, reliability, and ownership costs.

The memo goes on to emphasize the department’s long-standing commitment to performance-based sustainment, stating, “for several years, acquisition and sustainment management have been appropriately focused on performance-based strategies. DoD Directive 5000.01 currently recognizes *performance-based logistics (PBL)* as a key policy principle. I direct the Services to continue this emphasis with a more precise orientation on life cycle product support. PBL offers the best strategic approach for delivering readiness, reliability, and reduced ownership costs. *All of the policies and directions discussed in this memorandum are enabled by effective PBL implementation [italics added].*”

This emphasis was again reiterated in the recently updated December 2008 version of DoD Instruction 5000.02, which states “life-cycle sustainment planning and execution seamlessly span a system’s entire life cycle, from Materiel Solution Analysis to disposal. It translates force provider capability and performance requirements into tailored product support to achieve specified and evolving life cycle product support availability, reliability, and affordability parameters.” (DoD Instruction 5000.02, 2008, Pt. 8.c.[1])

Additionally, the new instruction instructs the program manager to “employ effective Performance-Based Life Cycle Product Support (PBL) planning, development, implementation, and management” (Pt. 8.c.[1][d]), emphasizing that “Performance-Based Life Cycle Product Support represents the latest evolution of Performance-Based Logistics. Both can be referred to as ‘PBL.’ PBL offers the best

strategic approach for delivering required life cycle readiness, reliability, and ownership costs. Sources of support may be organic, commercial, or a combination, with the primary focus optimizing customer support, weapon system availability, and reduced ownership costs.” (Pt. 8.c.[1][d])

Indeed, the requisite policies needed to effectively implement life cycle management are now in place. On the frontlines of successful implementation, shoulder-to-shoulder with their program manager counterparts, stands the DoD Life Cycle Logistics workforce.

LIFE CYCLE LOGISTICS

To accomplish an undertaking of this magnitude, it is important to first understand exactly what life cycle logistics is and how it integrates into the broader DoD logistics community. DoD defines life cycle logistics as “the planning, development, implementation, and management of a comprehensive, affordable, and effective systems support strategy.” (Defense Acquisition Guidebook, 2006, Pt. 5.1.2)

Moreover, “the demand for life cycle logistics expertise will remain strong as the acquisition community supports: 1) almost 100 major acquisition programs; 2) recapitalization of equipment and systems used to support the global war on terror; 3) an expanded and evolving expeditionary requirement, including surge requirements for security, stabilization, and reconstruction operations; contingency operations; and/or humanitarian assistance; 4) supply chain management; and 5) expanded use of logistics services to support deployed systems.” (DoD *Human Capital Strategic Plan*, 2008)

Significant concern exists by all stakeholders on the departure of the "baby boomer" workforce, and it is often described as a retirement bow wave.

The approximately 12,600 life cycle logisticians in the defense acquisition workforce are responsible for nothing short of translating warfighter performance requirements into tailored, cost-effective product support spanning a system’s life cycle from concept to disposal. Charged with ensuring “sustainability requirements are addressed comprehensively and consistently with cost, performance, and schedule during the life cycle” (DoD Human Capital Strategic Plan, 2008), the life cycle logistics workforce literally stands at the nexus between the defense acquisition workforce and the almost one million logistics personnel serving in a variety of related DoD supply, distribution, transportation, maintenance, and product support positions. Ensuring this workforce is properly recruited, supported, trained and developed is clearly essential to the successful development, sustainment, and life cycle management of DoD

weapon systems. The department, however, has its work cut out for it, particularly as the average age of the workforce increases:

Significant concern exists by all stakeholders on the departure of the ‘baby boomer’ workforce, and it is often described as a retirement bow wave. Today, 21 percent of the life cycle logistics civilian workforce are eligible for full retirement and approximately 24 percent [more] will become eligible for full retirement over the next five years. *The department must strengthen and sustain the life cycle logistics mission-critical workforce capability in order to continue to meet warfighting requirements* [italics added]. (DoD Human Capital Strategic Plan, 2008, Appendix 3, pp. A3-1, A3-2, A3-21)

DoD LOGISTICS HUMAN CAPITAL STRATEGY

The May 2008 DoD Logistics *Human Capital Strategy* (HCS) (available at <http://www.acq.osd.mil/log/sci/hcs.html>) represents a major milestone for the Department of Defense. Not only does it align with the other career fields within the defense acquisition workforce, consider inputs from industry logistics counterparts, and encapsulate all aspects of the broader DoD Logistics enterprise, but perhaps more importantly, it was endorsed by every major logistics stakeholder across the department. Among many other aspects of this initiative is the fact the strategy identifies a series of overarching workforce categories spanning the entire logistics career field (including life cycle logistics), supported by specific required competencies and detailed proficiencies for each. While the DoD Logistics HCS is necessary to “DoD developing an integrated, agile, and high-performing future workforce of multifaceted, interchangeable logisticians that succeed in a joint operating environment” (DoD Logistics Human Capital Strategy, 2008), as the goal of the initiative states, it is only a first step. In addition to addressing recruiting and retention issues resulting from an aging workforce, the department must also shape that workforce with the requisite knowledge, skills, and tools to effectively support and sustain both new and aging legacy weapon systems, and assist program managers in achieving the programmatic life cycle management requirements discussed earlier.

PROFESSIONAL DEVELOPMENT AND GOVERNANCE

The Defense Acquisition Workforce Improvement Act (DAWIA) requires the Secretary of Defense establish education, training, and career development standards for persons serving in acquisition positions in the department (Grosson et al., 2008). Life cycle logistics professional development requirements are spelled out in career field DAWIA certification requirements. Practitioner training is provided by the Defense Acquisition University (DAU), focusing on competencies and proficiencies DoD has deemed necessary. But how are these competencies and proficiencies identified? “The Logistics HCS identifies the competencies and proficiencies required to achieve [required] performance outcomes ... Identification of these technical competencies will result not only in continued improvement and refinement of the learning

assets and DAWIA certification training provided by the DAU, but will ultimately enhance the quality of the support provided by, and the expertise of, the life cycle logistics workforce.” (Blodgett, Conrad, & Kobren, 2008)

The life cycle logistics community also has in place a highly effective, joint governance structure widely regarded as setting the standard for the defense acquisition workforce, and which could easily serve as a template for implementation across the broader DoD logistics community. Led by the Assistant Deputy Under Secretary of Defense for Materiel Readiness (Life Cycle Logistics Functional Leader, or functional proponent.), career field training, education, experience, and certification

***[The Life Cycle Logistics FIPT] will pay dividends
... for years to come.***

requirements are established by a joint *functional integrated process team (FIPT)* with participants from defense agencies, the Joint Staff J4, and the military services. The Council on Occupational Education Reaffirmation of Accreditation Preparation Team highlighted the crucial role the Life Cycle Logistics FIPT plays in linking Service workforce competency outcomes to workforce professional development, stating, “the logistics program is using their FIPT to not only assure the congruency and currency of their curricula, but also to better integrate their curricula with [that] of other academic programs. This initiative will pay dividends ... for years to come.” (Cant & Bivens, 2008)

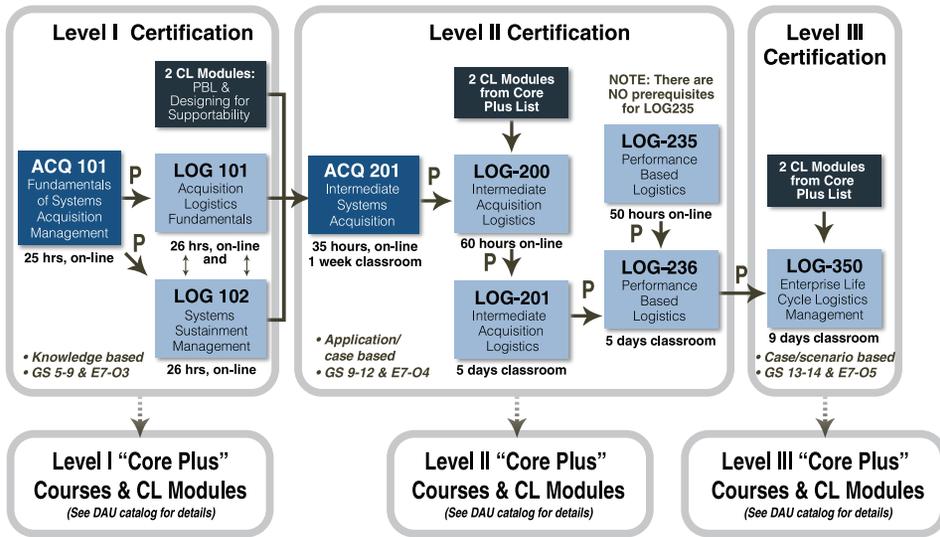
LIFE CYCLE LOGISTICS WORKFORCE TRAINING

Validated by Service and Agency Life Cycle Logistics FIPT representatives, and approved by the OSD career field Functional Leader, DAU offers the DoD Life Cycle Logistician rigorous DAWIA certification training, with particular emphasis on acquisition, acquisition logistics, sustainment, and PBL-related competencies. In addition, since the start of fiscal year 2008, a robust Core Plus Development Guide is available to each workforce member to guide their individual development plan. “Designed to advance the Defense Acquisition Workforce competency management model by providing a roadmap for the development of acquisition workforce members beyond the minimum certification standards required for their position ... Core Plus helps identify the right learning for the right people at the right time during their professional development.” (2009 Defense Acquisition University Catalog, 2008)

Built around key career field competencies, the Life Cycle Logistics Core Plus guide is available through the Web-based DAU Interactive Catalog at <http://icatalog.dau.mil/onlinecatalog/CareerLvl.aspx>. The guide is particularly robust in that it iden-

tifies not only a variety of other Life Cycle Logistics courses and continuous learning modules for the workforce to avail themselves of, but also identifies dozens of training assets from other career fields containing competencies that will directly benefit the Life Cycle Logistician. This Core Plus initiative not only facilitates critically important cross-functional and inter-disciplinary integration, but also clearly emphasizes the linkages between functional competency sets across the Defense Acquisition Workforce. The figure depicts the FY 09 Life Cycle Logistics Training process and certification levels.

FIGURE. FY 09 LIFE CYCLE LOGISTICS TRAINING



P = Prerequisite

WHERE TO FROM HERE?

Going forward, the [DoD Logistics] Human Capital Strategy charts an ambitious course for implementation ... Key next steps include identifying consistent criteria and a standard process for assessing a logistician’s competency levels and overall professional development; publication of career path roadmaps” (Blodgett, Conrad, & Kobren, 2008)

Acting in concert with the life cycle logistics FIPT, DAU is in the process of performing a gap analysis between existing learning assets and the new competency set, cross-walking individual proficiencies contained in the DoD Logistics Human Capital Strategy with individual Terminal Learning Objectives (TLO) taught in DAU courseware. Concurrently, DAU staff are developing and staffing a robust strategic roadmap to ensure each competency and proficiency is addressed, either through incorporation

into existing courseware, or through development of new training courses and continuous learning modules. Once this strategic roadmap is approved by the Life Cycle Logistics FIPT and the Functional Leader, revision of existing DAU certification and core-plus courses, development of new courseware, and updates to the career field Defense Acquisition Workforce Improvement Act (DAWIA) career field certification requirements will need to be aggressively implemented.

Even so, broader and more far-reaching issues remain. Recruiting and retention, particularly of younger personnel entering the career field, is an increasingly difficult challenge due to the fact pay and benefits can lag the private sector, the concept of lifetime employment is increasingly uncommon, greater numbers of mid- and senior-level civilian logistics positions are being filled by retired military logisticians, and in some cases, logistics may simply not be viewed as a desired career choice. Several ideas proposed by the National Defense Industrial Association could also be considered for the DoD life cycle logistics workforce, including scholarship programs for college students who commit to serve for a number of years, internships to familiarize students with the benefits of a logistics career, discussions with academia about integrating life cycle logistics competencies in their system engineering programs, development of more formalized mentorship programs, creation of a government-industry exchange program, and establishment of awards to encourage junior logisticians to remain in the career field (Grosson et al., 2008).

Yet successful implementation of these and other such initiatives is essential if the department is to proactively be able to anticipate the pending retirement of many more experienced life cycle logisticians. While no small comfort to those who had planned to retire sooner rather than later, one potential benefit of the current economic climate may be the slowing of this bow wave of anticipated retirements, as personnel choose to remain in the civil service workforce longer than originally envisioned. Unintended consequences, however, may also be the slowing of needed ascensions in the near term, followed by a potentially more rapid exodus of experienced personnel once the economy begins to recover.

Proper workforce sizing remains a critical consideration as well. Potentially sizeable expansion of the Life Cycle Logistics workforce is likely in the coming years. Specifically, the “Defense Logistics Agency (DLA) anticipates their Life Cycle Logistics workforce to grow as they gain employees from the various BRAC [Base Realignment and Closure] industrial sites. DLA plans to recode several thousand positions under the DAWIA Life Cycle Logistics position category description ... As DLA assumes an expanded role in directly supporting the warfighter in this regard, it is imperative their workforce become familiar with more of the factors influencing their customers' requirements and expectations for support throughout the total systems life cycle.” (DoD Human Capital Strategic Plan, 2008)

In addition, “the United States Air Force also anticipates a potentially sizeable increase in the number of DAWIA-coded Life Cycle Logistics positions. To meet the demands of developing, fielding, and sustaining weapon systems with increasingly long life cycles and to successfully provide effective total life cycle systems management, the Air Force chartered a team to “develop and right-size the life cycle logistics workforce engaged in systems acquisition, with the competencies, skills,

and management support necessary to translate and design warfighter performance requirements into tailored, affordable, effective product support spanning the entire system life cycle. Actual additive requirements remain to be determined, although preliminary estimates are between 1,000–2,000 additional positions.” (DoD Human Capital Strategic Plan, 2008)

The potential for a 25 percent or more increase in coded life cycle logistics defense acquisition workforce positions will require careful oversight and well-managed implementation. DAU is already working closely with their Air Force and DLA functional and acquisition career management stakeholders to ensure the assimilation of any new personnel into the defense acquisition workforce is done effectively and efficiently. Significantly easing any potential additions the fact is, for the most part, that these new life cycle logisticians would not require creation of new positions or hiring new personnel, since the personnel will largely be drawn from the current DoD civilian logistics workforce.

A professional, well-trained DoD life cycle logistics workforce, supported by human capital initiatives including, but certainly not limited to, those outlined in the DoD Logistics Human Capital Strategy and in this article, and coupled with unprecedented levels of collaboration among DoD and Service logistics leaders and subject matter experts are essential ingredients to successful life cycle management and by extension, getting a handle on long-term weapon system sustainment cost. Only through cutting-edge innovative strategies such as the DoD Logistics Human Capital Strategy, defining critical workforce competency and proficiency requirements, aggressive workforce professional development initiatives, and implementation of targeted training, recruiting, and retention strategies can DoD ensure the life cycle logistics workforce is prepared and incentivized to effectively support and sustain both aging legacy systems and newly acquired weapon systems throughout their life cycles, today and well into the future.

Keywords:

Life Cycle Logistics, Sustainment, Human Capital, Life Cycle Management, Performance Based Life Cycle Product Support, Performance-Based Logistics (PBL), Human Capital Strategy, Human Capital Strategic Plan, Logistics Workforce, Functional Integrated Process Team (FIPT)



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