

**Department of the Army
Pamphlet 700–28**

Logistics

Independent Logistics Assessments

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SUMMARY of CHANGE

DA PAM 700–28
Independent Logistics Assessments

This major revision, dated 17 July 2019—

- o Adds additional process time to the Independent Logistics Assessment Typical Schedule (chap 2).
- o Updates to the Assessment Criteria Checklist and Milestones (chap 3).
- o Replaces “certificate of networthiness” with “Risk Management Framework Assessment and Authorization” (chap 3).
- o Updates references (app A).
- o Updates Document Request List (app B).
- o Adds corrosion prevention and control measures to the independent logistics assessment checklist (throughout).
- o Replaces computer software and security plan with the term Cybersecurity Strategy (throughout).

Logistics
Independent Logistics Assessments

By Order of the Secretary of the Army:

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at key decision milestones in the materiel acquisition process and throughout the life cycle of the program.

Applicability. This pamphlet applies to the Regular Army, Army National Guard/Army National Guard of the United States, and U.S. Army Reserve, unless otherwise stated.

Proponent and exception authority. The proponent of this pamphlet is the Assistant Secretary of the Army (Acquisition, Logistics, and Technology). The proponent has the authority to approve exceptions or waivers to this pamphlet that are consistent with controlling law and regulations. The proponent may delegate this approval authority, in writing, to a division chief within the proponent agency or its direct reporting unit or field operating agency, in the grade of colonel or the civilian equivalent. Activities may request a waiver to this pamphlet by providing justification that includes a full analysis of the expected benefits and

must include formal review by the activity's senior legal officer. All waiver requests will be endorsed by the commander or senior leader of the requesting activity and forwarded through their higher headquarters to the policy proponent. Refer to AR 25–30 for specific guidance.

Suggested improvements. Users are invited to send comments and suggested improvement on DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to the Assistant Secretary of the Army (Acquisition, Logistics and Technology) (SAAL–ZL), 103 Army Pentagon, Washington, DC 20310–0103.

Distribution. Distribution of this publication is available in electronic media only and is intended for the Regular Army, Army National Guard/Army National Guard of United States, and the U.S. Army Reserve.

History. This publication is a major revision.

Summary. This pamphlet provides guidance for conducting Independent Logistics Assessments on Army programs, in conjunction with the guidance in AR 700–127. Also, provides the logistics program status

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*This publication supersedes DA Pam 700-28, dated 9 June 2013.

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Glossary

Chapter 1 Introduction

1–1. Purpose

This pamphlet provides a standard framework for assessing the status and/or health of the logistics program in preparation for key milestone decision reviews in the materiel acquisition process. The use of this pamphlet provides guidance for uniform independent logistics assessments (ILAs) across all commodity types (for example; Major Automated Information System (MAIS), combat vehicles, aircraft, electronic, or training equipment) thereby reducing subjectivity in the process. This guidance may be applied to any Acquisition Category (ACAT) program, however, each ILA criterion should be carefully tailored to individual program requirements.

1–2. References and forms

See appendix A.

1–3. Explanation of abbreviations and terms

See glossary.

1–4. Authority

This pamphlet is intended for use by personnel involved in systems acquisition, materiel fielding or materiel transfer. The primary authority for conducting ILAs is derived from AR 700–127. While certain aspects of computer resources support are covered by this pamphlet, the use of general purpose information management area (IMA) nondevelopmental item (NDI) equipment, services, and systems that are not embedded in or integral to a materiel system fall under the purview of AR 25–1. The IMA includes the disciplines of automation, telecommunications, records management, printing and publishing, and visual information.

1–5. Independent Logistics Assessment progression

The following progression should be followed:

a. The ILA process is described in chapter 2. This process defines an orderly progression of the acquisition logistics activities toward providing an operationally effective, fully supportable, and sustainable system at an affordable life cycle cost (LCC) at the time of first unit equipped.

b. ILAs will be conducted in accordance with policy from AR 700–127 and as discussed in chapter 2. Each of the recommended assessment criterion is detailed in the checklist tables in chapter 3.

(1) An assessment of the supportability-related planning and activities in support of Milestone B (pre-acquisition).

(2) The life cycle logistics program assessment following the Milestone B program approval decision (entry into the Engineering and Manufacturing Development Phase).

(3) The assessment in support of the Milestone C production decision (entry to the Production and Deployment Phase).

(4) Additional ILAs may be conducted as required pre or post Milestone C based upon program requirements.

c. Additionally, ILAs will be conducted post full-rate production (FRP) as discussed in chapter 2.

d. The ILA tables found in chapter 3, are based on current Army life cycle logistics related acquisition policy and guidance together with issues resulting from Assistant Secretary of the Army (Acquisition, Logistics, and Technology) (ASA (ALT))’s experience. The ILA documents will require updating, as Army policy, guidance, and experience further evolve.

e. The structure for performing an ILA is defined by the major topics to be addressed under each of the 12 logistics assessment areas shown below. The assessment rating definitions and criteria from AR 700–127 are applicable and are to be used when conducting each assessment (See AR 700–127). The ILAs follow the AR 700–127 framework and use the following 12 integrated product support elements (IPSE):

(1) Product support management encompasses not only the aspects of management planning, but also performance based product alternatives, schedule, cost, funding, contracts, and configuration management (CM).

(2) Design interface reflects the relationship of the various supportability parameters to other system design parameters. These parameters include human factors, system safety, corrosion control, energy management, standardization, interoperability, survivability, vulnerability, reliability, maintainability, environmental compliance, program protection, supply chain risk management, and affordability.

(3) Sustaining engineering is the process conducted to evolve and establish support concepts and support requirements for the life of the system.

(4) Supply support is all the management actions, procedures, and techniques used to determine requirements to acquire, catalog, receive, store, transfer, issue and dispose of secondary items. This encompasses provisioning for initial support and all end-to-end replenishment supply support and supply pipeline plans and activities. Supply support should be distribution based rather than inventory based and proactive rather than reactive.

(5) Maintenance planning and management includes all logistics factors found in maintenance concept, design and analysis, maintenance planning and maintenance plans for the life of the system. It encompasses the Army's two-level maintenance policy and doctrine (field and sustainment), repair times, maintenance procedures and/or techniques, support equipment needs and contractor or government responsibilities.

(6) Packaging, handling, storage, and transportation (PHS&T) includes the resources, facilities, processes, procedures, design considerations, packaging data, and methods needed to ensure that all system equipment and support items are preserved, packaged, stored, handled, and transported quickly, safely, and effectively.

(7) Technical Data (TD), and Intellectual Property (IP) . The program's approach to planning, programming, implementation and management of the short and long-range needs and uses of TD and IP necessary for sustaining the program over its life cycle. This product support element supports each of the other elements by accounting for the data needs/deliverables and associated rights to use, modify, reproduce, release, perform, display or disclose such data. Included in this element is the Statement of Work (SOW), Data Item Description (DID) selection, Contract Data Requirements List (CDRL), and inspection of deliverables for technical data and intellectual property. This includes: engineering drawings, cataloging data, logistics product data, Bills of Material (BOMs), Technical Manuals, Depot Maintenance Work Requirements (DMWR).

(8) Support equipment includes all management actions, procedures, and techniques used to determine requirements for and acquire the fixed and mobile equipment needed to support the operations and maintenance of a system. This includes material handling equipment; tools; test, measurement, and diagnostic equipment (TMDE); calibration equipment; prognostics and/or embedded diagnostics; nondestructive inspection; nondestructive testing, and automated test equipment. In addition, this element includes all plans and activities required to operate, maintain, and support all system support equipment.

(9) Training and training support consists of the processes, procedures, and techniques to identify requirements for and to acquire programs of instruction, training facilities, and training systems and/or devices needed to train and/or qualify military and civilian personnel to operate and maintain a system proficiently. This includes institutional training, on-the-job training, new equipment training, sustainment training, individual, and/or crew training.

(10) Manpower and personnel include the identification and provisioning for military and civilian personnel with the skill and grade levels needed to operate, maintain, and support a system over its life cycle in both peacetime and wartime. The materiel developers (MATDEVs) typically do not acquire personnel. The MATDEVs should, however; work with force management to ensure that the proper positions are available within the required modified table of organization and equipment (MTOE) and the tables of distribution and allowances (TDA) of the organization.

(11) Facilities and infrastructure all the management actions, procedures, and techniques used to determine requirements for and to acquire the permanent and semi-permanent real property assets (both temporary and fixed) needed to support operation, maintenance and storage of a system and its support equipment. This element includes new and modified facilities, special environmental conditions, and utilities required.

(12) Computer resources support includes all management actions, procedures, and techniques used to determine requirements for and to acquire hardware, middleware, firmware, software, documentation and support supplies required to support and upgrade computer resources used in operation and maintenance of the system. This includes fixed and mobile facilities required for computer resources support.

1-6. Additional assessment considerations

When Defense Acquisition Management Framework phases are combined or eliminated, preparation for the next phase and/or milestone review will address the full range of combined assessment requirements for both phases. For example, if the approved acquisition strategy (AS) calls for a combined Materiel Solution and Analysis Phase and Technology Development Phase, the full range of activities and events applicable to Milestone decision review Milestone A and Milestone B must be accomplished and accounted for prior to completing Milestone B and proceeding to the Engineering Manufacturing and Development Phase followed by Production and Deployment Phase. The following are additional considerations for assessing the severity of problems when specific issues are not satisfactorily answered:

- a. The contribution of the action to the overall objective of fielding a supportable system.
- b. The likelihood the logistics program can meet improvement objectives prior to the next milestone decision review or initial fielding.
- c. The eventual impact on system operational effectiveness, readiness, sustainability, and support costs if no corrective action is taken or the proposed corrective action is not successful.

d. The impact on the ability to field the system without interim support measures.

1-7. Policies and procedures

a. This pamphlet identifies issues associated with those displaced materiel systems that are to be distributed to an Army command (ACOM), Army service component command, and direct reporting units, which the system has not been previously fielded.

b. In the case of a joint program, coordination between the program support and logistics managers in each of the services involved is required to determine and agree upon the best approach for conducting the ILA and in making a recommendation to the program executive officer (PEO) for conducting a single joint ILA. In most instances, when conducting a joint ILA, the qualified ILA team leader should be designated from the Lead Service. The team members should be a mix of all services involved to ensure that any unique supportability requirements for each of the services are addressed and assessed.

Chapter 2

The Independent Logistics Assessment Process

This chapter is divided into two sections describing activities in the ILA process. They include section 1; Planning and Organizing, and section 2; Conducting the Assessment. The overall process is divided into 15 steps. Steps 1-11 are detailed here in chapter 2. Steps 12-15 are detailed in chapter 4. It is important to note that all phases are integrated into these steps. Each step contains guidance on both pre-FRP and post-FRP phases, even though some assessment activities differ greatly in these phases. For MAIS, the full deployment decision (FDD) is equivalent to the FRP decision. Carefully select those activities applicable to the current phase for which the assessment is being conducted. In order to provide an overall timeframe outlining the 15 steps, a table providing guidance on typical timeframes for each of the 15 steps is provided in table 2-1.

2-1. Team Selection Process

Step 1 through Step 5 details the ILA team selection process is detailed in figure 2-1, and described in subsequent paragraphs.

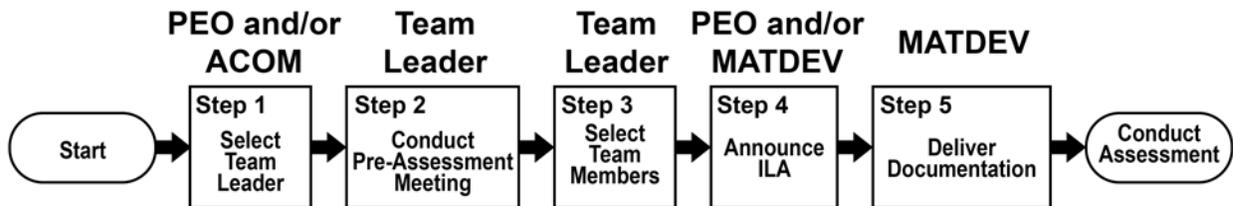


Figure 2-1. Independent Logistics Assessment Team Selection Process

**Table 2–1
Process**

Step	Process Plan and organize (7 weeks)	Activity	Timeline ¹
1	Plan and Organize (7 weeks)	Select team leader Note: ²	22
2		Conduct pre-assessment meeting note: ³	20
3		Select team members	19
4		Announce ILA	19
5		Deliver documentation	16
6	Conduct Assessment (10 weeks)	Conduct opening meeting	15
7		Review requirements and/or capabilities	14
8		Review logistics documentation and/or planning	14
9		Review Contractual Documentation	14
10		Review integrated master plan schedule	14
11		Write and compile deficiencies	6
12	Assess and Report Results (5 Weeks)	Assemble draft report	5
13		Brief results to the program office	3
14		Issue the final report	2
15		Issue memorandum of ILA status:	1

Note:

¹ Timeline countdown in weeks prior to final modified integrated program summary; final modified integrated program summary is 4 weeks prior to Army System Acquisition Review Council (ASARC).

² Team leads may be selected as early as 10 weeks prior to the conducting of the opening meeting (step 6), if circumstances require early notification and identification of the team lead.

³ For ACAT 1D ILAs where the milestone decision authority (MDA) is the Defense Acquisition Executive, the MDA requires the memorandum of ILA status be issued no later than 30 days prior to Milestone review.

2–2. Process description

a. Step 1 (Select team leader). The PEO and/or ACOM or designee is responsible for assigning a qualified team leader and providing resources to establish an ILA team leader. The team leader is selected based on the requirements which are identified below in table 2–2. The team leader is required to be a Government employee.

b. Step 2 (Conduct pre-assessment meeting). The team leader conducts a pre-assessment meeting with the MATDEV, product support manager (PSM), or designee addressing the following:

- (1) Confirm the responsibilities of the program office, team leader, and team members.
- (2) Confirm the purpose, scope, and timing of the review.
- (3) Discuss and review rating criteria found in table C–1.
- (4) For Post-FRP and/or FDD discuss and review rating criteria table found in table C–2.
- (5) Discuss specific review procedures.
- (6) Discuss tailoring of criteria. For example, in the acquisitions for joint service systems, the program office uses policies and procedures from the different military services.
- (7) Coordinate the availability and location of integrated product support (IPS) and program documentation to include use of an integrated digital environment and/or share site.
- (8) Draft an assessment plan that includes a tailored listing of IPS and program documentation prepared prior to the assessment for distribution to team members based on chapter 3 and appendix B.
- (9) Identify ILA team funding requirements.
- (10) Clarify specific logistics assessment schedule of events and/or agenda.
- (11) Identify the location of all assessment activities.
- (12) Identify program office personnel to respond to ILA team member questions.
- (13) Identify security requirements and arrangements, as well as access to classified material.
- (14) Discuss the conduct of the assessment, including development of an overall program brief.
- (15) Discuss the issuance of draft and final reports.

- (16) Discuss post-review procedures to include follow-up on identified issues.
- (17) Discuss the rating criteria and rating process.
- (18) Discuss PEO issuance of a memorandum of ILA status (memorandum stating the IPS Program is ready, ready with comment, or not ready to proceed).
- (19) Rationale for not reviewing a specific IPSE.
- (20) The results of this meeting should be documented in the form of: agreed upon minutes or memorandum of agreement and/or memorandum of understanding (MOU) between the principle parties.
- (21) Team composition. Typically, the team will be comprised of SMEs proficient in their respective IPSE areas. Each IPSE area may not require a unique team member. Some team members may be multifunctional and be able to assess multiple IPSEs. Table 2–3 provides some general guidance on team composition. Additionally, ILA Teams may include a representative from Assistant Secretary of the Army (Acquisition, Logistics and Technology), Deputy Assistant Secretary of the Army (DASA) for Acquisition Policy and Logistics. Additional consideration may be given to include a member from the ATEC and TRADOC communities. All representatives will function in SME roles and be assigned IPSEs to assess, and participate along with other SMEs as part of the ILA team. These individuals are required team members for ACAT I and ACAT II programs where the MDA is the Army Acquisition Executive. It is often beneficial for the MATDEV, PSM, or designee to provide program points of contact (system SMEs for each ISPE to facilitate the smooth flow of data to the independent (assessment) SME as well as to provide a direct path for adjudication.

**Table 2–2
Typical independent logistics assessment team composition**

Complexity	Number of members	SME makeup
Simple - Programs that are single systems with few subsystems and few integration requirements.	Leader plus 3–5 members	SMEs should be multifunctional. They should have the ability to assess multiple IPSEs.
Medium - Programs that have multiple systems and subsystems and multiple integration requirements.	Leader plus 6–8 members	Some SMEs should be multifunctional. Some of the IPSEs assessments will be completed by the same SME.
High - Programs that are comprised of multiple, complex System of Systems and substantial integration requirements.	Leader plus 10–12 members	SMEs should be able to focus on individual IPSEs. In some very complex programs, multiple SMEs may assess the same IPSE.

Note:

Efforts should be made to minimize team size when possible. All IPSE areas are required to be reviewed, no matter the team size.

c. Step 3 (Select team members). The team leader must select team members (assessment SMEs) independent of the program being assessed. The team leader may request input from any PEO, U. S. Army Materiel Command (AMC) Life Cycle Management Commands (LCMCs), and other MATDEVs for potential subject matter expert (SME) team members. The team leader and team member qualifications are identified in table 2–2.

**Table 2–3
Independent logistics assessment team qualifications**

Qualification:	Team Leader (Government Employee) ¹	Team Member ²
Independence:	Must be independent of the program. Not active nor has been recently active in the management, design, test, production or logistics planning of the program, whether from the program office, supporting field activity, or a member of a contractor activity.	Must be independent of the program. Not active nor has been recently active in the management, design, test, production or logistics planning of the program, whether from the program office, supporting field activity, or a member of a contractor activity.
Experience:	Participation in at least one ILA as a team member.	Must have experience in the functional area being assessed.
Education:	Defense Acquisition Workforce Improvement Act Level III in Life Cycle Logistics	Defense Acquisition Workforce Improvement Act Level II or equivalent certification

Note:

¹ For ACAT I and ACAT II program assessments, ILA team leaders should have professional experience as an acquisition logistician.

² When the operation and/or maintenance of the system is being reviewed, Soldier representatives may be invited to participate in the ILA. Additionally, an invitation may be extended to U.S. Army Test and Evaluation Command (ATEC) and U.S. Army Training and Doctrine Command (TRADOC) for participation in the ILA. Soldier and ATEC representatives should be qualified and experienced in the IPSEs and participate as a full team member.

d. Step 4 (Announce independent logistics assessment). Official correspondence such as an e-mail announcing the ILA should be sent by the PEO and/or MATDEV or other representative stating the dates of the ILA, the scope of the ILA, identification of team members, documentation request list, meeting site, schedule, agenda, security and point of contact

information. This correspondence should be distributed to the participants and stakeholders at least four weeks prior to the start of the ILA.

e. *Step 5 (Deliver Documentation)*. PM shall provide all relevant documentation to ILA team leader in accordance with Table 2–1, one week before the opening brief. Documentation should reflect the most current version identified during the pre-assessment and subsequent meetings. The Documentation request list (table B–1 through B–3) outlines typical documentation requirements that should be tailored for each ILA during the pre-ILA meeting to reflect program specifics and the upcoming milestone. The scope and depth of logistics support information in these documents can vary significantly from program to program and by acquisition phase. Some programs may be in a source selection process, or have sensitive/proprietary data issues. Team leaders need to identify team member information (for example, Government, contractor) to the program office to verify if there are sensitive/proprietary data issues and ensure non-disclosure agreements are completed as required. Support contractor personnel should not be disqualified from participating as ILA team members if the proper disclosures are followed and they are not from a competing/interested source. The following are deliverables from Steps 1–5:

- (1) Agreement document.
- (2) Team member listing.
- (3) ILA announcement and/or schedule.
- (4) Program documentation

2–3. Timing

ILAs will continue to be conducted periodically after FRP, with the first ILA occurring two years after the FRP decision. The default frequency for conducting Post-FRP ILAs is every 5 years; however, the following conditions may trigger an ILA earlier. These triggers include:

- a. Materiel availability (A_m) or materiel reliability (R_m) drops by 10 percent or more over a period of 12 consecutive months.
- b. Ownership cost key system attributes (KSA) is > 10 percent from stated requirements over a period of 12 consecutive months.
- c. For automated information business systems, periodicity is established by triggers identified by the PEO or ASA (ALT).
- d. If any of the triggers in a, b, or c occurs, the PEO, MATDEV, or the program sponsor will initiate an ILA within 60 days.

2–4. Assessment process

The assessment process is depicted in figure 2–2.

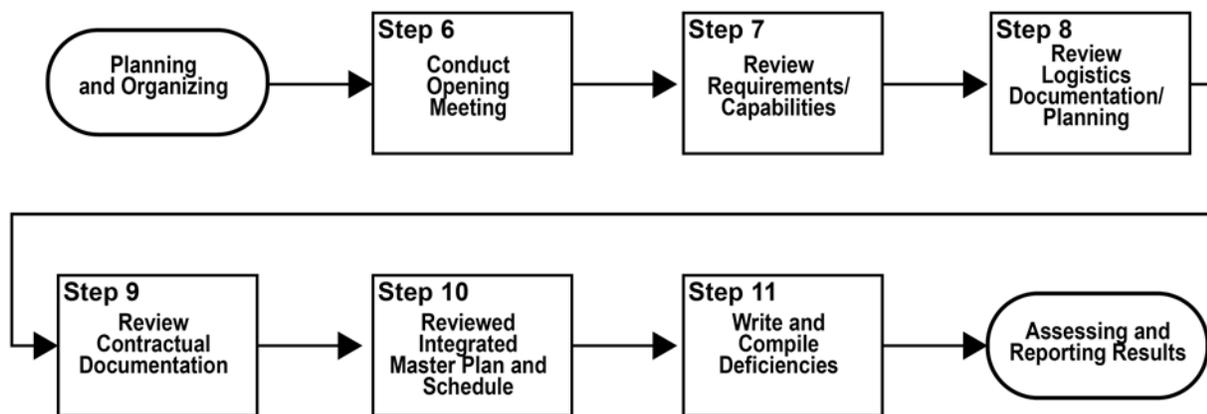


Figure 2–2. Conducting the assessment

2-5. Process description

a. Step 6 (Conduct opening meeting). The opening meeting provides the ILA team with a foundation of information regarding program background, current status, and logistics structure. It also provides the program office with a review of what is expected during the assessment. It is important to recognize assessment team SMEs are not familiar with the particular program (other than through the documentation they were provided, and will have recently reviewed) and the opening presentation is the best opportunity to impart the needed information and/or background to understand the program in its proper context. The opening presentation consists of the following:

(1) *Program presentation.* The purpose of the program presentation, normally presented by the product manager, deputy product manager, or designee, is to impart a basic understanding of the acquisition program. It should address:

(a) Scope of the ILA (a clear description of the scope of the program being assessed, including hardware and/or software elements).

(b) System interfaces.

(c) Planned operational use of the system.

(d) Support strategy, for example, Life Cycle Sustainment Plan (LCSP), including unique considerations and performance objectives, metrics, supportability requirements and assessment strategy.

(e) Hardware, if available.

(f) Current status of the program, including any pertinent history and program peculiarities.

(g) Size of the program in terms of number of units and dollars.

(h) Delivery schedules (end items and support elements).

(i) Program funding status.

(j) Organizational structure of the program office.

(k) Acquisition and sustainment strategy, including contract status and milestones.

(l) Status of the program's documentation (outstanding items from the documentation request).

(m) Program office and logistics points of contact.

(n) Identification of any developing or signed MATDEV Warfighter agreements, performance based agreements, or operational level agreements and/or service level agreements, as appropriate.

(o) Identification of any MOA and/or MOUs, expectation management agreements, with participating and supporting organizations.

(2) *Logistics presentation.* The logistics presentation, normally presented by the program's PSM or logistics lead, addresses each of the areas of supportability to be reviewed by the ILA team. At a minimum, it should address:

(a) Structure of the program support organization.

(b) Status of supportability documentation (For example, an agreement with the LCMC as the product's sustainment provider.

(c) Contracting Strategy.

(d) Results of any and all Alternative Product Support Analysis (APSA) supporting the program.

(e) Support agreement strategy and status (for example, extent of product support alternative life cycle support (industry and/or organic).

(f) Top-level schedules and milestones for each IPSE.

(g) Test Events Schedule and/or results.

(h) Status of delineated tasks, schedules and milestones of the support strategy, LCSP and field/training plan.

(i) Logistics and program risk assessment.

(j) Life cycle cost estimate (LCCE).

(k) Names and phone numbers of program office counterparts.

(l) Budgets (identifying the required, funded and delta amounts) for each IPSE.

(m) Data rights requirements and options pursued and/or obtained to ensure logistics supportability products and infrastructure can be developed. Ensure that consideration of intellectual property, technical data, computer software, software documentation, and the associated rights to use them have been addressed. Ensure that the Government has certain rights to selected technical data like form, fit, function, operation, maintenance, installation, and training data.

(n) Product support arrangements.

(o) Post-FRP and/or FDD performance metrics.

(p) Any other special interest items.

(3) *Independent Logistics Assessment Team presentation.* The purpose of this presentation, presented by the ILA team leader, is to provide information to the ILA team members and program personnel on the conduct of the assessment. This presentation should address the following:

(a) A review of the responsibilities of the team leader and team members.

(b) Specific logistics assessment schedule of events and/or agenda.

- (c) Instructions on documenting deficiencies and desired format (see app D).
- (d) Guidance on final report and recommended actions.
- (e) Post-review report and procedures.

b. *Step 7 (Review requirements and/or capabilities)*. User needs and capabilities form the basis for the support system performance requirements. ILA team members must familiarize themselves with not only the requirements but also the established metrics for measuring attainment of these user needs. Team members must understand and focus on user requirements when assessing the program using the individual "Assessment Criteria."

(1) Review the basic program requirements, including: performance agreements, key performance parameters (KPPs), KSA, and other critical system parameters in the initial capabilities document (ICD), capability development document (CDD), and capability production document (CPD), depending on the program phase, and the Acquisition Plan or AS.

(2) The absence of an approved ICD, CDD, CPD or any other single document will not be the sole basis for assigning a logistics rating of red, yellow, or green during the ILA process. These program documents are tracked by the MATDEV and their supporting PEO or LCMC as a program progresses through the Department of Defense (DOD) acquisition process.

(3) For post-FRP and/or post-FDD assessments should include the following assessment reviews:

(a) Validation that actual supportability performance is meeting all supportability-related KPP and KSA performance parameter threshold values, as specified in the CPD and/or Warfighter "User" performance-based agreement (PBA), if applicable.

(b) Assessment of program and any independent source sustainment and product support cost estimates, against current budget and funding, and also using actual costs reported in those same cost estimate categories.

(c) Assessment of the life cycle support strategy, as delineated in the LCSP, is being executed as planned, or has been revised to ensure satisfactory support of major design and support product improvements based on updated support analysis (operator and maintainer have been provided with final product support item).

(d) Assessment of materiel release status, including any open conditions and get well plans from a conditional materiel release.

(e) Confirmation of satisfactory configuration control.

(f) Assessment of obsolescence and diminishing manufacturing sources and materiel shortages.

(g) Analysis of product support alternatives or product support provider performance meet or exceed cost and performance baselines established by the product support alternative BCA.

(h) Assessment of training effectiveness.

(i) Assessment of customer satisfaction.

(j) Product improvements incorporated.

(k) Assessment of Configuration Status Accounting (including sponsor owned materiel, government owned materiel and plant property).

(l) Assessment of the materiel system supply chain.

c. *Step 8. (Review logistics documentation and/or planning)*. A full review of all of the logistics program management documentation: AS; LCSP; Reliability Program Plan; prior ATEC evaluation reports; and associated Materiel Fielding Plan ensures basic requirements have been translated into product support requirements. The LCSP should also provide a mapping to the primary support product, technical documentation, logistics schedules, and be supported by appropriate funding. For post-FRP and/or post-FDD reviews, consider execution of program documents during assessment (that is, how well they met the originally stated goals or targets).

(1) Determine if the performance agreements, specified supportability KPPs, KSA, and critical system parameters in the ICD, CDD, and/or CPD can be met from a supportability standpoint. Depending on the program phase, the information required to perform this assessment can generally be found in reliability, availability, and maintainability (RAM) models and predictions, development and operational test information documents, RAM and/or built-in-test (BIT) requirements in the contract PWS, RAM analysis, and test results. If the RAM KPPs and critical system parameters of the ICD, CDD, and/or CPD are not met, then the IPS areas must be reassessed to determine what impact the lower RAM numbers will have on the supportability of the system. For instance, if the actual reliability number does not meet the reliability stated in the CPD and spares are being reviewed, then the originally calculated requirements for spares may not be correct and may need to be recalculated. If manpower is being reviewed, the manpower analysis may need to be revalidated since it does not take into account more frequent failures and longer times to repair and maintain systems. If there is an impact, assess risk to the program and document a recommendation or deficiency.

(2) Review the primary and supporting documentation for each IPSE (i.e computer resources) to ensure logistics requirements are further detailed and required analysis have been performed. This should include a review of the funding and budget documents to ensure funding requirements for each IPSE are appropriately identified, funding is available, and shortfalls identified. Ensure each IPSE is funded and funding correlates to the appropriate tasking year per the IPS IMS.

(3) Assessment criteria requiring review. The following IPSEs require review during an ILA regardless of the support strategy:

- (a) Product support management.
- (b) Design interface.
- (c) Sustaining engineering
- (d) Supply support.
- (e) Maintenance planning and management.
- (f) Packaging, handling, storage, and transportation.
- (g) Technical data and Intellectual Property (TDIP).
- (h) Support equipment.
- (i) Training and training support.
- (j) Manpower and personnel.
- (k) Facilities and infrastructure.
- (l) Computer resources.

d. *Step 9 (Review contractual documentation)*. Review the contract or tasking to ensure appropriate requirements have been identified. The solicitation package or contract should include an adequacy assessment of supportability requirements. The review should include an assessment of the adequacy of:

- (1) The IPS and related RAM requirements.
- (2) Required IPS and related RAM analysis and the use of their results to impact design.
- (3) Compliance with critical completion and delivery dates.

e. The solicitation package for the next acquisition phase, if available, should also be reviewed to ensure it is adequate to meet the requirements of the ICD, CDD, and/or CPD (as appropriate) and other pertinent program documentation such as the LCSP. Verify that there are no disparities between what the LCSP, Systems Engineering Plan (SEP), Test and Evaluation Master Plan (TEMP), AS, and Corrosion Prevention Control Plan say and the requirements are accurately reflected in the request for proposal (RFP). This is critical to ensure planning is complete.

f. Similarly, field activity tasking documents (in place and proposed) should be reviewed to ensure the Government supporting activities are appropriately engaged, tasked and funded.

g. *Step 10 (Review Integrated Master Plan and Schedule)*. Review ILA element assessment criteria against the IMP and master program schedule. Review reasonableness of the tasks and likelihood of completion of each IPS task within the allocated schedule.

h. A program's overall schedule reflected in the IMS can range from being an imposed schedule to one that has some flexibility. The logistics support tasks for each IPS factor must be planned, scheduled and integrated with other program activities. The sequence and dependencies of one task upon another must be included in determining schedule realism. The integrated master program schedule timelines must be achievable within funding constraints when considering a bottom-up view of all required detail tasks and their interdependencies. The LCSP and Annexes should contain the detailed plans and milestones for each IPSE for focused IPS management planning and/or implementation.

i. One or more project management charting tools are commonly used to schedule and organize program tasks, graphically showing their schedule and dependencies. The effectiveness of a program's LCSP must be reviewed in context of the overall program schedule and the design and/or development milestones. However, logistics schedules allocated from programmatic top-down requirements may not be achievable within the allocated funding and manpower, especially when considering logistics ability to influence the design for optimized supportability. The program IMS must also factor in the schedule requirements for each logistics factor, based on a bottom-up task analysis to ensure realism. Otherwise, logistics efforts typically become focused on documenting the design when they should be focused on influencing the design.

j. The detailed logistics support tasks developed and integrated into the overall program integrated master schedule must be realistically achievable and consider the sequence of all dependent and interconnected tasks to minimize program risks. All tasks feeding into achieving IPS milestones and assessments should meet at those milestone and/or assessment nodes. The critical paths should be reviewed to identify all logistics tasks, and used to identify actual start and/or end dates to review progress of each task against its schedule, including the timeliness of the logistics tasks. Schedules, for example, should reflect tasks such as, BIT and/or testability design; maintainability analyses and/or verifications; failure modes, effects, and criticality analysis (FMECA); reliability centered maintenance (RCM); special test equipment identification, and development of the embedded and on-board training capabilities. These tasks should be reviewed to ensure that they are completed by the critical design review; thus allowing adequate time to develop and validate/verify the Interactive Electronic Technical Manual (IETM) and/or support documentation before completion of tasks associated with the development, coordination and approval of the school-house training curriculum. Optimistic, success-oriented schedules not reflecting realistic conditions will mask program cost growth and schedule delays.

k. Step 11 (Write and compile deficiencies). Documentation will be delivered no later than 8 weeks prior to assessment week and the ILA team will begin reviews immediately upon receipt using the assessment criteria contained in the tables found in chapter 3 of this handbook as assigned by the ILA team leader. Team members will annotate the IPSEs being evaluated with any discrepancies along with the impact if not corrected, the recommended action(s), and whether the program representative concurs or does not concur.

(1) Note: Periodic progress briefs are to be conducted during the ILA at a time agreed upon by the ILA Team Leader and the program office representative. The purpose is to brief the program office of any issues noted during the assessment as well as to resolve any remaining issues from previous progress briefs. During these briefs, the ILA Team Leader will—

(a) Discuss new issues with the program manager or program office representative.
(b) Obtain the program manager's or program office representative's concurrence or nonconcurrence on each deficiency, as well as on the team leader's logistics recommendation.

(c) Follow-up on open issues from previous progress briefs, as necessary.

(d) Address conflicts with ratings from other reviews provided in supporting documentation.

(2) These periodic progress briefs are intended to be informational in nature and should discuss issues likely to appear in the final brief. The intent of these progress briefs is keep the MATDEV informed so there are no surprises in the final brief.

l. Each team member should coordinate with their program office counterpart(s) upon formulation of initial observances and/or deficiencies to ensure the facts are understood. A summary report of the results of each element assessed, including all deficiencies, will be submitted to the ILA team leader. As part of their responsibilities, the team leader must review all issues or discrepancies turned in by the team members for accuracy and ensure the proposed rating given by the team member is commensurate with the rating criteria in this guide. The team leader may change a rating and/or modify the content of an issue if the facts are not correct and the rating is not in accordance with this guide or AR 700–127. Only after the team leader has vetted the issues with the program office PSM or sustainment lead should they be formalized. Appendix C provides required ILA rating criteria. Appendix D provides ILA report content. Report format should be in accordance with the ASA (ALT) or PEO instruction or as directed by the team leader if none is prescribed.

2–6. Process deliverables

The following are process deliverables for steps 6–11:

- a.* Deficiencies.
- b.* Recommendations.

Chapter 3 Assessment Criteria

The assessment criteria contained in the tables of chapter 3 should be used to assess the planning and status of the IPS program for the system under review, regardless of the support strategy (for example, product support alternative and traditional support). These criteria are derived from both policy and best practices, proven to produce optimal supportability. They are not system specific. System or PEO unique requirements along with varying program requirements and acquisition strategies may require tailoring of the criteria. The ILA team should assess all required program IPS documentation as part of the ILA.

3–1. Criteria

The criteria in the following tables are used to holistically assess the supportability of a program, not just the functions falling under the purview of the PSM. Many disciplines and organizations impact the ability of the PSM to execute a successful product support strategy (for example, with conflicting requirements, lack of funding, and inadequate design). These factors need to be considered as part of the assessment, and negative impacts documented (for tailoring see chap 2). The milestone columns in the assessment criteria tables are marked to indicate at which milestone the criteria will be applied for a typical program with program initiation at Milestone B. The milestone columns are either marked with an I, IP, F, or U. Each definitions are listed—

a. I (Initiated) – The strategy and approach have been defined and documented in program plans to include the IMS, and funding is identified in the logistics requirements funding summary. The activity and/or product is included in contractual documentation. (RFP, contract, and/or tasking orders.)

b. IP (In-process) – Efforts for the activity or product are in process, to include analyses, assessments, studies, and surveys. Predecessor activities have been completed and precursor actions have been initiated or are in process as appropriate.

c. F (Finalized) – The activity or product has been completed, is finalized, and has resulted in approval or decision by the approving/decision authority. The activity/product may also be in a completed state but not approved if a pending decision or approval will not impact dependent decisions or activities and the effort will be finalized prior to the milestone.

d. U (Update) – The activity and/or product is updated as required by statute, regulation, or to reflect new data as the product and/or process matures.

e. * (Special) - if an * appears in the column, typically it relates to multiple possibilities and each will be explained in the description.

f. Blank - If the column is blank, this implies that there is no formal activity during this milestone phase on the identified activity.

3–2. Recommended criteria for conducting independent logistics assessments on acquisition category III programs

Use the following criteria as recommendation on when to conduct an Independent Logistics Assessments on Acquisition Category III Programs:

a. Overall System performance and supportability are at risk of meeting requirement.

b. All required supportability products have not been (or are not scheduled to be) delivered to the user and there are significant issues impacting supportability.

c. The program is not projected to achieve operational cost goals as planned from a supportability perspective.

3–3. Criteria tables and/or checklists

Since programs vary in their acquisition approach and strategy (for example, Rapid Development Capability Programs, Urgent Operational Needs programs, and evolutionary programs), the letters in the milestone columns may vary and should be used as a guide, not a hard requirement.

Table 3 – 1

Produce support management

Assessment Criteria	Milestones			
	B	C	FRP and/or FDD	Post FRP and/or FDD
3-1.1 Management Planning				
3 – 1.1.1 Market research and analysis shall be conducted to determine the availability, suitability, operational supportability, interoperability, and ease of integration of existing commercial technologies and products and of NDIs prior to the commencement of a development effort.	U	U		
3 – 1.1.2 Processes to plan for or manage supportability have been identified or are in place to a level of maturity as appropriate to the program phase. These are documented in the program LCSP and implementing program IPS documents, and are derived from statutory, regulatory, ACOM, and other requirements documents (system specification) (see DODI 5000.02 and CJCSI 3170.01).	F	U	U	U
3 – 1.1.3 Product support manager appointed. The PSM is the focal point for all PSM actions related to the acquisition program and will be the chair of the Life Cycle Sustainment Team established by the MATDEV.	F	U	U	U
3 – 1.1.4 Program requirement documents quantify a threshold/objective range for each support and sustainment related performance parameter, with measureable metrics for each. Each parameter is associated with its programmatic resource cost to plan and execute across the projected life cycle (see 2.2.1). Sustainment KPP and/or KSA are defined consistently across documents (Joint Capabilities Integration and Development System (JCIDS), AS and/or LCSP, RFP, System Specification) (see DODI 5000.02 and CJCSI 3170.01).	F	U	U	
3 – 1.1.5 Performance threshold values are on target for IOC, or have been met. If not, a plan is in place to ensure they are met (see DODI 5000.02 and CJCSI 3170.01).	IP	IP	F	
3 – 1.1.6 Basis of issue plan (see AR 71 – 32), developed by U.S. Army Force Management Support Agency, is a document that establishes the distribution of new equipment and associated support items of equipment and personnel, as well as the reciprocal displacement of equipment and personnel. The process identifies minimum mission-essential wartime requirements for inclusion into organizational models based on changes in doctrine, personnel, or materiel. The basis of issue plans are source documents for changes to table of organization and equipment (TOE) and TDA.	I	IP	F	U
3 – 1.1.7 Authorization documents. MTOE, TDA, joint table of allowance (JTA), common table of allowance. Headquarters, Department of the Army-approved memorandum requests pending MTOE, TDA, JTA, and/or CTA documentation.	I	IP	F	U
3 – 1.1.8 Deficiencies identified during previous ILAs, assessments, systems engineering technical reviews (for example, preliminary design review, critical design review, production readiness review (PRR)), failure reports, program reviews, or testing that impact IPS planning have been corrected or an acceptable plan is in place to mitigate the deficiency. Technology, manufacturing, and/or sustainment readiness levels (technology release lists and/or materiel release lists) reflect maturity that will not impact supportability planning.	F	F	F	U
3 – 1.1.9 All operational test findings of deficiency related to product support are resolved or are in the process of being mitigated.			F	F
3 – 1.1.10 A SEP has been developed in accordance with DODI 5000.02 and DOD SEP preparation guide. Supportability and manpower and personnel integration (MANPRINT) elements are addressed in the SEP and considered in the engineering process (see AR 700 – 127 and AR 602 – 2).	F	U	U	
3 – 1.1.11 The MOAs and/or MOUs or other formal agreements have been developed between the program office, gaining command or platform, participating acquisition resource manager, user, (for example, those identified in the SEP), field activities, software support activities that defines supportability requirements, administrative and personnel resources, funding, and physical resources). All MOAs with a field activity, with support activities, with a DOD activity to host a backup disaster recovery site and software support activity (SSA).	I	IP	F	U
3 – 1.1.12 A standardization process and/or program is in place (and summarized in the AS) to reduce proliferation of nonstandard parts and equipment and optimize parts commonality across system designs (see 10 USC 2451 and DOD 5000.02).	IP	F	U	
3 – 1.1.13 If a warranty is used, a cost-benefit analysis is conducted to determine the appropriate spares and/or warranty strategy. (see AR 700 – 139)	I	IP	F	
3 – 1.1.14 If applicable, a written warranty plan has been developed that includes tracking and assessment of essential performance requirements as identified in the DOD Warranty Guide (see FAR and Defense Federal Acquisition Regulation Supplement (DFARS))	I	IP	F	
3 – 1.1.15 Fielding plans have been developed, including incorporation of the first install(s) at the schoolhouse(s).	I	IP	F	
3 – 1.1.16 Fielding authorizations have been obtained, including required type classifications and materiel releases. (see AR 700 – 142).		IP	F	

**Table 3 – 1
Produce support management — Continued**

Assessment Criteria	Milestones			
	B	C	FRP and/or FDD	Post FRP and/or FDD
3-1.1 Management Planning				
3 – 1.1.17 Full or conditional materiel release will be achieved prior to full rate production. (see AR 700 – 142)	I	IP	F	U
3 – 1.1.18 Interim support planning, including interim contractor support, for IPS is in place, including exit criteria for attainment of full organic support or rationale for any life cycle contractor support strategy.	I	IP	F	
3 – 1.1.19 Transition plans identify requirements for transitioning support of a system from an interim support provider to the gaining activity.		I	IP	F
3 – 1.1.20 The program office is staffed for all core and sub-product functions, to include a PSM, as required. These positions are fully funded, either with mission funding or by working capital funds. Additionally, all positions are filled with qualified acquisition certified professionals.	F	U	U	U
3-1.2 Performance based product support alternatives				
3 – 1.2.1 Performance based product support alternatives (contracts with incentives) have been considered for all support areas (including tech assist, support equipment (SE), calibration requirements, and training) which motivate and/or incentive performance, are metrics-based, and consider legacy systems (see DODI 5000.02, PSM Guidebook, and DOD Product Support BCA Guidebook).	I	IP	F	U
3 – 1.2.2 Applicable Alternative Product Support Analysis are conducted per AR 700 – 127 and DA Pam 700 – 127.	I	F	U	
3 – 1.2.3 System level performance metrics have been established for the PBA between the user and the program manager, and directly support KPPs. Metrics are in synchronization with the scope of support provider's responsibility.	I	F	U	U
3 – 1.2.4 A methodology has been established to collect IPS performance metrics. These metrics are defined and are measurable and repeatable. (see FAR)	I	IP	F	U
3 – 1.2.5 Supportability performance metrics are collected and assessed.	I	IP	F	U
3 – 1.2.6 A range of performance based product support alternatives opportunities with major subsystem and component original equipment manufacturers (OEMs) have been evaluated.		IP	F	U
3 – 1.2.7 Work agreement and/or contract SOO/SOW includes required metrics and data deliverables, which will be tailored to the unique circumstances of the arrangements, for evaluating required performance results in support of CDD and/or CPD and PBA performance parameters. Metrics support overall DOD product support measures (Ao, materiel reliability (RM), logistics footprint, cost per unit usage, and logistics response time). Sufficient cost data shall be included to validate applicable BCAs with actual costs during in-service reviews.		IP	F	U
3 – 1.2.8 Exit criteria has been established in the performance based contracts to ensure the orderly and efficient transfer of performance responsibility back to the Government upon completion or termination of the contracts. Contains provisions for the acquisition, transfer, or use of necessary technical data, support tooling, support and test equipment, calibration requirements and training required to reconstitute or re-compete the support workload.		I	IP	F
3 – 1.2.9 A support performance data collection system is planned and/or in place and operating. Trends are monitored and fed back for appropriate corrective actions. A corrective action process is defined if performance does not meet PBA and/or Warfighter requirements.	I	IP	F	U
3-1.3 Schedule				
3 – 1.3.1 A program IMP or work breakdown structure, as provided in the contract, has been developed which includes logistics support criteria or accomplishments to meet program milestones as specified within program requirements documentation (ICD, CDD, and/or CPD).	U	U	U	
3 – 1.3.2 A program IMS has been developed that: 1) is reflective of the program IMP or work breakdown structure; 2) contains detail on IPS support activities for both government and contractor, to include precursor and predecessor relationships; 3) is detailed for the program life cycle phase being assessed, and 4) reflects tasks identified in the LCSP (Assessor Note: this is not a contractor delivery and/or activity schedule).	U	U	U	U
3-1.4 Cost estimating				
3 – 1.4.1 A program LCCE has been approved by DASA – CE for the program (see DODI 5000.02).	F	U	U	
3 – 1.4.2 A Cost Analysis Requirements Document has been developed by the program office for all ACAT programs where the MDA is the Army Acquisition Executive, an independent cost estimate (ICE) is required. These are approved by DASA – CE. (See DODI 5000.02 and AR 70 – 1).	F	U	U	U
3 – 1.4.3 An ICE is completed for ACAT I programs conducted by the cost analysis and program evaluation. An ICE or independent cost assessment (depending on MDA option) is completed for programs for which the PEO is the MDA (see DODI 5000.02 and AR 70 – 1). A comparison of the results of the ICE and LCCE for the costs of logistics support (for both acquisition, and operations and support) is available for review.	F	U	U	

Table 3 – 1

Produce support management — Continued

Assessment Criteria	Milestones			
	B	C	FRP and/or FDD	Post FRP and/or FDD
3-1.4 Cost estimating				
3 – 1.4.4 For information technology (IT) programs, a component cost analysis has been conducted by the (ACAT IA) (see DODI 5000.02 and AR 70 – 1).	F	U	U	U
3 – 1.4.5 Logistics funding requirements are developed using accepted cost estimating methodologies appropriate to the program phase (see DODI 5000.02).	F	U	U	U
3 – 1.4.6 The program has conducted should cost analyses to identify the availability of cost reductions in logistics operations (for both acquisition and sustainment operations). And, in those instances where advantageous and actionable logistics cost savings are available, the program manager has developed, and is tracking and reporting should cost estimates on the savings.	F	U	U	
3-1.5 Funding				
3 – 1.5.1 The program budget is funded to the requirements identified in the ownership cost estimates.	IP	F	U	U
3 – 1.5.2 A budget has been established and kept updated that identifies all appropriations; supports the budgetary requirements of the LCSP and requirements documentation and is appropriately phased; includes rationale to support the documented funding amounts and includes funding shortfalls and impacts.	F	U	U	U
3 – 1.5.3 Lifecycle cost estimates, including cost reduction efforts have been developed and validated optimizing total ownership costs (TOCs).	F	U	U	U
3 – 1.5.4 Funding requirements identified in the replaced system sustainment plan are identified and funded, as appropriate.	F	U	U	U
3 – 1.5.5 The TOC analysis is being performed, including fielding and Operational and Support costs to date.				U
3 – 1.5.6 Post-IOC cost estimates and the projection of the TOC objective versus service cost position baseline are substantiated by assessed fielded systems performance, operations, and sustainment related expenditure to date.				U
3-1.6 Contract package				
3 – 1.6.1 The respective contractual package reflects the IPS efforts to be completed and delivered by the contractor as identified in program and IPS planning documentation. Assessor Note: When reviewing the contract package, ensure any IPS tasks or requirements identified as options have been exercised.	F	F	F	U
3 – 1.6.2 Specifications for supportability and the current contract include verification criteria which can be met (to include test, demonstration, analyses, and verification).	F	U	U	
3 – 1.6.3 Supportability requirements are flowed down to the appropriate specifications.	IP	F	F	
3 – 1.6.4 Contracts include metrics for tracking and assessing contract performance.	F	U	U	U
3 – 1.6.5 The contractual package clearly identifies the functions, responsibilities, and authorities of field service representatives, if used. The contract is adequately funded.				F
3 – 1.6.6 In the development of a contract package for IPS elements, does the contract package have appropriate entries in the SOO/SOW, Contract Data Requirements List (CDRL), which have been appropriately tailored based on the Data Item Description (DIID) identified and the underlying Specification/Standard, and any requirements for Sections L & M."	I	U	U	F
3-1.7 Configuration management				
3 – 1.7.1 Requirements for the configuration identification, control, status accounting, configuration baseline, Configuration Control Board processes and membership (to include logistics participation), deviations, engineering changes and verification and/or audit functions are established for hardware, software, product and/or technical data and reflected in an approved Systems Engineering Plan (SEP). The Defense Acquisition Guidebook (DAG) should be consulted for additional information and best practices related to CM (see DODD 5000.01, DODI 5000.02, EIA – 649, IEEE 12207 for SW).	F	U	U	U
3 – 1.7.2 Appropriate configuration audits have been conducted. * Functional Configuration Audit conducted before Operational Test Readiness Review and prior to Milestone C, typically coinciding with System Verification Review and PRR. Physical Configuration Audit (PCA) conducted prior to FRP and/or FDD.	I	*	*	
3 – 1.7.3 The appropriate baselines (for example, functional, allocated and product) have been established by the appropriate technical review events. * Functional baseline at system functional review, allocated baseline at preliminary design review, initial product baseline at critical design review and finalized at PCA (see DODI 5000.02, see above references).	IP	*	*	
3 – 1.7.4 All configuration items have been identified (see above references).	IP	F	U	
3 – 1.7.5 The status of configuration change activity, approvals, and the version descriptions for software configuration item under development and installed in hosting locations are tracked within the configuration status accounting function within the program's CM processes per the SEP (see above references).	I	IP	F	U

Table 3 – 1 Produce support management — Continued				
Assessment Criteria	Milestones			
	B	C	FRP and/or FDD	Post FRP and/or FDD
3-1.7 Configuration Management				
3 – 1.7.6 The configuration status accounting information is maintained in a CM database that may include such information as the as-designed, as-built, as-delivered or as-modified configuration of the product, as well as the configuration of any replaceable components within the product along with the associated product and/or technical data (see above references).	IP	F	U	U
3 – 1.7.7 The status of proposed engineering changes from initiation to final approval and contractual implementation has been recorded and reported in the configuration status accounting records and/or database (see above references).			U	U
3 – 1.7.8 An effective process is in place for processing engineering change proposals (ECPs) and deviations The ECPs, deviations are tracked and managed per the program's configuration management plan and process.	IP	F	U	U
3-1.8 Product assurance				
3 – 1.8.1 The organization has a quality policy, at the highest level in the company, which commits to continuously improving processes to exceed customer expectations by establishing a corporate strategic vision, objectives, policies and procedures that reflect a commitment to quality both in-house and in suppliers' facilities. The DAG should be consulted for additional information.	IP	F	U	U
3 – 1.8.2 The organization has established a quality management system (QMS) giving consideration to determine the sequence and interaction of the quality processes in relation to the supportability and sustainability of the system. The DAG should be consulted for additional information.	IP	F	U	U
3 – 1.8.3 The organization has established a Quality Program Plan (QPP) with a methodology to meet all quality requirements for use throughout all phases of the life cycle in relation to the supportability and sustainability of the system (development, fabrication, test, delivery and post-delivery support).	IP	F	U	U
3 – 1.8.4 The organization's QPP establish the procedures used to satisfy the product assurance (PA) requirements of the program with effective quality management that seeks continual improvement of its processes, product designs, and thereby products by improving its overall performance, efficiency, and effectiveness. The DAG should be consulted for additional information.	IP	F	U	U
3 – 1.8.5 Does the program have a quality program in accordance with AR 702 – 11, Army Quality Program? In addition, does the work directive and/or contract include quality assurance/quality control provisions?"	IP	F	U	U

Table 3 – 2 Design Interface				
Assessment Criteria	Milestones			
	B	C	FRP and/or FDD	Post FRP and/or FDD
3-2.1 Parts and Material Selection				
3 – 2.1.1 Design guidelines for the contractor are provided which optimize supportability and maintainability of the system. The degree of adherence to the design guidelines for supportability and maintainability should be assessed at preliminary design review and critical design review (see DODI 5000.02).	F	U	U	
3 – 2.1.2 System, subsystem, and component specifications reflect the design reference mission profile (DRMP) environmental, functional, corrosion resistance, and logistics use profiles.	I	F	U	U
3 – 2.1.3 Predicted failure rates have been verified and used to estimate annual operating costs (to include consideration of corrosion severity zones in accordance with ISO Std 8044, 8565, 9223, 9224, and 9225).	I	IP	U	U
3 – 2.1.4 For applicable programs, the process for establishing and managing critical items and/or critical safety items list has been developed and follows the process delineated in AR 385 – 10 (see DOD 4140.1 – R, PL 108 – 136 section 802).	I	F	U	
3 – 2.1.5 For applicable programs, provisions for identifying critical safety items (CSIs), critical application item (CAIs), and noncritical items have been identified (see DODI 5000.02).	F	F	F	U
3 – 2.1.6 For applicable programs, CSIs, CAIs, and noncritical items are incorporated in the contract SOW and program office tasking (see DOD 4140.1 – R).	F	F	F	
3 – 2.1.7 For applicable programs, a preliminary list of CSIs, CAIs, and noncritical items has been reconciled with latest logistics product data (LPD) and submitted.	I	F	U	
3 – 2.1.8 For applicable programs, the CSI and/or CAI list and associated technical and management information has been approved by appropriate Government technical authorities and the final list has been submitted to the appropriate logistics databases.	I	F	U	U

**Table 3 – 2
Design Interface — Continued**

Assessment Criteria	Milestones			
	B	C	FRP and/or FDD	Post FRP and/or FDD
3-2.1 Parts and Material Solution				
3 – 2.1.9 A parts standardization program has been implemented. Standard parts and equipment are those currently in the DOD inventory or produced in accordance with nationally recognized industry, international, federal, or military specifications and standards (see 10 USC 2451 and DOD 5000.02).	IP	F	U	U
3 – 2.1.10 Interoperability: the ability of systems, units, or forces to provide data, information, materiel, and services to and accept the same from other systems, units, or forces, and to use the data, information, materiel, and services so exchanged to enable them to operate effectively together.	IP	F	U	
3 – 2.1.11 Reliability verification testing has been planned or conducted for commercial-off-the-shelf (COTS) components to ensure they meet or exceed overall system reliability requirements.		I	F	U
3-2.2 Testability and diagnostics				
3 – 2.2.1 Preliminary BIT and/or testability analysis is completed by preliminary design review (see Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 3170.01 and/or IEEE EIA – 649).	IP	F		
3 – 2.2.2 Detailed BIT, and/or testability analysis is completed by critical design review, and BIT effectiveness is validated with tests (see above references).		F		
3 – 2.2.3 The testability and/or BIT concept is defined with the operation concept and the maintenance concept for all levels of maintenance (see above references).	I	F	U	
3 – 2.2.4 Design analyses (for example, fault tree analysis (FTA), FMECA) have been used to determine test point requirements and fault ambiguity group sizes (see above references).	IP	F	U	
3 – 2.2.5 The level of repair and testability analysis is completed for each configuration item for each maintenance level to identify the optimum mix of BIT, semi-automatic test equipment, calibration standards, maintenance assist modules (MAMs), special purpose test equipment and general-purpose test equipment (see above references).	I	IP	F	U
3 – 2.2.6 The BIT metrics are collected to validate BIT effectiveness and performance against requirements.	IP	F		U
3 – 2.2.7 The BIT and diagnostics are meeting performance requirements (for example, false alarm rates and percent fault isolation).	IP	F	U	U
3-2.3 Reliability, availability, maintainability, and cost				
3 – 2.3.1 RAM–cost (RAM – C) Rationale Report has been developed and provides a quantitative basis for reliability requirements and improved cost estimates.	F	U		
3 – 2.3.2 Product support elements are traceable to the following factors of the Design Reference Mission Profile (DRMP) (see DOD RAM Guide, and DOD RAM – C Manual, MIL – STD – 53072 and ISO Stds 8044, 8565, 9223, 9224, and 9225): Environmental profiles (for example, temperature, vibration, electromagnetic interference, electrostatic discharge, humidity, altitude, salt spray, fog, nuclear, chemical and biological, sand and/or dust, foreign object damage, and production contaminants); functional profiles (to the subsystem, assembly and part levels as the system design progresses); logistics-use-profiles and associated timelines.	F	F	F	U
3 – 2.3.3 Metrics for availability (KPP), reliability (KSA) and cost (KSA) have been defined. Additional sustainment metrics, such as mean down time, customer wait time and footprint reduction as appropriate have been assessed and defined (see DODI 5000.02).	I	F	U	U
3 – 2.3.4 The RAM measures (for example, Ao, AM, mean time between failures, mean time to repair (MTTR), and mean logistics delay time, fault detection, fault isolation, and false alarm) are defined in quantifiable and measurable terms (see CJCSI 3170.01).	F	U	U	U
3 – 2.3.5 The RAM requirements are applied to all systems, to include those that rely on or are developed with COTS and/or NDIs (see DODI 5000.02. DAG, and DOD RAM – C manual should be consulted for additional information on RAM.).	I	F	U	
3 – 2.3.6 The life cycle sustainment KPPs (Ao, AM KSA, materiel release, and ownership cost KSA) and other RAM performance objectives (MTTR and BIT) are being tracked and achieved as defined (see DODI 5000; CJCSI 3170.01; DOD JCIDS Manual; and DOD RAM – C Rationale Report Manual).	I	IP	F	U
3 – 2.3.7 A process has been implemented to assess achieved reliability, RAM performance by collection and analysis of user data, for factory and the field.	I	IP	F	U
3 – 2.3.8 Programs are reporting RAM into the appropriate RAM databases, as required, such as the Defense Acquisition Management Information Retrieval System and Material Readiness Database		F	U	U
3 – 2.3.9 The RAM performance capability parameters are defined consistent with the ICD, CDD, CPD, and system/performance specification and flowed down to the TEMP, other programmatic documents and RFP and/or contract, as appropriate (see DODI 5000.02 and CJCSI 3170.01). * Final (F) documents as follows: ICD (F) at Milestone B, CDD (F) at Milestone S C, CPD (F) at FRP	*	*	*	

**Table 3 – 2
Design Interface — Continued**

Assessment Criteria	Milestones			
	B	C	FRP and/or FDD	Post FRP and/or FDD
3-2.3 Reliability, availability, maintainability, and costs				
3 – 2.3.10 Predictions, analyses and tests are conducted to verify if RAM requirements and KPPs will be met (see DODI 5000.02).	IP	F	U	
3 – 2.3.11 Reliability growth program indicates that system and subsystem reliability is appropriate to meet the stated requirement. A reliability growth plan has been implemented, as appropriate.	F	U	U	U
3 – 2.3.12 An approved readiness model is used to assess the effects of various levels of redundancies, spares, downtimes and maintenance concepts on operational availability.	I	F	U	
3 – 2.3.13 Reliability maturation tests (accelerated life, to include corrosion, or reliability development tests) are used to mature equipment reliability	I	F	U	
3 – 2.3.14 Contracts include the requirement for the supplier to implement RAM programs and provide updated analyses towards the achievement of those requirements (see GEIA – STD – 0009, as a reference for RAM contracting practices,.	I	F	U	
3 – 2.3.15 Contingencies for system selection or RAM and/or supportability design changes are considered when preliminary RAM thresholds are deemed unachievable.	I	IP	F	
3 – 2.3.16 Reliability verification testing has been planned and/or conducted for all components as applicable, to include COTS components, to ensure they meet or exceed overall system reliability requirements.	F	U	U	U
3 – 2.3.17 Demilitarization and disposal plan has been developed, addressing requirements in a way that complies with legal and regulatory requirements. . This plan should also be documented in the LCSP (AR 700 – 144).	I	F	U	U
3 – 2.3.18 Reliability centered maintenance (RCM) is used to address the total scheduled maintenance program of a system. RCM analysis is done to benefit the evaluation of progress, consistency, and technical adequacy of the design and test approach and to make a determination of the acceptability to proceed with the designs that optimizes maintenance actions. It provides an insight into areas of design that may be deficient in maintainability. An early analysis also provides the foundation inputs for supportability planning and human factors and/or personnel planning of a system. (See AR 70 – 1; maintenance planning Section 3 – 5.2.1 for related requirements for condition based maintenance).	F	U	U	U
3 – 2.3.19 FMECA process, including failure analysis, is established and failures are analyzed and trended for IPS visibility. BIT indications and false alarms are analyzed and included in the FMECA process (see DOD RAM C Guide).	I	F	U	U
3 – 2.3.20 A FMECA should be performed such that all failure modes including safety critical are identified during the design and development and eliminated or impact assessed to reduce reliability risk. Those failure modes identified through testing, production, deployment and sustainment should be analyzed and the FMECA updated.	IP	F	U	U
3 – 2.3.21 A FTA has been conducted on the top failures identified in the FMECA identify all credible ways in which these failures can occur and how they are related. The goal is to identify failures modes, symptoms, and critical areas early in the life cycle to allow for efficient time to adjust the design to reduce programmatic impact.	F	U	U	U
3 – 2.4 Product support analysis				
3 – 2.4.1 Product support strategy created outlining proposed supportability objectives for the new product and proposed PSA activities which provide the best return on investment.	F	U	U	U
3 – 2.4.2 Contractor product support plan created outlining coordinated PSA activities and analysis.	F	U	U	U
3 – 2.4.3 Product supportability factors (and associated thresholds) identified that address the intended use of the system. These include factors such as application scenarios, mobility factors, task frequency, interoperability, operational environment, (to include on or near salt water), human capabilities and limitations, and anticipated service life.	F	U	U	U
3 – 2.4.4 Supportability design constraints developed that address use of standard support hardware and process resources such as facilities, manpower (existing), personnel, test equipment, spares and repair parts.	F	U	U	U
3 – 2.4.5 Comparative analysis conducted against the weapon system being replaced by the new system (Baseline Comparison System (BCS)) to identify the supportability cost, and readiness drivers experienced by these predecessor systems. Ensure that the drivers of the BCS are addressed in the requirements of the new system to ensure they are minimized.	F	U	U	U
3 – 2.4.6 Technological opportunities considered for improving supportability. Examples might include technologies reducing logistics tail such as fuel consumption, health monitoring technologies to better forecast maintenance actions, radio frequency or identification technologies to better track as system throughout the supply and inventory process.	F	U	U	U

**Table 3 – 2
Design Interface — Continued**

Assessment Criteria	Milestones			
	B	C	FRP and/or FDD	Post FRP and/or FDD
3-2.4 Product support analysis				
3 – 2.4.7 Task inventory created of all preventive and corrective maintenance tasks. Resultant task descriptions will be the basis on RCM, FMECA, FTA, analysis described in the RAM and maintenance planning sections. – See RAM for additional requirements in this area.	IP	F	U	U
3 – 2.4.8 Alternative support system designs considered and analyzed for their characteristics such as affordability, risk, data rights, and industrial base limitations.	IP	F	U	U
3 – 2.4.9 Level of repair analysis (LORA) conducted on alternative support systems to optimize the echelons of maintenance based on operational availability and cost (see maintenance planning 3.2.3 – 21 for more requirements in this area).	IP	F	U	U
3 – 2.4.10 Tradeoff of alternative support designs (conducted using the results of many of the analysis specified previously in this document, such as the RAM, LORA, technology, maintenance planning) and addressing additional issues such as facilities, (to include paint stripping and application facilities and wash racks/bird baths), energy, diagnostics, and transportability (to include packaging to prevent corrosion during transportation, especially on or near salt water).	IP	F	U	U
3 – 2.4.11 Logistics Product Data identifies product support requirements identified for each maintenance task to include supply support (provisioning bill of materials), PHS&T requirements, resources to perform each task, task frequency, task intervals, elapsed times, maintenance level, environmental impacts, new or critical resources, training requirements, in accordance with ANSI – TA – STD – 0017.	IP	F	U	U
3 – 2.4.12 Data generated from the conduct of the Product Support Analysis (PSA) tasks (that is, LPD) is contracted for or captured via American National Standards Institute (ANSI) Government Electronics and Information Technology Association (GEIA)–STD – 0007 LPD standard. This may include maintenance task, cataloging, provisioning, bill of materials, FMECA, PHS&T, and RAM. The planning for this data affects all elements of product support.	IP	F	U	U
3–2.5 Environment				
3 – 2.5.1 A programmatic environmental, safety and occupational health evaluation (PESHE) has been developed that describes the strategy for integrating environmental, safety, and occupational health (ESOH) considerations into the systems engineering process (see MIL – STD – 882), identifies responsibilities for implementing the ESOH strategy, describes the approach to identify, then eliminate or reduce ESOH hazards, status of ESOH risk, hazard tracking; schedule for completing National Environmental Policy Act (NEPA) and/or Executive Order (EO) 12114 documentation, pollution prevention efforts being implemented, and plans for reuse, recycling and/or safe disposal.	F	U	U	U
3 – 2.5.2 Environmental compliance requirements and considerations relative to the acquisition, life cycle operations and maintenance of the system are included in the PESHE (that is, existing or lack of NEPA and/or EO 12114 coverage, discharge and/or emissions requirements) that directly affect testing have been addressed in the TEMP as limitations or conditions of the testing.	F	U	U	U
3 – 2.5.3 All known ESOH risks have been accepted by the appropriate approval authority prior to exposing people, equipment or environment to known system-related ESOH hazards, and the residual ESOH hazard risk has been communicated to the user. The user representative has provided formal concurrence prior to all serious and high risk acceptance decisions.	IP	IP	F	U
3 – 2.5.4 The NEPA and/or EO 12114 compliance schedule should identify all known or projected NEPA documentation requirements throughout the life cycle to include identification of the proponent responsible for the documentation. Significant program events that could trigger NEPA and/or EO 12114 may include test and evaluation of the system and/or subsystem, contracting for production, major upgrades to facilities or supporting infrastructure to support the system, and demilitarization and/or disposal of the system.	F	U	U	
3 – 2.5.5 Significant program events that could trigger NEPA and/or EO 12114 are included in the NEPA and/or EO 12114 compliance schedule. Significant program events may include categorical exclusion; finding of no significant impact or harm based upon an environmental assessment; record of decision driven by an environmental impact statement, memorandum for record stating that NEPA and/or EO 12114 compliance is part of a larger environmental planning document.	F	U	U	
3 – 2.5.6 The ESOH requirements have been addressed in the ICD, CDD, and/or CPD and flowed down to other programmatic documents and RFP and/or contract, as appropriate (see CJCSI 3170.01).	F	U	U	U
3 – 2.6 Safety and occupational health				
3 – 2.6.1 Noise sources are identified and evaluated during system's design and control measures implemented to minimize personal exposure.	F	U	U	U
3 – 2.6.2 Personnel protective equipment is specified in maintenance instructions and training manuals for relevant operations and specified products are compliant with all Federal and consensus American National Standards Institute (ANSI) standards.	I	IP	F	U

**Table 3 – 2
Design Interface — Continued**

Assessment Criteria	Milestones			
	B	C	FRP and/or FDD	Post FRP and/or FDD
3-2.6 Safety and occupation health				
3 – 2.6.3 A system safety program to include interaction with systems engineering has been established per MIL – STD – 882 and DODI 5000.02.	F	U	U	U
3 – 2.6.4 System safety design requirements are specified and legacy systems, subsystems, and/or components have been analyzed and incorporated into the design requirements as appropriate.	IP	IP	IP	
3 – 2.6.5 A closed-loop hazard tracking system is implemented. Hazard analysis is performed during the design process to identify and categorize hazards, including hazardous materials and associated processes. Corrective action is taken to eliminate or control the hazards, or to reduce the hazard to an acceptable level.	IP	IP	IP	U
3 – 2.6.6 Weapon System Explosive Safety Review Board approval is scheduled or obtained as upgrades/changes.	IP	F	U	U
3 – 2.6.7 All systems containing energetic materials comply with insensitive munitions criteria.	IP	F	U	U
3 – 2.6.8 The ESOH risk management strategy has been incorporated into the SEP.	F	U	U	
3-2.7 Hazardous material management				
3 – 2.7.1 Hazardous materials prohibited (or limited and/or requiring waiver for use) in the weapon system design have been identified and communicated via contracts to include subcontractors.	F	U	U	
3 – 2.7.2 Hazardous materials whose use cannot be avoided and associated processes have been documented in planning documents (for example, LCSP, LPD) and communicated to the user and support installations for inclusion in their authorized use lists. This includes an inventory of materials incorporated into the weapon system (to include COTS and/or NDI) during production, materials required for operations and maintenance, and hazardous wastes generated from maintenance processes.	IP	F	U	U
3 – 2.7.3 There is a plan for tracking, storing, handling and disposing of hazardous materials and hazardous waste consistent with hazardous material control and management requirements.	IP	F	U	U
3 – 2.7.4 Hazardous material findings and determinations are incorporated into the training program for all system-related personnel as applicable to include approval to use hexavalent chromium in the system, if required.	IP	F	U	U
3 – 2.7.5 No Class I or Class II ozone depleting substances are used to operate or maintain the system without having obtained appropriate approval. Use of Class I or Class II ozone depleting substance are identified in the PESHE.	F	U	U	U

**Table 3-3
Sustaining Engineering**

Assessment criteria	Milestones			
	B	C	FRP and/or FDD	Post FRP and/or FDD
3-3.1 Sustaining engineering				
3-3.1.1 Reliability growth data and curves show that reliability is improving (see MIL-HDBK-189).	IP	F	U	U
3-3.1.2 Information from Product Quality Deficiency Reports (PQDRs) is tracked for trends and product improvement.			I	U
3-3.1.3 The Corrosion Prevention Control Program is effective in preventing corrosion or minimizing its effects on availability. Maintenance actions during operation and long term storage to correct issues from corrosion are declining (see DODI 5000.02 and DODI 5000.67).	F	U	U	U
3-3.1.4 Support posture is still valid to meet mission requirements as currently defined in concept of operations, mission profiles, and/or DRMP.				U
3-3.1.5 Safety and/or FTA mishap reports associated with material and design deficiencies are linked with or provide input into the FMECA.	IP	IP	IP	U
3-3.1.6 Supportability inputs to Test and Evaluation Master Plan (TEMP).	IP	F		
3-3.1.7 A logistics demonstration (log demo) strategy and plan exists that includes conduct of field level maintenance, diagnostics, and prognostics capabilities by target audience Soldiers in order to assess product support elements and the system support package. The strategy shall include timeframe(s) for the log demo including use of any additional test events. The log demo will be conducted at the earliest opportunity possible but must be completed prior to the FRP and materiel release.	IP	F		
3-3.1.8 Log demonstration results documented in the log demonstration report. Report shall show evidence that objectives in the log demonstration plan have been met.	I	F	U	U
3-3.1.9 The Supply Support Plan is documented, and contains a composite of the support resources that will be evaluated during log demonstration and tested and validated during technical and user tests. It includes items such as spare and repair parts, technical manuals (to include all T&E pubs), training package, special tools and TMDE, and unique software.	IP	F	U	
3-3.2 Post production support analysis				
3-3.2.1 Early distribution analysis impact the introduction of the new product on existing products to include inventory, automatic test equipment available, property, transportation systems, readiness impacts.		I	F	U
3-3.2.2 Field Feedback impacts, field data is collected from systems in production and fielded units to verify if RAM requirements and KPPs are being met (see activity 15 in TA-STD-0017).		I	F	U
3-3.3 Diminishing manufacturing sources and materiel shortages				
3-3.3.1 A formal diminishing manufacturing sources and materiel shortages (DMSMS) program and management plan has been established and documented consistent with DOD and DA policy and guidance (see DODI 5000.02, DOD 4140.1-R, and AR 700-90).	F	U	U	U
3-3.3.2 The DMSMS forecasting and/or management tools and or service providers have been researched and selected, and the BOM has been loaded into the system with regular updates.	IP	F	U	U
3-3.3.3 A formal Technology Refresh (Roadmap) Plan should be documented.	IP	F	U	U
3-3.3.4 The program has defined DMSMS metrics and tracks DMSMS cases, trends and associated solutions and costs (see above references).	F	U	U	U
3-3.3.5 The DMSMS exit strategy requires the product support provider to ensure there are no end-of-life issues at completion of period of performance	I	IP	F	U
3-3.3.6 Identified DMSMS risks (for example, end-of-life issues) have been mitigated or the solution and funding to mitigate the risk has been identified.	IP	F	U	U

**Table 3-4
Supply support**

Assessment Criteria	Milestones			
	B	C	FRP and/or FDD	Post FRP and/or FDD
3-4.1 Sparing Analysis				
3-4.1.1 Sparing analysis and levels: Are based on use of an approved readiness based sparing methodology. Selected essential item stockage for availability method is the approved Army model for readiness based sparing (see AR 700-18).	I	IP	F	U
3-4.1.2 Supply chain metrics tracking and management processes are defined and approved by weapon system stakeholders (see DOD 4140.1-R and DODI 5000.02).	IP	F		
3-4.1.3 Supply chain metrics and management processes for tracking and assessing performance (for example, turnaround times, repair times, and delivery times) are implemented. Operation and support cost estimates are compared with TOC standards defined in the KPP (see DOD 4140.1-R and DODI 5000.02).			F	U
3-4.2 Supply Chain Management				
3-4.2.1 Support strategies have been considered that are consistent with the end-to-end materiel flow process, from source to destination, including "last mile." It also identifies turnaround times for spares, replacement parts, refurbished and reworked items, fleet and field returns (see DOD 4140.1-R and DOD 5000.02).	IP	F	U	
3-4.2.2 The program provides asset visibility and reporting of Government-owned material.	I	IP	F	
3-4.2.3 End-to-end logistics chain sustainment solutions include planning for contingency and surge capacity.	IP	IP	F	U
3-4.2.4 Support strategies have been considered that are consistent with the end-to-end materiel flow process, from factory to the ultimate customer supporting deployed user and deployed systems in austere environments. It also identifies turnaround times for spares, replacement parts, refurbished and reworked items (see DOD 4140-1-R and DOD 5000 series)	I	IP	F	U
3-4.2.5 A supply chain management process has been established to address and eliminate the introduction of counterfeit components into the supply chain and weapon system during repair.	IP	F	U	U
3-4.2.6 If program has a third party inventory control provider, has third party provider integrated with Army Enterprise supply chain management (LMP/GCSS-A)	IP	F	U	U
3-4.3 Asset Management Planning				
3-4.3.1 The inventory of spares to be procured is determined and spares records are maintained.		IP	F	U
3-4.3.2 Provisions for surge requirements are identified and reflected in the contract as applicable.	I	F	U	U
3-4.3.3 Provisioning guidance conferences have been conducted within 45 days after contract award and that follow-on provisioning conferences are conducted on a regular basis to determine if the contractor's provisioning preparation, documentation and facilities are adequate. In process reviews are being held at regular interval with contractor before submittal of provisioning LPD for review and evaluation, to check contractor process and format of logistics produce data (see AR 700-18 and AR 700-127).	I	IP	F	U
3-4.3.4 Ensure provisioning LPD includes legacy part numbers as assigned by OEMs. The OEM should provide actual manufacture part numbers for component parts, and they meet required formatting.	I	IP	F	U
3-4.3.5 Provisioning LPD screening has been conducted prior to provisioning conferences to recommended repair parts list, to prevent duplicate entries in the DOD supply data system.	I	IP	F	U
3-4.3.6 Selected essential item stockage for availability method is used to determine the range and quantity of support items for an initial period	I	IP	F	U
3-4.3.7 Item management codes are assigned, as well as source, maintenance, and recoverability (SMR) codes and those for hazardous materials (HAZMAT).	I	IP	F	U
3-4.3.8 Provisioning LPD and reports have been generated that provide a repair parts list for repair parts and training equipment, as well as a parts list for the range and quantity of support items for an	I	IP	F	U

**Table 3-4
Supply support**

Assessment Criteria	Milestones			
	B	C	FRP and/or FDD	Post FRP and/or FDD
initial provisioning. Requirement computation and initial stockage sparing have been done to compute cost and to meet readiness goals (see AR 700-18, AR 700-127, and ANSI GEIA-STD-0007).				
3-4.3.9 The supply support provider has the capability to process automated requisitions and provide status reports and other LPD deliverables by electronic data interchange to Army data systems.			F	U
3-4.4 Interim Support				
3-4.4.1 The interim support item list identifies support requirements for a transitional operating period.	IP	F	U	
3-4.4.2 Transition planning to IOC is conducted to ensure attainment of full operational support beyond the interim support period for all applicable logistics factors (see above references).		IP	IP	U
3-4.4.3 Interim supply support requirements are in place and effective.	I	IP	F	U
3-4.4.4 If Government support will not be available, planning for contractor teams supporting fielded units is in place (see above references).		IP	F	U
3-4.5 Automatic Identification Technology				
3-4.5.1 Radio frequency identification (RFID) planning and strategy have been developed/updated consistent with DOD policy and guidance.	I	IP	F	U
3-4.5.2 The RFID DFARS has been added to all solicitations and contracts, as appropriate.	I	F	U	U
3-4.5.3 Item unique identification (IUID) DFARS item identification and evaluation and DFARS added to all solicitations and contracts as appropriate to verify that the contract contains the two lists required by the DFARS clauses: (a) the list of MATDEV-designated, controlled, and serially managed items under \$5,000, and (b) embedded items.	IP	F	U	U
3-4.5.4 The IUID DFARS, reporting of Government-furnished equipment in the DOD IUID Registry, has been added to all solicitations and contracts, as appropriate.	IP	F	U	U
3-4.5.5 The IUID Program plan and strategy have been developed and/or updated consistent with DOD policy and guidance including DODI 8320.04 and DODD 8320.03.	IP	F	U	U
3-4.5.6 Program IUID, serialized item management (SIM), and RFID requirements are adequately addressed in the appropriate program supportability plans (see DODI 4151.19).	IP	F	U	U
3-4.5.7 The RFID and IUID implementation and compliance metrics have been identified.	F	U	U	U
3-4.5.8 The RFID and IUID implementation and compliance metrics are being tracked.	I	IP	F	U

Table 3-5

Maintenance planning and management

Assessment Criteria	Milestones			
	B	C	FRP and/or FDD	Post FRP and/or FDD
3-5.1 Maintenance Concept, Design, and Analysis				
3-5.1.1 Accessibility, human factors engineering, diagnostics, repair and sparing concepts for all maintenance levels are established (see DODI 5000.02, DODD 4151.18, MIL-HDBK-470, and MIL-STD-1472).	F	U	U	
3-5.1.2 Requirements for manpower factors that impact system design utilization rates (for example, maintenance ratios) are identified (see above refs).	F	U	U	
3-5.1.3 Maintenance task times, maintenance skill levels and number of maintenance and support provider personnel required have been derived from but not limited to reliability (for example, mean time between failures); maintainability (for example, MTTR and maintenance task analyses); availability (for example, task-time limits); RAM tests; performance monitoring and/or fault detection and/or fault isolation and diagnostics; task and function analysis; corroivity severity zones; and top down requirements analysis.	IP	F	U	U
3-5.1.4 Life cycle supportability design, installation, maintenance, SE, calibration, and operating constraints and guidelines are identified. (see DODI 5000.02, DODD 4151.18, TA-STD-0017, and MIL-HDBK-502A).	IP	F	U	
3-5.1.5 Maintenance planning and analyses consistent with statutory and regulatory requirements (see 10 USC 2464: Core Logistics Analysis, Core Depot Assessment, Source of Repair Analyses and/or Depot Source of Repair, (CORE Logistics Analysis and/or Source of Repair Analysis documented in LCSP and summarized in the AS) (see DODI 5000.02)	F	U	U	U
3-5.1.6 Economic and noneconomic LORA is planned to establish the least cost feasible repair level or discard alternative (see TA-STD-0017 and DAG 4.3.3.3.4).	F	U	U	U
3-5.2 Maintenance Planning and Plan				
3-5.2.1 Maintenance concept developed (first concept established pre-Milestone A)	U	U	U	U
3-5.2.2 Condition-based maintenance plus (CBM+) strategy is used to determine maintenance decisions to reduce scheduled maintenance and manpower requirements, while reducing operation and support costs and ensuring the appropriate maintenance is performed (see DODI 4151.22 (CBM+), DODM 4151.22-M, RCM Handbook, and AR 700-127).	IP	F	U	U
3-5.2.3 Defines specific criteria for repair and maintenance for all applicable maintenance levels in terms of time, accuracy, repair levels, BIT, testability, reliability, maintainability, nuclear hardening, support equipment requirements (including automatic test equipment), manpower skills, knowledge and abilities and facility requirements for peacetime and wartime environments (see above references).	IP	F	U	U
3-5.2.4 Defines the maintenance approach including level of repair and includes the results of the LORA to determine logical maintenance task intervals, grouping and packaging. Computerized Optimization Model for Predicting and Analyzing Support Structures is the Army approved model for the LORA, and shall be used (see above references).	IP	F	U	
3-5.2.5 Defines the actions and support necessary to ensure that the system attains the specified Ao that is optimized considering RCM, CBM+, and time-based maintenance (see above references).	IP	F	U	
3-5.2.6 System anomalies and intermittent failures are analyzed for possible changes to the BIT design, thresholds and/or tolerances and/or filtering (see above references).	IP	F	U	U
3-5.2.7 States specific maintenance tasks, including battlefield damage repair procedures, to be performed on the materiel system (see above references).	IP	F	U	U
3-5.2.8 Identifies hosting and requirements (for example, interfaces) for the maintenance data reporting system if it will be used and/or deployed on a platform (for example, aircraft and boat) (see above references).	F	U	U	U

**Table 3-5
Maintenance planning and management—Continued**

Assessment Criteria	Milestones			
	B	C	FRP and/or FDD	Post FRP and/or FDD
3-5.2 Maintenance Planning and Plan				
3-5.2.9 Maintenance Plan. Maintenance planning documentation identifies tools and test equipment by task function and maintenance level; category codes (for example, SMR codes) and manufacturer's part numbers, nomenclatures, descriptions, estimated prices and recommended SE quantities, including SE for SE.	IP	F	U	U
3-5.2.10 The RCM analysis conducted in accordance with MIL-STD-3034 and FMECA are used to determine the appropriate type of maintenance (for example, inspect and/or repair, as necessary, disposal or overhaul) (see DODM 4151.22-M and above references).	IP	F	U	
3-5.2.11 A CPCP has been developed in accordance with DODI 5000.67 (required for all ACAT I programs and included in the AS) which identifies corrosion prevention, monitoring, maintenance during operation and long term storage. The corrosion control process has been incorporated into LCSP (see DODI 5000.02 and DODI 5000.67).	F	U	U	U
3-5.2.12 Develop maintenance allocation chart	IP	F	U	U
3-5.2.13 Final preventive maintenance system products have been certified, are resident in the authoritative database, and have been delivered to the users.		IP	F	U
3-5.2.14 Develop Depot Maintenance Support Plan.	IP	IP	F	U
3-5.2.15 It has been validated (or verified) that the interim depot is ready to accept workload.		F	U	U
3-5.2.16 If a commercial depot is used, the contract is awarded.				F
3-5.2.17 The depot manager has certified the depot is ready to support the system. If not certified, the certification date and criteria have been identified, and it has been verified that the date is valid to support the system.			F	U
3-5.2.18 Required organic depot personnel have been trained and all required equipment and tools are in place to perform depot maintenance.				F
3-5.2.19 The planning efforts have a requirement for depot capability establishment at IOC plus 4 years. Per 10 USC 2464, depot level repair processes identified as CORE must have a core capability that is Government-owned and Government-operated (including Government personnel and Government-owned and Government-operated equipment and facilities not later than four years after achieving IOC).				F
3-5.2.20 Maintenance skill levels and number of maintenance and support provider personnel do not exceed documented requirements.			F	U
3-5.2.21 Performance monitoring, fault detection, fault isolation, and diagnostics (for example, BIT) are performing to specified requirements and are optimized to meet maintenance requirements.			F	U
3-5.2.22 Maintenance manuals (including electronic technical manuals (ETMs)) and authenticated IETMs have been delivered and are in adequate quantities (to support equipment fielding) to support maintenance and repair actions. When IETMs are used, they are accessible in the areas where work is being accomplished.			F	U

**Table 3-6
Packaging, handling, storage, and transportation**

Assessment Criteria	Milestones			
	B	C	FRP and/or FDD	Post FRP and/or FDD
3-6.1 General Requirements				
3-6.1.1 The PHS&T profiles of the configuration items over the system life cycle from acceptance through disposal have been derived.	I	IP	F	U
3-6.1.2 The PHS&T requirements such as weight and dimension data are adequately specified for in the required provisioning technical data (See IP Strategy section 3-7.1).	I	F	U	
3-6.1.3 The DOD's computerized Container Design Retrieval System database has been searched to preclude the design of new specialized containers when a suitable one exists in the system.	I	IP	F	
3-6.1.4 If a new specialized reusable container is needed, requirements have been coordinated with the cognizant field activity.		IP	F	
3-6.1.5 The PHS&T planning documentation has been developed that identifies the program strategy for safely packaging, handling, storing, and transporting the system as well as any special requirements and interfaces with agencies or DOD components responsible for transporting the system (see AR 70-47)	IP	F	U	U
3-6.1.6 The PHS has been standardized as applicable to minimize new designs and to ensure interoperability between Services and North Atlantic Treaty Organization allies.	I	IP	F	U
3-6.2 Packaging				
3-6.2.1 MIL-STD-2073-1 is specified for items that cannot be protected and preserved in a cost-effective manner using standard practices for commercial packaging; that are delivered during wartime for deployment with or sustainment to operational units; that are depot level repairable; require reusable containers; or are intended for delivery-at-sea.	I	IP	F	U
3-6.2.2 Department of Agriculture requirements for packaging intended for international use have been met, as required.	I	IP	F	
3-6.2.3 Marking requirements for all unit intermediate and shipping containers have been met (see MIL-STD-129).	I	IP	F	
3-6.2.4 The PHS&T requirements for hazardous materials and associated wastes have been identified.	I	IP	F	
3-6.2.5 The PHS&T issues (retrograde packaging, reusable containers, retrograde transportation, storage, and damage in transit) raised by the user have been addressed by the program.		IP	F	U
3-6.3 Handling				
3-6.3.1 Requirements for material handling devices for loading and unloading have been defined.	IP	F	U	
3-6.3.2 Material handling devices at Government-owned or Government-operated facilities for loading and unloading have been certified.	I	IP	F	U
3-6.4 Storage				
3-6.4.1 Long term storage requirements for systems, such as ground and air vehicles, have been identified to ensure lubrication, batteries, and seals will not degrade. Accessibility for maintenance during long term storage has been considered.	I	IP	F	U
3-6.4.2 Items requiring special storage requirements (for example, controlled humidity storage, freezers for storage of composites, and HAZMAT) and/or shelf life requirements have been identified and documented in the appropriate IPS documentation. Reference AR 740-1, Storage and Supply Activity Operations, TM 38-400, Joint Service Manual for Storage and Material Handling, TM 38-470, Storage and Maintenance of Army Prepositioned Stock Material.	I	IP	F	U
3-6.5 Transportability and/or Transportation				
3-6.5.1 Transportability issues are addressed, to include oversized/overweight items; items requiring special transportation modes; classified items; certification (air, rail, and Department of Transportation); waivers have been obtained; items intended for international shipment. Transportability Assessment for trans problem items in accordance with AR 70-47.	IP	F	U	U

**Table 3–6
Packaging, handling, storage, and transportation—Continued**

Assessment Criteria	Milestones			
	B	C	FRP and/or FDD	Post FRP and/or FDD
3-6.5 Transportability and/or Transportation				
3–6.5.2 Anti-tamper requirements (and security processes while in storage and transit) have been identified for both hardware and software and factored into maintenance planning for deployed systems.	IP	F		U
3–6.5.3 Rail, air, and ship certifications have been obtained or are scheduled and/or coordinated with the appropriate platform manager or agency. Certification encompasses tie down patterns, rail impact tests, load modeling or load demonstration, and interfaces between the system being transported and the transporting platform.	IP	F	U	
3–6.5.4 Time delivery requirements for all shipments of spares to the Army have been identified.	I	I	F	U
3–6.5.5 Transportation requirements with Federal and State agencies have been identified (such as, height and weight) and any necessary waivers obtained for highway or rail transport.	IP	F	U	
3–6.5.6 Transportation processes, hardware and procedures for disabled systems (for example, aircraft, ground systems) have been developed and tests scheduled and/or conducted.	I	IP	F	U
3–6.5.7 The capability developer, training developer, and MATDEV will ensure that airdrop and air transportability are considered during preparation of requirements documents (see AR 70–47).	IP	F	U	U
3–6.5.8 There are no interface issues between the system being transported and the transporting platform (for example, height and turning radius).		IP	F	U
3–6.6 Testing				
3–6.6.1 Design validation testing has been conducted on special packaging (see MIL–STD–31000, TA–STD–0017, ANSI GEIA–STD–0007, MIL–HDBK–502A, and ASTM D4169).	I	IP	F	
3–6.6.2 Ammunition tests have been conducted to ensure compatibility with host platform and/or facility requirements (to include Hazard Classification and Insensitive Munitions Test).	I	IP	F	
3–6.6.3 Hazardous material packages have been tested per the applicable requirements for performance packaging contained in the International Air Transport Association Dangerous Goods Regulations or the International Maritime Dangerous Goods Code and with the Code of Federal Regulation, Titles 29, 40, and 49.	I	IP	F	

**Table 3-7
Technical data**

Assessment Criteria	Milestones			
	B	C	FRP and/or FDD	Post FRP and/or FDD
3-7.1 Intellectual Property Strategy				
3-7.1.1 A detailed intellectual property (IP) strategy has been developed that identifies the program's short and long-term need for intellectual property, technical data, computer software, and the associated rights/licenses necessary to use, modify, reproduce, release, perform, display, or disclose such data. At Milestone B and at Milestone C it is transferred to the LCSP. (see DODI 5000.02).	F	U	U	
3-7.1.2 The PM, has shared with prospective vendors the general outline of how the system is to be sustained as part of the Request For Information, Request for Proposal, and/or Industry Days.	F	U	U	
3-7.1.3 The PM, has identified and traced the forms of data (for example, form, fit, function (FFF) data; operation, maintenance, installation, and training (OMIT) data; interface data; and detailed manufacturing and process data (DMPD) in each CDRL to their data deliverables." Reference Title 10 US Code Section 2320 and DFARS Part 227.71 and 227.72.	F	U	U	
3-7.1.4 The program has included a priced option for a Technical Data Package (TDP).	F	U	U	
3-7.2 Integrated Digital Environment				
3-7.2.1 If applicable, all network (for example, Risk Management Framework Assessment and Authorization) compatibility issues are addressed and mitigation steps identified.	IP	F	U	U
3-7.2.2 Electronic data interchange, online access, and automation issues are addressed starting with development of the information exchange requirements and continuing throughout the program life cycle.	IP	F	U	U
3-7.2.3 A logistics data enterprise architecture has been generated which identifies electronic data repositories (for example, Logistics Information Warehouse, LPD Store), information exchange requirements, and usage.	I	IP	F	
3-7.2.4 Authoritative Data Sources and the associated change authority have been identified, described and designated by the appropriate Services, U.S. Military Services and components, as the authorized data production source to create, manage, use, distribute, and archive publish complete and accurate data for use by the end users.	IP	F	U	U
3-7.3 Product and/or Technical Data Package and Publication				
3-7.3.1 Computer-aided design, modeling, and engineering product source data is acquired in acceptable digital format such as Extensible Markup Language per the DA Product and/or Tech Data Policy and managed according to the Integrated Digital Data Environment concept of operations.	IP	F	U	
3-7.3.2 The product and/or technical data package is consistent with the maintenance plan, calibration support plan, information support plan and provides a sufficient level of detail for procurement, upgrade, and maintenance. The product and/or technical data package normally includes specifications, technical manuals, publications, engineering drawings and/or product data models, calibration procedures, and special instructions such as unique manufacturing and test processes; interchangeability, form, fit and function information; ESOH constraints or requirements; preservation and packaging requirements; test requirements data and quality provisions; preventative maintenance system and/or maintenance requirements card and environmental stress screening requirements.	I	IP	F	U
3-7.3.3 The product and/or technical data package elements have been specified in the contractual package accordance with requirements of MIL-STD-31000, as appropriate.	F	F	F	U
3-7.3.4 The contract identifies and requires delivery of the technical data requirements as identified by the analysis, as appropriate.		F	U	U

Table 3-7

Technical data—Continued

Assessment Criteria	Milestones			
	B	C	FRP and/or FDD	Post FRP and/or FDD
3-7.3 Product and/or Technical Data Package and Publications				
3-7.3.5 Changes have been made that were identified during the PCA.			F	
3-7.4 Technical Publications				
3-7.4.1 The contents of the product and/or technical manuals have been validated and/or verified, considering the following: Phased TM development schedule is in parallel with the system development, including validation and verification.	I	F	U	U
3-7.4.2 Verification and validation of software applications and other tools used to create, manage, update, present and view technical manuals has been completed. A quality assurance plan has been developed to ensure technical manuals and technical data packages have been validated and verified.	I	F	U	
3-7.4.3 A process for distribution of technical manuals is established.	I	F	U	U
3-7.4.4 Approved technical manuals will be available to support the end item and peculiar support equipment and in the quantities required, and have been registered in the authenticated database repository (Logistics Information Warehouse).	I	F	U	U
3-7.4.5 An approved calibration requirements list is available to support the end item and all peculiar installed instrumentation.	I	F	U	U
3-7.4.6 TMs, ETMs, and IETMs contain appropriate notes, aids and procedures to minimize environmental risks and personnel exposure during maintenance activities, such as warnings, and cautions.	I	F	U	U
3-7.4.7 The contents of the product and/or TMs have been integrated into the ETM or IETM, and consider the following: Contents meet Web enabled DOD requirements as applicable; Phased development schedule is in parallel with the system development, including validation and transition to the services; Operator and/or maintainer training is embedded and job performance aids, such as enhanced schematics if required, included.	I	F	U	U
3-7.4.8 Depot maintenance work requirement or national maintenance work requirement will be available for the performance of depot maintenance tasks identified in the maintenance allocation chart. All overhaul, rebuild, and remanufacturing of equipment, regardless of commodity, shall be defined as depot level maintenance to the extent that this does not include 10/20 maintenance requirements.	I	IP	F	U

Table 3-8

Support equipment

Assessment Criteria	Milestones			
	B	C	FRP and/or FDD	Post FRP and/or FDD
3-8.1 General requirements				
3-8.1.1 The environmental and physical constraints, such as size, weight, power, temperatures, and interfaces have been factored into SE design (see DODI 5000.02 and MIL-HDBK-2097A).	F	U	U	
3-8.1.2 There are no environmental and physical constraint issues (for example, size, weight, power, temperatures, and interfaces) between the SE and hosting platform.	I	IP	F	U
3-8.1.3 Types and quantity of SE for each location are available to support test of fielded systems.			F	U
3-8.1.4 Overall support strategy for SE has been defined, and includes identification of the support equipment requirement documents and SE to support the SE.	IP	F	U	U
3-8.1.5 Required technical documentation to support the SE is identified and includes procedures to perform the required tests and diagnostics; test measurement and diagnostic equipment, calibration requirements, procedures and associated technical parameters; all product and/or technical data required to support and operate required support equipment throughout the life cycle of that product; and test fixtures and/or interfaces to connect the system to the test equipment.	IP	IP	F	U
3-8.1.6 Requirements for the testing of SE during technical evaluations have been identified (see above references).	F	U	U	
3-8.1.7 All automated test equipment procured by the Army for use in the field, depot, or in the system developer's production facility must be acquired in accordance with AR 750-43.	I	F	U	U
3-8.1.8 Test Program Sets (TPSs) and associated documentation have been evaluated and verified.			IP	F
3-8.1.9 Availability of calibration standards and procedures, SE, TPSs, and tools at required maintenance sites and training schools have been verified, including types and quantity of ST&E for each location (see above references).	IP	IP	F	U
3-8.1.10 SE has been identified in the LPD database, Support Equipment Requirement Determination List.		I	F	U
3-8.1.11 SE has been identified in the Aviation Coordinated Allowance List, as appropriate.		I	F	U
3-8.1.12 SE has been certified for use.		IP	F	U
3-8.1.13 For Major Defense Acquisition Programs (MDAPs), a plan for preservation and storage of unique tooling has been provided as an annex to the LCSP. It includes: Identification of any contract clauses, facilities, and funding required for the preservation and storage of such tooling and shall describe how unique tooling retention will continue to be reviewed during the life of the program; unique tooling designated for preservation and storage will be serially managed and meets the requirements of IUID per DODI 8320.04.	IP	F	U	U
3-8.1.14 The depot maintenance plant equipment requirements will be identified in the depot maintenance support plan for all new equipment entering the Army inventory that will require depot-level repair in DOD depots. The depot maintenance plant equipment may consist of items on-hand not requiring modification, on-	I	IP	F	U

**Table 3-8
Support equipment—Continued**

Assessment Criteria	Milestones			
	B	C	FRP and/or FDD	Post FRP and/or FDD
hand requiring modification or adapters, and new equipment.				

Table 3-9

Training and training support

Assessment Criteria	Milestones			
	B	C	FRP and/or FDD	Post FRP and/or FDD
3-9.1 Training System Planning and Execution				
3-9.1.1 A Systems Approach to Training is conducted. (TRADOC Regulation 350-70).	IP	F	U	
3-9.1.2 The Systems Training Plan (STRAP) is developed and approved.	IP	F	U	
3-9.1.3 Resource requirements are specified for training equipment, services, calibration standards, test equipment, materials, facilities, and personnel. Training facilities, trainers, and units dedicated for training can handle throughput for both personnel and hardware to include consideration of footprint, maintenance environmental requirements and constraints. Requirements to bring training onboard a host platform, including local area network based computer training, has been coordinated.	IP	F	U	U
3-9.1.4 Instruction provides training commensurate with the STRAP including formal schools, on-the-job-training and follow-on training, system operation, maintenance levels, and calibration requirements (for example, daily, weekly, monthly, quarterly, and on condition), individual and team training, and instructor training.	I	IP	F	
3-9.1.5 Operator, maintainer, and calibration training along with job performance aids are embedded in the IETM, where applicable.	I	IP	F	
3-9.1.6 New equipment training (NET) supports unit modernization and deployment. Initial transfer of knowledge on the operation and maintenance of equipment (to include software, software updates, and their documentation) from the materiel developer or provider to the tester, trainer, supported user, or organization will be provided as part of NET. Assess completeness of formal NET Plan.	I	IP	F	U
3-9.1.7 Initial production equipment and technical manuals for the new system's delivery and installation schedule must be planned so that trained personnel shall be available for the first operational unit.	I	IP	F	
3-9.1.8 The effectiveness of training, using measures such as MTTR, is measured and corrective action implemented, when required.				U
3-9.1.9 Training is being executed per the training plan.			F	U
3-9.1.10 Cross training and crew drills are being conducted; crew-based training systems, if fielded, are being utilized.		IP	F	U
3-9.1.11 Instructor training (train the trainer) is included in the training requirements planning documentation.		IP	F	U
3-9.1.12 Initial unit training for Operational Evaluation and Service Introduction is in place.		F	U	U
3-9.2 Training Material				
3-9.2.1 Terminal and enabling learning objectives are derived through appropriate job task and learning analysis and formatted per service training development guidance MIL-HDBK-29612-2A.	IP	F	F	
3-9.2.2 Instructor guides, course curriculum, training aids, support equipment, and student guides are planned and/or developed for classroom training (see above references).	I	IP	F	U
3-9.2.3 Training courses are developed and training is conducted on the fielded configuration(s). This includes pre-faulted modules or software to simulate faults for diagnostics training (see above references).		IP	F	U
3-9.2.4 Safety procedures, warnings, cautions, and advisory labels have been incorporated into training materials and curriculum.		IP	F	U
3-9.2.5 Contractor and/or government test and evaluation activities are used to validate training requirements (see above references).		IP	F	

**Table 3-9
Training and training support—Continued**

Assessment Criteria	Milestones			
	B	C	FRP and/or FDD	Post FRP and/or FDD
3-9.3 Training Product and Support				
3-9.3.1 Training simulators and devices are in place and instructor and support personnel have been trained on their use and maintenance.	I	IP	F	U
3-9.3.2 A Training transfer agreement has been developed to ensure that all training resources and capabilities are in place to support execution of the transfer of responsibility for a complete training system from the training support agent to the training agent.	IP	F	U	U
3-9.3.3 Plans for the installation, transfer and support of training simulators and training devices have been executed.		IP	F	U
3-9.3.4 A military characteristics document or Training System Functional Description is prepared for each training device, defining its basic physical and functional requirements (see above references).		IP	F	U
3-9.3.5 Delivered content uses an Information Assurance compliant delivery mechanism, and has been accredited.			F	U
3-9.3.6 Logistics support (spares and support equipment) for training schools is planned (see above references).	IP	F	U	U
3-9.3.7 Feedback loops exist that allow operating forces to inform the training command and program manager of training shortfalls or changes needed as a result of experiences obtained in an operating environment.		IP	F	U
3-9.3.8 If applicable, inter-service training agreements have been established or updated.	IP	F	U	U
3-9.3.9 If applicable, requirements for training system integration into live, virtual, and constructive training environments have been planned for or met.	I	IP	F	U
3-9.3.10 Assess if training ammunition requirements are needed to sustain proficiency on a materiel system, and had its training strategy approved by the Standards in Training Commission in accordance with AR 5-13.	IP	F	U	U

Table 3-10

Manpower and personnel

Assessment Criteria	Milestones			
	B	C	FRP and/or FDD	Post FRP and/or FDD
3-10.1 Human Factors Engineering				
3-10.1.1 Human Engineering analysis has been performed addressing operator, maintainer and support personnel (see MIL-STD-46855A and MIL-STD-1472): Accessibility, visibility, human factors and/or ergonomics, testability, complexity, standardization and interchangeability, use of mock-ups, modeling and simulation, operational experience, cooling, ventilation, workspace environment heating, illumination, noise, vibration, design for effective handling and carrying, controls and displays, user computer interface, habitability, safety and personnel survivability, and workload.	IP	F	U	U
3-10.1.2 Task analyses were used to identify and guide analyses of physical and sensory requirements for the operators, maintainers, and support personnel that contribute, and/or constrain to total system performance.	IP	F	U	
3-10.1.3 A human systems integration (HSI) plan has been developed, executed, maintained, and coordinated with subsystem HSI plans and the overall SEP. MANPRINT is the Army's HSI strategy that the MATDEV must use for all acquisition programs.	IP	F	U	U
3-10.2 Manpower and Personnel				
3-10.2.1 A manpower estimate (ME) for operation and maintenance of the program has been developed and included in the Cost Analysis Requirements Document.	F	U	U	
3-10.2.2 Manpower and personnel requirements have been identified for both organic and contractor support including knowledge, skills, and abilities; maintenance, calibration, operator and support provider labor hours by rate or skill area/level by year; number of personnel by rate, maintenance level and year; operator, maintainer and support provider organizational level assignments defined; inherently government tasks; peacetime and wartime.	IP	F	U	U
3-10.2.3 Maintenance and calibration task times, maintenance and calibration skill levels and number of maintenance and support provider personnel required have been derived from task and workload analyses (see maintenance planning table 3-5).	IP	F	U	
3-10.2.4 Requirements for both organic and contractor manpower requirements are validated under representative operating conditions.		IP	F	
3-10.2.5 Changes (increases and/or decreases) in manpower and personnel requirements have been identified for any transition period between systems.	I	U	U	U
3-10.2.6 Actual manpower requirements are in accordance with the manpower estimate for operation and maintenance of the program.				U
3-10.2.7 Manpower and personnel requirements include affected duties beyond operational, maintenance and support (for example, collateral duties).		IP	F	U
3-10.2.8 The manpower requirements criteria Headquarters, Department of the Army-approved standards are used to determine the mission-essential wartime position requirements for combat support and combat service support functions in TOE. The manpower requirements criteria program provides a means of establishing and justifying the right quantity and mix of maintenance personnel for sustainment of Army materiel.	IP	F	U	U

Table 3-11

Facilities and infrastructure (and platform integration)-

Assessment Criteria	Milestones			
	B	C	FRP and/or FDD	Post FRP and/or FDD
3-11.1 Facility Requirements				
3-11.1.1 The types of facilities and/or infrastructure (research, development, test, and evaluation, operations, training ranges, calibration, maintenance, and training) required to support and sustain the new or modified system have been identified, such as parking aprons and hangar space for aircraft; support facilities, supply warehouses, transit sheds, maintenance facilities, calibration laboratories, training facilities, and ordnance handling and storage (for both classrooms and trainers for operational training and maintenance training, including required product and/or technical data to ensure efficient and/or effective support of facilities); land use requirements have been identified (as early as possible); facilities to support research, development, test, and evaluation and in-service engineering requirements (for example, prototypes and mock-ups); transient support requirements when the system requires some level of support for continental U.S. and outside continental U.S. activities that are not regular homeports and/or support sites.	IP	F	U	U
3-11.1.2 The facilities/infrastructure support requirements are documented in the Army's official facilities assessment "Support Facilities Annex" (SFA), developed by The Army Corps of Engineers and Chief of Engineers office. (see AR 700-127)	F	U	U	U
3-11.1.3 The facilities and/or infrastructure support requirements are documented in the training equipment facilities requirements plan or equivalent documentation.	IP	F	U	
3-11.1.4 SFAs have been developed as required facilities planning criteria and other appropriate documents (for example, MIL-HDBKs) using the system's logistics support requirements.	IP	F	U	
3-11.1.5 All host tenant agreements are in place.	IP	IP	F	U
3-11.1.6 A site activation plan has been developed.	IP	F	U	U
3-11.1.7 A plan for utilization of contractor or organic depot maintenance facilities had been developed.	IP	F	U	U
3-11.2 Evaluation of Existing Facilities and/or Capabilities				
3-11.2.1 All necessary changes to MTOE spaces have been made to accommodate the installation and/or storage of hosted systems, SE, and related supplies.	IP	IP	F	U
3-11.2.2 System support and SFAs are provided to the activities and/or regions expected to support operations, maintenance, calibration, training and other logistical support related to the system as required by the service.	IP	F	U	U
3-11.2.3 Site surveys are scheduled and criteria developed. Surveys have been coordinated through appropriate materiel fielding team or other appropriate user representative and will include representation from appropriate offices.	IP	F	U	
3-11.2.4 Site surveys have been conducted and the proper coordination was made with the installation facilities staff. The results have been documented in a Site Evaluation Report which will be used to inform a Site Activation Plan and other appropriate facility project documentation (for example, DD Form 1391 (FY__ Military Construction Project Data) for military construction (MILCON) project).	IP	IP	F	U
3-11.3 New Construction				
3-11.3.1 The program has assessed (for example, site surveys and trade studies) all means of satisfying a facility requirement prior to selecting the use of MILCON or facilities sustainment restoration and Modernization. This is usually documented in the program's facilities management plan or its equivalent.	IP	F	U	
3-11.3.2 Estimates of facility requirement and associated costs have been refined and detailed project documentation	IP	F	U	

Table 3-11

Facilities and infrastructure (and platform integration)-

Assessment Criteria	Milestones			
	B	C	FRP and/or FDD	Post FRP and/or FDD
with cost estimates has been developed. The appropriate resource sponsor has been briefed and is aware of costs and schedule associated with the needed MILCON projects(s).				
3-11.3.3 Basing decisions with appropriate environmental documentation have been completed and a basing letter and/or record of decision has been signed. This permits the coordination of projects and ensures successful promulgation through Force Management Budget, DOD, and congressional authorization.	IP	F	U	U
3-11.3.4 Project (MILCON) documentation has been submitted for funding in the appropriate FY. For instance, if beneficial occupancy is needed by FY16 (project year is FY14), the project needs to be submitted by the second quarter of FY11.	IP	F	U	U
3-11.3.5 Environmental documentation for projects per NEPA and/or EO 12114 is either complete or scheduled for completion to support the timelines for new construction or modification of existing facilities.	IP	F	U	U
3-11.3.6 Equipment (for example, simulators, air traffic control, and magnetic equipment) has been identified and budgeted in the appropriate fiscal year. Its procurement is on track to support project completion schedules.	IP	F	U	
3-11.3.7 Construction of MILCON projects have been initiated and are on track to support introduction of the new or modified system to the user.	IP	F	U	U
3-11.3.8 Where applicable, interim facility support (also known as "workaround") has been identified to meet requirements earlier than can be met by the completion of new facility projects.	IP	F	U	U
3-11.4 Integration (Air, Ground Systems, Command, Control, Communication, Computers, and Intelligence)				
3-11.4.1 An integration team has been formed between the host platform, weapon system, command, control, communications, computers and intelligence, program manager, and integration facility to ensure all supportability planning is conducted upfront. The Integrated Product Team has been formally chartered.	F			
3-11.4.2 Facility storage requirements (for example, workspaces, storage, including any specific types of storage required for corrosion prevention and control such as dehumidified warehouses, and spaces for the storage of ordnance) have been identified and spaces allocated.	IP	F	U	U
3-11.4.3 A site survey has been conducted for receiving the system in each type of unit.	IP	F		
3-11.4.4 Power, water, chillers, and overhead cranes requirements have been coordinated with the host platform to ensure maintenance actions can be conducted as planned.	IP	F		
3-11.4.5 The program has identified the requirements, bandwidth, and interfaces with the host platform's local area network.	IP	F		U
3-11.4.6 Proper amount of bandwidth is available on the host platform to support communications and required data flow between the user and host platform, and host platform and base or shore activity.	IP	F		U
3-11.4.7 Systems integration facilities can handle work throughput (for example, integration of electronic warfare systems and communication gear, and on ground vehicles).	IP	F		U

**Table 3–12
Computer resources**

Assessment Criteria	Milestones			
	B	C	FRP and/or FDD	Post FRP and/or FDD
3–12.1 General Requirements				
3–12.1.1 Cybersecurity Strategy, including safety, has been developed. Program is following the Risk Management Framework and developed a System Security Plan.	IP	F	U	U
3–12.1.2 A Program Protection Plan has been developed in accordance with DODI 5200.39 that includes Anti-Tamper requirements. Assessor Note: The Anti-Tamper Plan is an annex to the PPP (see DODI 5000.02).	F	U	U	U
3–12.1.3 Software functional requirements and associated interfaces have been defined.	IP	F	U	
3–12.1.4 Gap analysis has been performed on candidate COTS software to identify functionality shortfalls, as applicable.	IP	F	U	
3–12.1.5 Requirements for system firmware and software documentation have been identified and integrated into the overall system test program.	IP	F	U	
3–12.1.6 Software testing requirements have been identified and integrated into the overall system test program.	IP	F	U	
3–12.1.7 Measures of effectiveness have been established for software.	IP	F	U	
3–12.1.8 A software development plan has been developed and reflects program milestones.	IP	F	U	
3–12.1.9 Software maturity has been measured.	IP	F	U	
3–12.1.10 Software data rights have been addressed in the Engineering and Manufacturing Development RFP and contract. Required software data rights have been obtained.	F	U	U	
3–12.1.11 The CBM+ software is developed for the operating and maintenance system for diagnostics and prognostics, as applicable.	I	F	U	
3–12.1.12 Software routines for planned maintenance procedures are addressed in Planned Maintenance System.	I	F	U	
3–12.1.13 The SSA has been designated and/or established.	I	IP	F	U
3–12.1.14 The software documentation support matches the software in use.	I	IP	F	U
3–12.1.15 Software support is described in the LCSP and implementing documentation.	IP	F	U	U
3–12.1.16 A process has been defined to manage (create, discard, track, and/or close) software trouble reports that will be levied against the software product.	I	F	U	U
3–12.1.17 A mechanism is in place for getting prime contractor (and subcontractor) support specific to support software and/or equipment, if needed, at the SSA's (for example, performance based support).	I	IP	F	U
3–12.1.18 A process has been established for distributing corrections and revisions of the software to the users.	F	U	U	U
3–12.1.19 There is adequate reserve capacity (processing unit, memory, disk space, and bus capacity) for the life of the system to accommodate changes, expansion and growth of the software. The hardware may be easily upgraded without impacting the software.	I	F	U	U
3–12.1.20 There are plans for processor upgrades so that tech refresh may be accomplished with minimal software modifications.	F	U	U	U
3–12.1.21 The HSI considerations have been incorporated into software development, integration, and test phases. This effort includes graphical user interface, usability testing, control and display layout, human error/reliability analysis, and online user guides and documentation.	I	F	U	
3–12.1.22 Software integrator and development contractors for software systems have well-documented, standardized software processes as well as continuous software process improvement practices, equivalent to that articulated by Capability Maturity Model Integration Capability Level 3.	F	U	U	
3–12.1.23 A process to proactively project vendor discontinuance of software support, software revisions, upgrades, has been developed and documented to ensure both program software and software support tools can be sustained and software refreshes can be adequately planned.	F	U	U	U
3–12.1.24 Software support planning requirements and/or data (for example, these handbook criteria) are presented in the information support plan (ISP).	F	U	U	
3–12.1.25 A software configuration control plan has been developed and is implemented.	F	U	U	

**Table 3–12
Computer resources**

Assessment Criteria	Milestones			
	B	C	FRP and/or FDD	Post FRP and/or FDD
3–12.1.26 The Computer Resources Life Cycle Management Plan can be used as the primary planning document for computer resources throughout the system life cycle.	I	F	U	U
3–12.1.27 The post production software support plan is established.	I	F	U	U

Table 3–13

Automated information system specific criteria

Assessment Criteria	Milestones			
	B	C	FRP and/or FDD	Post FRP and/or FDD
3-13.1 General Requirements				
3–13.1.1 A proactive process is in place for support of software to include system and third party software to effectively: forecast software sustainment issues and identify time periods for software availability and support; capture cost trade-off criteria for full or partial software updates; identify upgrade schedules to reduce transition costs associated with updates; identify accurate budget estimates; provide a process that can be used to help manage and optimize the efficiency and effectiveness of software tech refreshment.				U
3–13.2 Data Management				
3–13.2.1 Data and resources agreements, such as a MOA between the gaining system activity and the transferring system activity are approved and detail the actions required by each activity.		IP	F	U
3–13.2.2 Agreements, such as a MOA between the program management office and gaining commands, are current.		IP	F	U
3–13.2.3 A data migration plan has been developed for transfer of data from legacy systems.	IP	F	U	
3–13.2.4 Interfaces for migration of data between systems have been defined.	F	U	U	
3–13.2.5 Middleware requirements have been defined.	F	U	U	
3–13.2.6 Middleware has been developed.	F	U	U	
3–13.2.7 A methodology and process for data cleansing, data translation mapping, and data validation have been documented in a data migration plan.	IP	F	U	
3–13.2.8 Data conversion has been completed per Data Conversion Agreements.			F	U
3–13.2.9 Data cleansing, data translation mapping, data validation and resources are completed.			F	U
3–13.2.10 The MOAs between the gaining system activity and the transferring system activity are approved and detail the actions required by each activity.	IP	F	U	U
3–13.2.11 Mock loads with actual data have been conducted with no outstanding issues prior to cut-over.	IP	IP	F	U
3–13.3 System Reliability				
3–13.3.1 The system is meeting its RAM measures and KPPs and/or KSA.	I	IP	F	U
3–13.3.2 The disaster recovery and/or secondary site is fully operational. Disaster recovery reliability is factored into overall system reliability.		IP	F	U
3–13.3.3 Agreements are current for the command and/or activity hosting the disaster recovery center.		IP	F	U
3–13.3.4 Help desk response metrics are tracked and are meeting the metrics defined in the support agreement and requirements documents. Help desk metrics are factored into the reliability of the system.		IP	F	U
3–13.3.5 Trouble calls and/or tickets to the help desk are processed through a Failure Reporting Analysis and Corrective Action System (FRACAS) as input to the reliability program.	I	IP	F	U
3–13.3.6 Processes for the help desk are adequately documented		IP	F	U
3–13.3.7 Help desk personnel are adequate to support functions required by the supported organization(s).			F	U
3–13.3.8 System architecture has been defined to include redundancy, modularity, and impact on availability due to server failure.	IP	F	U	
3–13.3.9 Requirements for a disaster recovery and/or secondary site have been developed. Disaster recovery reliability is factored into overall system reliability.	IP	F	U	
3–13.3.10 Agreements are in place for the command and/or activity hosting the disaster recovery center.	F	U	U	U
3–13.3.11 Requirements for the help desk have been defined and factored into the reliability of the system.	F	U	U	

Table 3-13 Automated information system specific criteria—Continued				
Assessment Criteria	Milestones			
	B	C	FRP and/or FDD	Post FRP and/or FDD
3-13.3 System Reliability				
3-13.3.12 Trouble calls and/or tickets to the help desk are processed through a FRACAS as input to the reliability program.	I	IP	F	U
3-13.3.13 Help desk procedures have been established.	IP	F	U	U
3-13.3.14 Help desk staffing and KSA of personnel is adequate to support functions required by the help desk.		IP	F	U

Note: Automated information systems criteria is an extension of computer resources and is not a separate IPS element.

Chapter 4 Reporting Results

This chapter discusses reporting the results of the ILA.

4-1. Objective

Chapter 4 addresses the preparation of the ILA report, coordination with the program office and submission of the report to the PEO. The report will serve as the basis for the decision memorandum of ILA status by the PEO.

4-2. Process

The following figure 4-1 depicts the process.

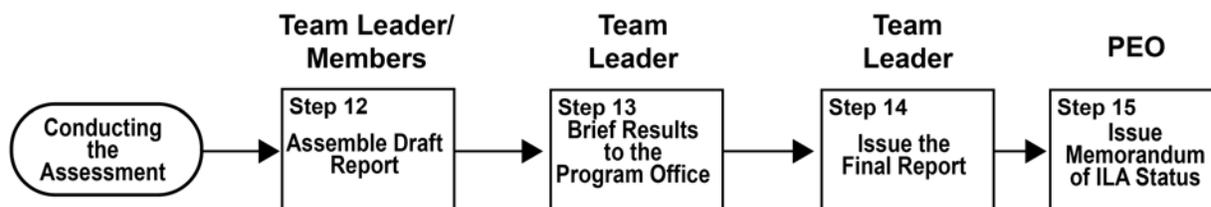


Figure 4-1. Reporting results process

4-3. Process description

Process continued in the following four steps

a. *Step 12 (Assemble draft report)*. It is the responsibility of the team leader to oversee development of the draft report. The following identifies the process for developing the report.

b. *Draft the report*. The team leader and team members (in conjunction with the program office) must—

(1) Document all deficiencies, shortcomings and recommendations using the appendix D format. Deficiencies should describe the ILA team's recommended actions to resolve the deficiency or shortcoming and include a green, yellow, or red rating using the ILA rating criteria in appendix C. For post-FRP and/or FDD ILAs, use table C-2.

(2) Compile programmatic data for the introduction (program points of contact, system description, purpose and scope of the assessment, support concept).

(3) Summarize the results of the ILA (review dates, list of assessors, and status of each IPS area).

(4) Review individual deficiencies and recommendations and rate the overall risk for each IPSE area in the report. The risk matrix (see fig C-1) and accompanying tables C-4 and C-5 should be used as a tool in recommending the ILA status. This format is consistent with overall program risk assessment tools currently used in the acquisition community for determining and briefing cost, schedule, and performance risk. Assessment criteria areas without deficiencies need not be reflected in the risk matrix. Careful consideration of all outstanding deficiencies and their associated risk will be used to develop the overall ILA status recommendation to proceed or not proceed to the next acquisition milestone.

(5) In general, if major deficiencies cannot be corrected prior to the issuance of memorandum of ILA status, or the milestone decision, the rating should not be “Green.” The team leader should brief the program manager prior to release of the final ILA report on each deficiency and recommendation as well as the team leader's recommendation for ILA status.

(6) Draw conclusions regarding the program's IPS posture and/or risks in terms of its ability to—

- (a) Meet established performance metrics.
 - (b) Have achievable interim support plans.
 - (c) Be fully supportable at system IOC.
 - (d) Meet other support requirements and milestones.
- (7) Draw recommendations regarding the program's preparation to proceed into the next phase.

c. The report must reflect a clear distinction between issues requiring resolution prior to the milestone decision and issues that may be resolved after the milestone at specific timeframes (for example, prior to contract award or release of the request for proposal, or prior to material fielding, or operational evaluation). As the report is being drafted, the program manager provides a formal plan of action and milestone (POA&M) to address each deficiency identified in the ILA report. POA&Ms should be submitted and included in the final report, if possible. If they are not finalized prior to issuance of the final report, they will be provided to the team leader at a mutually agreed to time. All proposed actions should address funding availability and support overall program milestones. The team leader, in consultation with respective team members, shall review and respond to the proposed POA&Ms, ensuring adequacy and appropriateness of the planned actions. The recommended ILA report format is provided in appendix D.

d. *Step 13 (Brief results to the program office).* The team leader provides the program manager, product support manager, and other key program office personnel the draft results of the assessment to ensure the content of the report is accurate and understood. The team leader discusses the following:

- (1) Assessment overview.
- (2) Summary of each deficiency.
- (3) Rating for the program, including individual assessments and overall program rating.
- (4) Concurrence from the program office.
- (5) Any follow-up discussions on issues requiring action plans.
- (6) Coordination of the final report prior to formal issuance.

e. *Step 14 (Issue the final report).* The team leader incorporates all changes or corrections resulting from discussions with the program office during step 13 and forwards the final report, to include the final risk matrix and assessment criteria color summary, to his signature authority as appropriate. The final report is forwarded by the team leader to the program manager and PEO. For ACAT I programs and ACAT II programs where the Army Acquisition Executive (AAE) is the MDA, a copy of the ILA report is sent to ASA (ALT), Deputy Assistant Secretary of the Army Acquisition Policy and Logistics, 103 Army Pentagon, Washington, DC 20310-0103, as well as other stakeholders identified in AR 700-127. For Joint programs, a courtesy copy of the ILA report should also be provided to other affected Service's PEO and/or Acquisition Executive.

f. *Step 15 (Issue memorandum of ILA status).* Upon receipt of the final report, the PEO will review the report and issue an ILA Memorandum stating overall status as “ready to proceed,” “ready to proceed with comments,” or “not ready to proceed.” The PEO shall submit their ILA report and associated memorandum of ILA status to the MDA and key stakeholders no later than four weeks prior to the scheduled milestone or FRP and/or FDD decision meetings. For ACAT-ID programs, PEOs shall also copy the Deputy Assistant Secretary of Defense (Materiel Readiness). For post-FRP/FDD ILAs, the IPS program risk will be certified by the program sponsor or user representative as low, moderate, or major per table C-4.

4-4. Process deliverables

The following are the expected deliverables from the process described in chapter 4.

- a. ILA report, including POA&M.
- b. Memorandum of ILA status.

Appendix A

References

Section I

Required Publications

AR 700–127

Integrated Product Support (Cited in the title page.)

DODD 5000.01

The Defense Acquisition System (Cited in table 3–1.) (Available at <http://www.esd.whs.mil/dd/>.)

DODI 5000.02

Operation of the Defense Acquisition System (Cited in table 3–1.) (Available at <http://www.esd.whs.mil/dd/>.)

Section II

Related Publications

A related publication is a source of additional information. The user does not have to read a related publication to understand this publication. CJCSM and CJCSI publications are available at http://www.dtic.mil/cjcs_directives/. DOD publications are available at <https://www.esd.whs.mil/dd/dod-issuances/>. MIL–HDBKs, MIL–PRFs, and MIL–STDs are available at <http://quicksearch.dla.mil/>. USCs are available at <http://www.gpoaccess.gov/uscode>.

AKSS

(Available at <http://www.dau.mil/>.)

AR 5–13

Total Army Munitions Requirements and Prioritization Policy

AR 25–1

Army Information Technology

AR 25–2

Information Assurance

AR 25–30

Army Publishing Program

AR 70–1

Army Acquisition Policy

AR 70–47

Engineering for Transportability Program

AR 71–32

Force Development and Documentation

AR 210–20

Real Property Master Planning for Army Installations

AR 350–1

Army Training and Leader Development

AR 385–10

The Army Safety Program

AR 420–1

Army Facilities Management

AR 602–2

Human Systems Integration in the System Acquisition Process

AR 700–18

Provisioning of U.S. Army Equipment

AR 700–90

Army Industrial Base Process

AR 700–139

Army Warranty Program

AR 700–142

Type Classification, Materiel Release, Fielding, and Transfer

AR 750–1

Army Materiel Maintenance Policy

AR 750–43

Army Test, Measurement, and Diagnostic Equipment

ASTM D4169

Standard Practice for Performance Testing of Shipping Containers and Systems (Available at <http://www.astm.org/standards/d4169.htm>.)

CJCSI 3170.01

Instructions for the Joint Capabilities Integration and Development System (JCIDS) (Available at http://www.dtic.mil/cjcs_directives/.)

CJCSI 6212.01F

Net Ready Key Performance Parameter (NR KPP) (Available at http://www.dtic.mil/cjcs_directives/cdata/un-limit/6212_01.pdf.)

DA Pam 700–142

Instructions for Type Classification, Materiel Release Fielding and Transfer

DAG

Defense Acquisition Guidebook (Available at <https://dag.dau.mil>.)

DFARS

Defense Federal Acquisition Regulation (Available at <http://farsite.hill.af.mil/vfdfara.htm>.)

DOD Product Support BCA Guidebook

(Available at <https://www.dau.mil/guidebooks/shared%20documents%20html/bca%20guidebook%202014.aspx>)

DOD 4140.1–R

DoD Materiel Management Regulation

DOD 4151.18–H

Depot Maintenance Capacity and Utilization Measurement Handbook

DOD 4151.22–M

Reliability Centered Maintenance (RCM)

DOD 5010.12–M

Procedures for the Acquisition and Management of Technical Data

DOD RAM–C Guidebook

DoD Reliability, Availability, Maintainability-Cost (RAM–C) Report Manual

DODD 4151.22

Condition Based Maintenance Plus (CBM+) for Material Maintenance

DODI 4000.19

Support Agreements

DODI 4160.28

Defense Demilitarization (DEMIL) Program

DODI 4630.8

Interoperability of Information Technology (IT), Including National Security Systems (NSS)

DODI 5000.67

Prevention and Mitigation of Corrosion on DoD Military Equipment and Infrastructure

DODI 5200.39

Critical Program Information (CPI) Identification and Protection within Research, Development, Test, and Evaluation (RDT&E)

DODI 8320.02

Sharing Data, Information, and Technology (IT) Services in the Department of Defense

DODI 8320.03

Unique Identification (UID) Standards for Supporting the DoD Information Enterprise

DODI 8320.04

Item Unique Identification (IUID) Standards for Tangible Personal Property

FAR

Federal Acquisition Regulation (Available at [http://farsite.hill.af.mil/.](http://farsite.hill.af.mil/))

MIL-HDBK-189

Reliability Growth Management

MIL-HDBK-502A

Product Support Analysis

MIL-HDBK-2097A

Acquisition of Support Equipment and Associated Integrated Logistics

MIL-HDBK-29612-2A

Instructional systems development/systems approach to training and education

MIL-PRF-32216

Evaluation of Commercial Off-The-Shelf (Cots) Manuals and Preparation of Supplemental Data

MIL-STD-129

Military Shipping Labels

MIL-STD-882

System Safety

MIL-STD-1472

Department of Defense Design Criteria Standard

MIL-STD-2073-1

Military Packaging

MIL-STD-3034

Reliability-Centered Maintenance (RCM) Process

MIL-STD-31000

Technical Data Packages (TDP)

NEPA

National Environmental Policy Act

SAE EIA-649B

National Consensus Standard for Configuration Management

SAE GEIA-STD-0007-B

Logistics Product Data

SAE GEIA-STD-0009

Reliability Program Standard for Systems Design, Development, and Manufacturing

SAE TA-STD-0017

Product Support Analysis

10 USC 2320

Rights in Technical Data

10 USC 2435

Baseline Description

10 USC 2451

Defense Supply Management

10 USC 2464

Core logistics capabilities

10 USC 2466

Limitations on the performance of depot-level maintenance of materiel

Section III

Prescribed Forms

This section contains no entries.

Section IV

Referenced Forms

Unless otherwise indicated below, DA Forms are available on the Army Publishing Directorate website (<http://armypubs.army.mil>). DD Forms are available from the Office of the Secretary of Defense website (<http://www.esd.whs.mil/directives/forms/>).

DA Form 2028

Recommended Changes to Publications and Blank Forms

DD Form 1391

FY__ Military Construction Project Data

Appendix B

Processes

B-1. Process

Table B-1 provides a mix of statutory, regulatory and discretionary documents that contain information related to product support. Table B-2 provides a list of documents that should be reviewed during sustainment ILAs in addition to those identified in table B-1, as applicable. Table B-3 provides program documents specific to MAIS. These tables provide the ILA team lead and program office representative a list of documents that are typically reviewed during an ILA. While a program office must provide statutory and regulatory documents, the discretionary documents may or may not exist as titled below. The required information may be a standalone plan or be included as a subset or chapter of another document. For example; a program office may not have a standalone DMSMS Program Management Plan, but the detailed process for managing DMSMS is included as a section in another program document. Likewise, there may not be a FRACAS plan; however, that information on FRACAS may be included as part of the reliability plan or other program planning document. AR 700-127 identifies the statutory and regulatory documents and information required for programs at each milestone.

Typical document request and description	Source	Milestone and/or decision point		
		B	C	FRP or FDD
Acquisition Plan. Defines the specific actions planned by the program manager to execute the contracting approach established in the AS and to guide contractual implementation.	FAR and DFARS	F	F	F
Acquisition Program Baseline. Documents the agreement among resource and functional sponsors, program managers and the MDA on how the program is to be executed. The baseline contains only those program cost, schedule and performance parameters (both objectives and thresholds) that, if thresholds are not met, will require the MDA to reevaluate the program and consider alternative program concepts or design approaches.	10 USC 2435 and DODI 5000.02	F	F	F
AS Describes the business and technical management approach to achieve program objectives within the resource constraints imposed. It provides the framework for planning, directing, contracting for and managing the program. It provides the basis for formulating functional plans and strategies (for example, acquisition plan, Test and Evaluation Master Plan and the Systems Engineering Management Plan).	DODI 5000.02	F	U	U
Analysis of Alternatives (AoA) Provides an analysis to aid decision makers by identifying risks, uncertainty and the relative advantages and disadvantages of alternatives being considered to satisfy a mission need. The AoA identifies the sensitivity of each alternative to possible change in key assumptions.	DODI 5000.02	F	F	F
BCA for performance based decisions and support decisions Evaluates alternative solutions for obtaining best value while achieving operational requirements balancing cost, schedule, performance and risk.	DODI 5000.02	F	U	U
Contractual documentation Contains the program contractual requirements. This may include the RFP, SOW, and/or objectives, specification, contract requirements deliverables, performance agreements, and any other related contractual documentation that contains support criteria and requirements.	FAR and/or DFARS, DODI 5000.02	F	U	U
Cost Analysis Requirements Description Describes the complete program and is used as the basis for program office and Component cost analysis teams to prepare program life cycle cost estimates. It should be comprehensive enough to facilitate identification of any area or issue that could have a significant effect on life cycle costs and therefore must be addressed in the cost analysis. It also must be flexible enough to accommodate the use of various estimation methodologies.	DODI 5000.02	F	U	U
CDD	DODI 5000.02	F		

Table B-1
Document request list—Continued

Typical document request and description	Source	Milestone and/or decision point		
		B	C	FRP or FDD
The CDD includes the operational performance parameters necessary for the acquisition community to design a proposed system and establish a program baseline. The performance attributes stated include KPP, thresholds and objectives to guide the development and demonstration of the proposed increment. Equivalent to the operational requirements document. The CDD builds on the ICD and is approved prior to Milestone B.				
CPD The CPD narrows the generalized performance and cost parameters from the CDD into more precise performance estimates for the specific production system increment. The CPD is finalized after the design readiness review.	DODI 5000.02		F	U
Computer Resources Life Cycle Management Plan Describes the development, acquisition, test and support plans over the life cycle of computer resources integral to, or used in, direct support of systems.	Acquisition and Technology and Logistics Knowledge Sharing System (AKSS)		F	U
COTS Refreshment Plan and/or Program Part of the DMSMS plan, it defines the plan to avoid obsolescence in the delivered systems. The planning for technology refresh and insertion is a part of the systems engineering process and includes market research over the life of the system to identify potential replacements in anticipation of end-of-life issues.	DAG and AKSS		F	U
Corrosion Prevention Control Plan Refer to Corrosion Prevention in the SEP and LCSP sections.	DODI 5000.02 and DODI 5000.67	F	U	U
Depot Source of Repair and CORE Analysis and/or Determination. Identifies the maintenance requirements to determine if they are a CORE capability (for example, capability the DOD wants to retain organically).	DODI 5000.02, 10 USC 2464, and/or 10 USC 2466	IP	F	U
DRMP Provides a time history or profile of events, functions (often referred to as use or operations) and environmental conditions that a system is expected to encounter during its life cycle, from manufacturing to removal from service use.		F	U	U
Development test and/or operational test (OT) results Provides results from developmental and operational testing on a system.	DODI 5000.02		D	F
DMSMS Management Plan Identifies the program approach to managing DMSMS. DMSMS addresses identifying, defining, and establishing activities and functions to enhance the efficiency and cost-effectiveness of obsolescence mitigation.	DODD 4140.01 Volume 1-7	F	U	U
Facilities Plan. Describes the plan to develop, identify and implement facility requirements to maintain, operate and test an item and to train personnel for its use.	AR 420-1 and AR 210-20	F	U	U
FRACAS A closed-loop system for the identification of hardware and/or software failures and/or discrepancies, their analyses to root cause, implementation of corrective actions to prevent recurrence and verification of their effectiveness. Recording of data should be comprehensive to provide an accurate database for analyses.	AKSS	D	F	F
HSI Plan Describes how the system will meet the needs of the human operators, maintainers, and support personnel. This includes manpower, personnel, training and education, human factors engineering, personnel survivability, and habitability. Also describes how the program will meet HSI programmatic requirements and standards including analysis to reduce manpower, improve human performance, and minimize personnel risk. HSI is the integrated analysis, design, and assessment over the life cycle of a system and associated support infrastructure in the domains of manpower, personnel, training and education, human factors	DOD 5000.02 and Army Directives	F	U	U

Table B-1
Document request list—Continued

Typical document request and description	Source	Milestone and/or decision point		
		B	C	FRP or FDD
engineering, personnel survivability, habitability, safety, and occupational health.				
ISP Identifies ISP needs, dependencies and interfaces focusing on interoperability, supportability, and sufficiency concerns throughout a program's life cycle. It provides a plan for all ACAT programs, including both information technology and national security systems that connect to the communications and information infrastructure.	DODI 4630.8, DODD 4630.5, CJCSI 6212.01F, and DODI 5000.02	F	U	U
ICD The ICD guides the concept refinement and technology development phases of the acquisition process and supports the Milestone A decision. The ICD includes a description of the operational capability gap, threat, shortcomings of existing systems and (command, control, communications, computers and intelligence) architectures, capabilities required for the system, program support, force structure, doctrine, organization, training, materiel, leadership and education, personnel and facilities (DOTMLPF) analysis and schedule and/or program affordability for the system. Replaces the mission needs statement.	CJCSI 3170.01 and DODI 5000.02	F		
Integrated Master and/or Management Plan Depicts the overall structure of the program and the key processes, activities and milestones in an event-based plan. It defines the accomplishments and criteria for each event in the plan.	DODI 5000.02; and DAG	F	U	U
IUID Plan Annex to the SEP, describes the plan for physical marking and encoding of the two-dimensional data matrix symbols that are applied to items to facilitate electronic data capture and transmission. Data elements are then used to track parts throughout their life cycle.	DODI 5000.02 AR 700-145	F	U	U
LORA Provides an analysis to determine whether an item should be repaired or discarded and, if repaired, at what maintenance level. Analyses are performed and trade-off decisions are made based on mission requirements, as well as economic and non-economic considerations.	DAG	D	F	U
LCCE Provides an estimate of the total cost to the Government of acquisition and ownership of a weapon system over its useful life. It includes the cost of development, acquisition, support and, where applicable, disposal.	DODI 5000.02	F	U	U
LCSP Describes the overall supportability program and includes all requirements, tasks, schedules and milestones for each ILA element integrated into the overall program milestones during acquisition and sustainment.	DODI 5000.02	F	U	U
Logistics demonstration report Documents the program's plan to execute the logistics demonstration. The demonstration is required on all acquisition programs to evaluate the system support package by using target audience Soldiers to perform system maintenance and troubleshooting using the system support package. The log demonstration report must include log demonstration results to date.	AR 700-127	I	IP	F
Logistics requirements funding summary. The logistics requirements funding summary document identifies the logistics support functions and sub functions required to establish affordable and effective logistical support. It identifies support resource requirements and the funds available to meet those requirements. The summary displays requirements versus available funding for all IPSEs and related disciplines, by fiscal year and appropriation, and is traceable to logistics support plan tasks and activities.	AKSS	F	U	U
Maintenance concept.	AR 750-1 and DAG	F		

Table B-1
Document request list—Continued

Typical document request and description	Source	Milestone and/or decision point		
		B	C	FRP or FDD
The concept provides a brief description of the concept for operational maintenance, constraints and plans for support of items under development.				
Maintenance Plan. Provides a description of the concept for operational maintenance, constraints and plans for support of items under development. Information in the plan is based on different supportability analyses, the LORA, and maintenance analyses.	AR 750-1 and DAG		F	F
Materiel Fielding Plan. The Materiel Fielding Plan is a plan that details the activities related the fielding of a materiel system. It includes such topics as; the post fielding support concept, the total package fielding category, the maintenance concept (including warranties), any equipment and software being displaced, facility requirements, and NET.	AR 700-142 and DA Pam 700-142			
Manufacturing Plan. This plan defines and integrates a sequence of activities to establish, implement and control production resources for efficient transition from development to production and continued manufacturing. The plan addresses all aspects of manufacturing and/or product engineering, manufacturing methods, production and material control, scheduling and manufacturing cycle times, personnel, tooling, and defect prevention.	DAG and DFARS		F	U
Memorandum of agreement(s) and field tasking agreements. Delineates the roles and responsibilities, as well as agreements between the program office and supporting field activities, in-service engineering agents, agreements between the SSA, inter-service agreements. Field tasking agreements include funding documents that contain statements of work.	DODI 4000.19	F	F	F
Operational test agency report of operational and test evaluation results. Provides operational test results from the Services testing agencies.	DODI 5000.02	D	F	U
Planned Maintenance System (PMS). Documentation includes scheduled maintenance instructions provided on maintenance requirements cards and maintenance index pages. May be included in the TM and/or the IETM.	AR 750-1 and DAG		F	U
Preferred parts selection list and/or approved parts list. A list of parts or part types that meets the system design requirements over its life cycle and are either recommended or approved for use.	DFARS		F	U
PESHE This document is a management tool used to help program managers identify and manage ESOH hazards and risks, and determine how best to meet ESOH regulatory requirements and standards. It is a living document that is continually updated and maintained throughout the progression of a program or project, from concept to disposal.	42 USC 4321 and DODI 5000.02	F	U	U
Program Protection Plan (includes the Anti-Tamper Plan as an Annex). Prepared for programs with critical program information.	DODI 5000.02, DODI 5200.39, DODI 5200.44 and AR 70-77	F	U	U
Quality Assurance Plan Provides the contractors plan for assuring the quality of the system.	DODI 5000.02		F	U
RAM Plans and reports plans (like Reliability Program Plan) that include factors to influence the design, and provide reports from the results of the completed analyses (for example, failure modes, effects and criticality analysis).	DODI 5000.02	D	F	U
Replaced System Sustainment Plan Identifies how the system being replaced will be sustained.	DODI 5000.02	F	U	U
Results of Design Analysis	DFARS		F	U

**Table B-1
Document request list—Continued**

Typical document request and description	Source	Milestone and/or decision point		
		B	C	FRP or FDD
Provides analyses as part of the design process to identify, quantify and qualify product characteristics in terms of attributes, tolerances and test and inspection requirements necessary to produce a quality product that meets its life cycle and supportability requirements. Examples of analyses include reliability, availability and maintainability predictions, task time analyses, testability analysis, worst case tolerance analysis, stress analysis, sneak circuit analysis and FMECA.				
Risk Management Plan and/or Assessment Describes the approach to identify, assess, mitigate and continuously track, control and document program risks.	DODI 5000.02	F	U	U
Software Development Plan Describes responsibilities, tasks, deliverable, and schedules. The descriptions include how the design, review and tests will be performed. The plan addresses management and control of the development process, software development practices or standards to be followed, and procedures to be used for tracking and reporting progress.	DAG		F	U
Software Plan Documents the procedures for identifying, organizing, controlling, and tracking the configuration of the software (that is, selected software work products and their descriptions) and systematically controlling changes to the configuration, and maintaining the integrity and traceability of the configuration throughout the software life cycle.	AKSS	F	U	U
Software Security Plan Addresses various aspects of security such as Cybersecurity, protection of critical program information, and obtaining security certification and accreditation if not included in other documents.	AR 25-2		F	U
Software Support and/or Sustainment Plan Describes the activities to ensure that implemented and fielded software continues to fully support the operational mission of the software.	DAG	F	U	U
Systems Engineering Plan (SEP) Describes the comprehensive, iterative technical management process that includes translating operational requirements into configured systems, integrating the technical inputs of the entire design team, managing interfaces, characterizing and managing technical risks, transitioning technology from the technology base into program specific efforts, and verifying that designs meet operational needs. It addresses life cycle activities using a concurrent approach to product and process development as well as sustainment.	DODI 5000.02 and DAG	F	U	U
Supply Support Management Plan Identifies the major supply support events, deliveries, and/or milestones for an acquisition or configuration change with projected and actual delivery dates for each event from budgeting through the materiel support date.	AKSS		F	U
Supportability analysis summaries (Maintenance planning and repair analysis, support and test equipment; supply support; MPT, facilities, PHS&T, and post production support). Provides information for planning, assessing program status and decision-making by the government relative to the logistics disciplines and/or elements.	AR 700-127, ANSI ANSI GEIA-STD-0007 and DAG		F	U
System operating and maintenance documents Contains information and instructions for the installation, operation, maintenance, training, and support of a system.	AR 25-30		F	U
Systems Safety Analysis and/or Plan Provides the plans and analyses to achieve acceptable safety risk through a systematic approach of hazard analysis, risk assessment and risk management.	AR 385-10	F	U	U
STRAP Identifies the resources required to establish and maintain an effective training program throughout the acquisition life cycle. It	AR 350-1	IP	F	U

Table B-1
Document request list—Continued

Typical document request and description	Source	Milestone and/or decision point		
		B	C	FRP or FDD
controls planning for meeting the training requirements and identifies personnel required to install, operate, maintain, or to otherwise use the system.				
TEMP Documents the overall structure and objectives of the test and evaluation program consistent with the ICD, CDD, CPD, and/or AS. It identifies the development test and evaluation, operational test and evaluation, live fire test, and evaluation activities and provides the framework to generate detailed T plans.	DODI 5000.02	F	U	U
Training analysis Provides a methodology to determine manpower, personnel, training and education requirements to support the planning and programming process and the Training Systems Plan.	AR 350-1	IP	F	U

Legend:
 Use the following to understand the status of the required documents in table B-1.
 IP= in process.
 D= draft.
 F=final.
 U= update as required and/or necessary.
 Blank= no formal activities.

B-2. Additional documentation for post-FRP assessments

The following documents apply to systems that are conducting Post-IOC Phase (Post FRP and/or FDD) ILAs. This document list is in addition to the documents identified in table B-1 and should be tailored for each program by the ILA team lead and program office.

Table B-2
Sustainment independent logistics assessment documentation request list

Post IOC sustainment ILA documentation description	Post IOC or FDD
System operational verification tests list of deficiencies upon system fielding.	X
Maintenance history, supportability, and/or cost drivers component failures per total of installed population of same component.	X
Diagnostic help history tech assists per system.	X
Configuration management information configuration control and change history to include number of engineering design changes.	X
Product support alternative performance information on how the product support alternative provider is performing against required metrics.	X
Training performance training effectiveness and/or issues.	X
Depot performance component repairs per total of installed population of same component.	X
Planned maintenance system performance user feedback on maintenance system program.	X
Product data performance User feedback on technical data.	X

B-3. Additional documents for major information management systems assessments

The following documents apply to MAIS conducting ILAs. This document list is in addition to the documents identified in table B-1. Note that the documentation list should be tailored for each program by the ILA team lead and program office. See table B -3 for the MAIS list.

Table B-3
Major automated information system documentation list

Requirement	Milestone and/or decision point			
	B	C	FRP and/or FDD	Post and/or FDD
Acquisition information assurance strategy (all IT and National Security Systems)	X	X	X	X
AoA	X	X	X	X

Table B-3
Major automated information system documentation list—Continued

Requirement	Milestone and/or decision point			
	B	C	FRP and/or FDD	Post and/or FDD
Beyond low-rate initial product report (include MDAPs that are also MAIS)			X	X
Component cost estimate (MAIS, optional MDAP)			X	X
Consideration of technology issues (MDAP and MAIS)	X	X		
Cost analysis requirements description (MDAP and MAIS)	X	X	X	X
Data management strategy (MDAP, MAIS, and ACAT II)	X	X	X	X
DOD Chief Information Officer Confirmation of CCA Compliance (MDAP and MAIS)	X	X	X	X
Economic analysis (MAIS)	X		X	X

Appendix C

Independent Logistics Assessment Rating Criteria

C–1. Independent logistics assessment rating for early life cycle Independent logistics assessments

The following tables provide guidance for rating individual elements and for rolling those individual ratings into an overall program rating. Table C–1 is used for assessing the Milestone B, Milestone C, FRP, and/or FDD ratings.

Table C–1
Finding and/or integrated product support element rating criteria

Grade	Cost	Schedule	Performance
Low (Green)	Minor or no impact to supportability	Minor or no impact to supportability	Minor or no impact to supportability
Moderate (Amber)	Some supportability impact; able to re-allocate within program	Some impact to logistics tasks; internally adjustable with no milestone changes	Some impact to readiness, but can be remedied by program adjustments.
	Funding is not available when needed, but workarounds are identified moderate impact to supportability	Delays in logistics tasks impacting ability to meet milestones, but workarounds exist such that impact is minimal	Logistics requirements will not be met within budget or schedule, but can be if resources will be applied
Major (Red)	Funding is not available when needed, significant impact to supportability	Delays in logistics tasks with significant milestone impact	Significant degradation below thresholds
	Supportability cannot be achieved within the current funding profile	Delays in logistics tasks with major impact to the ability to meet milestones or establish support capability	Logistics performance requirements cannot be met

Note:

¹ Table C–1 is used to rate individual issues and each element.

C–2. Independent Logistics Assessment Rating for Post-FRP and/or FDD Independent Logistics Assessments

Table C–2 is used for assessing the Post-FRP and/or FDD ratings, the focus is on program performance during fielding or in the field, vs. program performance during system development.

**Table C-2
Integrated product support element finding and overall program rating criteria**

Grade	IPS Finding, Element and Overall Program Rating Criteria
Low (Green)	All Supportability Products have been (or are scheduled to be) delivered to the user in accordance with the requirements and program schedule. Supportability KPPs, KSA, and other measures of effectiveness are being achieved per the system requirements. The program is meeting operational cost goals from a supportability perspective per cost estimates.
Moderate (Amber)	Not all Supportability Products have been (or will be) delivered to the user in accordance with the requirements and program schedule. Impact to support is not significant and workarounds are established with little or no impact to support and performance. All supportability products have been delivered to the requirements but the requirement is inadequate, either because the requirement was misstated or the mission profile and/or threat has changed. Supportability KPPs, KSA, and other measures of effectiveness have not been achieved but corrective actions are funded/in process and trending toward achieving required thresholds in the near term. Overall system performance and supportability has not been degraded or is slightly degraded. The program is exceeding operational cost goals from a supportability perspective per cost estimates, but cost reduction improvements are in place and costs are trending downward in the near term.
Major (Red)	Not all supportability products have been (or will be) delivered to the user in accordance with the requirements and program schedule. Impact to support is significant and performance and supportability KPPs and/or KSA are being impacted. All supportability products have been delivered to the requirements but the requirement is inadequate, either because the requirement was misstated or the mission profile and/or threat has changed. Supportability KPPs, KSA, and other measures of effectiveness are not being achieved and there is no current plan, process, or funding in place to correct the deficiency. Overall system performance and supportability has been degraded. The program is exceeding operational cost goals from a supportability perspective per cost estimates. Additional funding is required to support the system, and cost reduction efforts will be significant.

C-3. Overall program assessment rating

See table C-3 for the overall program assessment criteria.

**Table C-3
Overall program assessment criteria**

Overall program assessment criteria		
Not ready to proceed (Red)	Ready to proceed with comments (Amber)	Ready to proceed (Green)
A program is not ready to proceed when there are major product support planning and implementation issues or actions outstanding that have substantial impact on the program's ability to meet sustainment performance requirements within cost and schedule. Further, there are no plans or workarounds in place that will correct the deficiency. The program should not proceed to a milestone decision until detailed action plans are developed and in place which meet minimum acceptable sustainment performance requirements with acceptable impacts to cost and schedule. Once these plans are in place and properly resourced to the satisfaction of the ILA team lead, PEO sustainment manager, or next echelon of sustainment competency, the program is considered to be ready to proceed with comments.	A program is ready to proceed with comments, when product support planning and implementation issues of moderate risk have detailed action plans established and in place. However, the resolution of the deficiency will not occur prior to the milestone decision and requires continued monitoring. Once the action is completed, there is no expected degradation to sustainment performance requirements and minimal impact to cost and schedule. Once identified actions are resolved as verified by the ILA team lead, PEO sustainment manager, or next echelon of sustainment competency, the program is considered ready to proceed.	A program is considered ready to proceed when there are no (or only minor) product support planning and implementation issues. Each issue has an approved mitigation plan in place to eliminate the deficiency prior to the milestone decision. There is no impact on the program's ability to meet sustainment performance requirements within cost and schedule.

Note:

¹ Table C-3 is used to provide the overall program rating for the program. The overall program rating typically would be reflected in the PEO memorandum of ILA status to the MDA; however, the PEO may identify urgency factors or nonconcur with the ILA team's recommendations found in the ILA report.

C-4. Independent Logistics Assessment risk matrix

a. Used to graphically represent the program's overall logistics risk in accordance with the overall rating. The matrix provides a presentation media that is used to present other programmatic risks to the Deputy Assistant Secretary of Defense (Materiel Readiness), such as performance, cost, and schedule risks. This allows logistics risk to be presented at the same level during briefs to the MDA. Table C-4 and table C-5 are used in tandem to provide an overall rollup of findings onto the risk cube.

b. Figure C-1 provides the format for the ILA risk matrix.

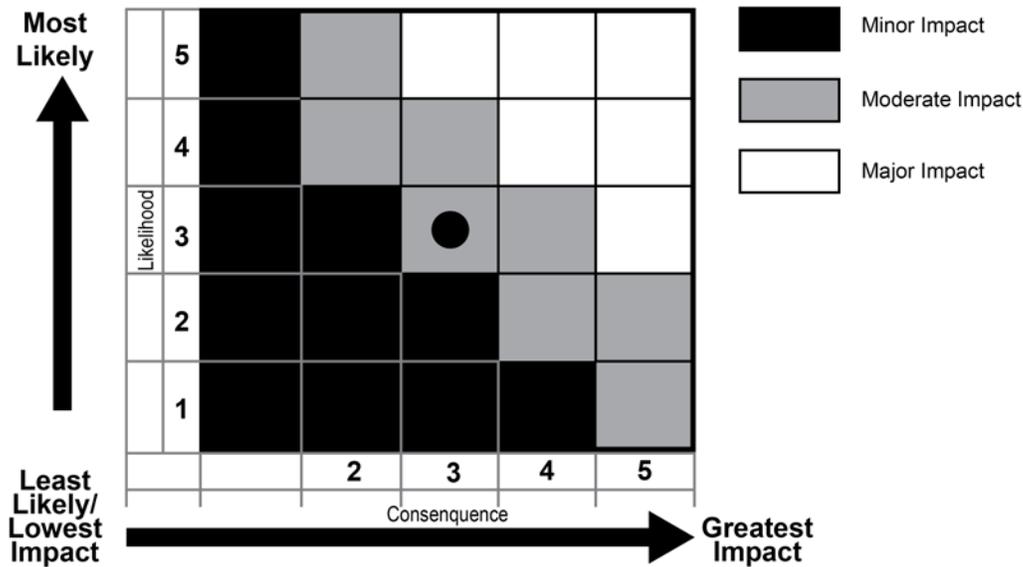


Figure C-1. Independent logistics assessment risk matrix

c. Table C-4 provides the levels and definitions of impacts for risk matrix. Table C-5 provides likelihood decision table for risk matrix.

Table C-4
Independent logistics assessment risk impact

Level	Cost	Schedule	Performance
1	Minor or no impact to supportability	Minor or no impact to supportability	Minor or no impact to supportability
2	Some supportability impact; Re-allocatable within program	Some impact to logistics tasks; Internally adjustable with no milestone changes	Some impact to readiness, but can be remedied by program
3	Funding is not available when needed, moderate impact to supportability	Delays in logistics tasks impacting ability to meet milestones, but workarounds exist such that impact is minimal	Logistics requirements will not be met within budget or schedule, but can be if resources will be applied
4	Funding is not available when needed, significant impact to supportability	Delays in logistics tasks with significant milestone impact	Significant degradation below MOS thresholds
5	Supportability cannot be achieved within current funding profile or not identified	Delays in logistics tasks with major impact to the ability to meet milestones or establish support capability	Logistics performance requirements cannot be met

Table C-5

Independent logistics assessment likelihood decision correlation for risk matrix

Level	Likelihood
1	Not likely
2	Low likelihood
3	Likely
4	Highly likely
5	Near certainty

Appendix D

Independent Logistics Assessment Report Content

Appendix D provides the minimal content that should be included in an ILA report. However, formatting of a report is left up to the PEOs or team leads. This appendix provides content information on ILA summary and/or executive summary content and deficiency and/or recommendation report content.

D–1. Summary and/or executive summary content

The following outlines provide a foundation for the content to be provided in the executive summary.

a. Introduction. The introduction should include the following:

- (1) Program: (identify program).
- (2) ACAT: (identify ACAT).
- (3) Next milestone: (Identify next milestone and date).
- (4) MDA: (identify the MDA).
- (5) PEO: (name and/or code).
- (6) Program manager: (name, code, and/or phone number).
- (7) Assistant PEO (logistics): (name, code, and/or phone number).
- (8) IPS manager and/or assistant program manager for logistics: (name, code, and/or phone number).
- (9) System description: (brief overview of the system being addressed during this assessment).
- (10) Support concept: (brief overview of the support concept).
- (11) Purpose of ILA review: (what life cycle events are being addressed).
- (12) Scope of ILA review: (identify the configuration of the system(s) being addressed during this assessment).

b. Summary of independent logistics assessment. The summary of the ILA should include the following:

- (1) Review dates: (start and finish of assessment).
- (2) Team lead: (name, code, and/or phone number).
- (3) Listing of ILA reviewers by element: (name, code, and/or phone number) (see table 1).
- (4) Conclusions and recommendations: (draw conclusions regarding the program’s IPS posture and/or risk, its ability to meet established performance metrics and to be fully supportable at system IOC; provide recommendations regarding IPS certification (including contingencies) and the program’s proceeding into the next phase). Insert either table C–1 or table C–2, as appropriate, from appendix C as table 2. Also include table D–1 in this section as table 3.
- (5) Logistics risk matrix: (Insert figure C–1 from appendix C as figure 1. Insert table C–4 from appendix C as table 4. Insert table C–5 from appendix C as table 5).

c. Table listing of criteria, color code, and MATDEV’s position.

Assessment result areas	Color code
Product support management	
Design interface	
Sustaining engineering	
Supply support	
Maintenance planning and management	
Packaging, handling, storage, and transportation	
Technical data	
Support equipment	
Training and training support	
Manpower and personnel	
Facilities and infrastructure	
Computer resources	

Note:

¹ Fill in table D–1 and provide rationale for each support area not addressed.

d. Conclusions and recommendations. Draw conclusions regarding the program’s IPS posture and/or risk and its ability to meet established performance metrics and be fully supported at system IOC; provide recommendations regarding IPS certification (including contingencies) and the program’s readiness to proceed to the next acquisition phase.

- (1) Individual deficiencies and/or recommendations.
- (2) Status reports: (identify when the MATDEV’s first status report is due and the periodicity of future reports).

D–2. Deficiency and/or recommendation content

Use the following outline format for detailed element deficiency or recommendation reports. Include the following topics for each report:

- a. Deficiency Recommendation.* (Place an “X” on the appropriate line for each finding.)
- b. Program.* (Identify Program).
- c. Number.* (ILA team leader assigns numbering sequence. A number is not required for recommendations).
- d. Assessment SME* (Name of assessor).
- e. Deficiency and/or recommendation.* (Clearly state what the assessor thinks can, or will, create a supportability problem if left uncorrected).
- f. Program manager’s position* (Concur and/or nonconcur and/or rationale).
- g. References.* (Identify documents reviewed, include date and/or version number).
- h. Integrated product support element.* (Identify the IPS element affected).
- i. Rating* (Red, yellow, and/or green).
- j. Discussion.* (Assessor provides background and impact. Should specifically address the matrix and how the green, yellow, and/or red was determined).
- k. Corrective action(s).* (Assessor identifies the top level action(s) required to correct the problem(s)).
- l. Action Office* (Assessor identifies the action office).
- m. Completion date.* (Assessor identifies the date by which the program office has indicated the problem will be corrected)
- n. Program office plan of action and maintenance.* (Program office provides a detailed POA&M that documents how specific issues will be resolved and should be submitted with the final report).

Glossary

Section I

Abbreviations

ACAT

acquisition category

ACOM

Army command

AKSS

Acquisition and Technology and Logistics Knowledge Sharing System

ANSI GEIA

American National Standards Institute Government Electronics and Information technology Association

AoA

Analysis of Alternatives

AS

Acquisition Strategy

ASA (ALT)

Assistant Secretary of the Army (Acquisition, Logistics and Technology)

ASARC

Army System Acquisition Review Council

ATEC

U.S. Army Test and Evaluation Command

BCA

Business Case Analysis

BIT

Built-in-Test

CAI

Critical Application Item

CBM+

Condition-Based Maintenance Plus

CDD

Capability Development Document

CJCSI

Chairman, Joint Chiefs of Staff Instruction

CM

Configuration Management

CORE

Title 10 USC 2464 “Core Logistics Capabilities”

COTS

Commercial-Off-The-Shelf

CPD

Capabilities Production Document

CSI

Critical Safety Item

DASA

Deputy Assistant Secretary of the Army

DASA – CE
Deputy Assistant Secretary of the Army – Cost and Economics

DET
Displaced Equipment Training

DFARS
Defense Federal Acquisition Regulation Supplement

DMSMS
Diminishing Manufacturing Sources and Materiel Shortages

DOD
Department of Defense

DODIC
Department of Defense Identification Code

DRMP
Design Reference Mission Profile

EO
Executive Order

ESOH
Environmental, Safety, and Occupational Health

ETM
Electronic Technical Manual

FDD
Full Deployment Decision

FMECA
Failure Modes, Effects, and Criticality Analysis

FRACAS
Failure Reporting Analysis and Corrective Action System

FRP
Full-Rate Production

FTA
Fault Tree Analysis

HAZMAT
Hazardous Materials

HSI
Human Systems Integration

ICD
Initial Capabilities Document

ICE
Independent Cost Estimate

IETM
Interactive Electronic Technical Manual

ILA
Independent Logistics Assessment

IMA
Information Management Area

IMP
Integrated Master Plan

IMS
Integrated Master Schedule

IOC
Initial Operational Capability

IPS
Integrated Product Support

IPSE
Integrated Product Support Element

ISP
Information Support Plan

IT
Information Technology

IUID
Item Unique Identification

JCIDS
Joint Capabilities Integration and Development System

KPP
Key Performance Parameter

KSA
Key System Attributes

LCC
Life Cycle Cost

LCCE
Life Cycle Cost Estimate

LCMC
Life Cycle Management Command

LCSP
Life Cycle Sustainment Plan

LORA
Level of Repair Analysis

LPD
Logistics Product Data

MAIS
Major automated information system

MANPRINT
Manpower and Personnel Integration

MARC
Manpower Authorization Requirements Criteria

MATDEV
Materiel Developer

MDA
Milestone Decision Authority

MDAP
Major Defense Acquisition Program

MILCON
military construction

MIL–HDBK
military handbook

MOA
memorandum of agreement

MOU
memorandum of understanding

MTOE
modified table of organization and equipment

MTTR
mean time to repair

NDI
Non-Developmental Item

NEPA
National Environmental Policy Act

NET
new equipment training

OEM
original equipment manufacturer

PBA
performance-based agreement

PEO
program executive office

PESHE
Programmatic Environmental, Safety and Occupational Health Evaluation

PHS&T
Packaging Handling, Storage, and Transportation

POA&M
Plan Of Action and Milestone

PRR
Production Readiness Review

PSA
Product Support Analysis

PSI
Product Support Integrator

PSM
product support manager

RAM
reliability, availability, and maintainability

RCM
Reliability Centered Maintenance

RFID
Radio Frequency Identification

RFP
Request For Proposal

SE
Support Equipment

SEP

Systems Engineering Plan

SME

subject matter expert

SMR

Source, Maintenance, Recoverability

SOW

statement of work

SSA

Supply Support Activity

STRAP

System Training Plan

T&E

Test and Evaluation

TDA

Tables of Distribution and Allowances

TEMP

Test and Evaluation Master Plan

TM

Technical Manual

TMDE

test, measurement and diagnostic equipment

TOC

total ownership cost

TOE

table of organization and equipment

TRADOC

U.S. Army Training and Doctrine Command

Section II**Terms****Acquisition strategy**

A plan that documents the acquisition planning process and provides a comprehensive approach for achieving goals established in materiel requirements. It summarizes other management planning documents (including the LCSP), Government-furnished materiel to be provided, the overarching acquisition strategy, organizational resources (money, time, people), and schedule.

Affordability

Program affordability is part of the JCIDS analysis process, which balances cost with performance in establishing key performance parameters. Cost goals are established in terms of thresholds and objectives to provide flexibility for program evolution and to support tradeoff studies.

Analysis of alternatives

The AoA assesses potential materiel solutions to satisfy the capability need documented in the approved ICD. It focuses on identification and analysis of alternatives, measures of effectiveness, cost, schedule, concepts of operations, and overall risk, including the sensitivity of each alternative to possible changes in key assumptions or variables. The AoA also assesses critical technology elements associated with each proposed materiel solution, including technology maturity, integration risk, manufacturing feasibility, and, where necessary, technology maturation and demonstration needs. The AoA is conducted during the Materiel Solution Analysis Phase of the Defense Acquisition Management System, is a key input to the CDD, and supports the materiel solution decision at Milestone A.

Computer resources

Facilities, hardware, software, and manpower needed to operate and support embedded and standalone computer systems, including post-deployment software support requirements and planning.

Condition based maintenance plus

The CBM+ is a set of maintenance processes and capabilities derived primarily from real-time assessment of materiel system condition obtained from embedded sensors and/or external test and measurements using portable equipment. CBM+ is a maintenance strategy that is derived from an RCM analysis and is an enabler for product support. The goal of CBM+ is to perform maintenance only upon evidence of need.

Cybersecurity

Prevention of damage to, protection of, and restoration of computers, electronic communications systems, electronic communications services, wire communication, and electronic communication, including information contained therein, to ensure its availability, integrity, authentication, confidentiality, and nonrepudiation

Deficiency

A fault or problem that creates a nonmission capable or unsupportable state. Faults that make the equipment nonmission capable or unsupportable are deficiencies.

Demilitarization

The act of destroying the military offensive or defensive advantages inherent in certain types of equipment or material. Demilitarization includes mutilation, dumping at sea, scrapping, melting, burning, or alteration designed to prevent the further use of this equipment and material for its originally intended military or lethal purpose and applies equally to material in unserviceable or serviceable condition that has been screened through an Inventory Control Point and declared excess or foreign excess.

Depot maintenance

Materiel maintenance requiring major overhaul or a complete rebuilding of parts, assemblies, subassemblies, and end items, including the manufacture of parts, modifications, testing, and reclamation, as required. Depot maintenance serves to support lower categories of maintenance by providing technical assistance and performing that maintenance beyond their responsibility. Depot maintenance provides stocks of serviceable equipment because it has more extensive repair facilities than are available in lower maintenance sites. Depot maintenance includes all aspects of software maintenance.

Facilities

The permanent or semi-permanent real property assets specifically required to support the system, including facilities for training, equipment storage, maintenance, contractor, ammunition storage, mobile shop storage, classified storage, troop housing, fuels and lubricant storage, and special facility requirements.

Failure definition and scoring criteria

The FD and SC describes the failure and criteria to score and assess reliability failures. It is the standard by which the RAM Working Group (WG) and/or Integrated Product Team (IPT) scores failures. It ensures that problems with contractual issues or any conflicts during the scoring and assessing of data during the RAM WG conferences is minimized or reduced by identifying the valid definition of failure or success criteria and the chargeability of those items that fail.

Failure mode effects analysis and/or failure mode effects and criticality analysis

A FMEA would ascertain design information which relates to fault detection and isolation. This provides an effective and efficient identification of modes of failure and their effects on symptoms. A FMECA is a tool to identify potential design weaknesses. It systematically identifies the likely modes of failure, the possible effects of the failure, the criticality of each effect on safety, readiness, mission success and demand for supportability.

Failure Reporting Analysis and Corrective Action System

The closed loop FRACAS should be required by all system, subsystem and equipment contractors. It provides essential documented information about unplanned events, the possible cause of the failure, the need for corrective actions for these events, what specific effective corrective actions were taken and is a baseline for those corrections in later testing. It is a major factor in assessing and maintaining reliability program effectiveness, managing reliability growth and assessment, and provides real time data to adequately assess the RAM status of the program at the RAM WG and/or IPT meetings.

Fault tree analysis

The FTA is a top down failure analysis in which all possible failure mode cause and effects are analyzed and the probability of occurrence of each is determined.

Hazardous materiel

A material as defined by Federal Standard, Material Safety Data, Transportation Data and Disposal Data for HAZMAT Furnished to Government Activities ((FED–STD–313C). See AR 200–1 for further guidance.

Human factors engineering

The systematic application to system design and engineering of relevant factors concerning human characteristics. These factors include skill capabilities; performance; anthropometric data; biomedical factors; and training implications to system development, design, acquisition strategy, and manning.

Independent logistics assessment

The ILA is an independent assessment process where the PEO assigns an ILA lead and team members who are not involved in the program under review. The purpose of the ILA is to certify that the product support strategy, LCSP, management, resources, and implementation meet the capability developer's requirements.

Integrated product support

A unified and iterative approach to the management and technical activities needed to influence operational and materiel requirements and design specifications, define the support requirements best related to system design and to each other, develop and acquire the required support, provide required operational phase support at lowest cost, seek readiness and LCC improvements in the materiel system and support systems during the operational life cycle, and repeatedly examine support requirements throughout the service life of the system.

Item unique identification

A system of assigning, reporting, and marking DOD property with unique item identifiers that have machine-readable data elements to distinguish an item from all other like and unlike items.

Level of repair analysis

An analytical methodology used to assist in developing maintenance concepts and establishing the maintenance level at which components will be replaced, repaired, or discarded based on economic and/or noneconomic constraints and operational readiness requirements. Also known as repair level analysis.

Life cycle cost

The LCC is the total cost to the Government for a system over its entire life and is required for all appropriation categories and all systems. It includes all costs for research and development, investment (production and deployment, to include military construction and site activation), operating and support (organic and/or contractor personnel, supplies, operations, maintenance, and training) and disposal. This includes direct costs to the system and indirect costs that are logically attributable, regardless of funding source or management control.

Life Cycle Sustainment Plan

The LCSP documents the MATDEV's plan for formulating, implementing and executing the sustainment strategy for an acquisition program so that the system's design as well as the development of the product support package (including any support contracts) are integrated and contribute to the Warfighter's mission requirements by achieving and maintaining the sustainment KPP and/or KSA.

Logistician

An individual who works for an organization, other than the MATDEV, capability developer, trainer, or user representative. The logistician is responsible for IPS program surveillance and evaluation in the acquisition process.

Logistics product data

Logistics product data comprises the support and support-related engineering and logistics data acquired from contractors for use in materiel management processes such as those for initial provisioning, cataloging, and item management. Depending upon specific program requirements, this data may be in the form of an extensible markup language data deliverable, summary reports, a set of specific data products, or both.

Maintainability

A characteristic of design and installation that provides inherently for the system to be retained or restored to a specified condition within a given time when the maintenance is performed using prescribed procedures and resources.

Maintenance planning

Establishing a maintenance structure for a system. Source selection authority (including RCM) and maintenance engineering are used to provide an effective and economical framework for the specific maintenance requirements of the system.

Manpower

The personnel strength (military and civilian) as expressed in terms of the number of men and women available to the Army.

Manpower and Personnel

The process of identifying and acquiring military and civilian personnel with the skills and grades required to operate and support a materiel system over its lifetime at peacetime and wartime rates. One of the traditional IPS elements.

MANPRINT

The entire process of integrating the full range of human factors engineering, manpower, personnel, training, health hazard assessment, system safety, and Soldier survivability throughout the materiel development and acquisition process to ensure optimum total system performance.

Materiel

An all-inclusive term used to describe the total aggregate of equipment being developed, acquired, and managed by a materiel proponent. The materiel includes the logistics support hardware and software being developed and acquired to support the mission-performing equipment.

Materiel developer

The command, organization, or agency responsible for accomplishing life cycle system management of a materiel system to include the research, development, production, fielding and sustainment that fulfills DA-approved system requirements.

Operational availability

A measure of the degree to which a system is either operating or is capable of operating at any time when used in its typical operational and support environment.

Organic logistics support

Any logistics support performed by a military department under military control, using Government-owned or Government-controlled facilities, tools, test equipment, spares, repair parts, and military or civilian personnel, is considered organic support. Logistics support provided by one military service to another is considered organic within DOD.

Packaging, handling, and storage

The resources, techniques, and methods required for preserving, transporting, loading and unloading, and storing materiel systems, their support equipment, BSM (for example, ammunition, batteries, and petroleum, oils, and lubricants), and associated supplies of all classes. Includes the procedures, environmental considerations, and equipment preservation requirements for both short- and long-term storage.

Personnel

Military and civilian persons of the skill level and grade required to operate and support a system, in peacetime and wartime.

Post production support

The management and support activities necessary to ensure continued attainment of readiness and sustainability objectives with economical logistics support after the cessation of the production phase for the acquisition or modernization of a system or equipment.

Product support analyses

A wide range of related analyses that should be conducted within the system's engineering process. The goals of supportability analyses are to ensure that supportability is included as a system performance requirement and to ensure that the system is concurrently developed or acquired with the optimal support system and infrastructure. Examples of these analyses are repair level analysis, reliability predictions, RCM analysis, failure mode, effects, and criticality analysis, and LCC analysis.

Product support integrator

The PSI is an entity performing as a formally bound agent (for example, AMC LCMC, contract, memorandum of agreement, memorandum of understanding) charged with integrating all sources of support, public and private, defined within the scope of the performance based logistics agreements to achieve the documented outcomes. The product support manager, while remaining accountable for system performance, effectively delegates responsibility for delivering Warfighter outcomes to the PSI. In this relationship, and consistent with "buying performance," the PSI has considerable flexibility and latitude in how the necessary support is provided, so long as the outcomes are accomplished.

Product support manager

The PSM is an integral member of a program office, reporting directly to the MATDEV in planning and executing their life cycle management responsibilities

Product support provider

Provide the necessary product support for the system (or the subsystem(s) and/or component(s), as applicable) as integrated and employed by the PSI. Each PSP's requirements and performance metrics are detailed in a specific PBA developed by the PSI (examples of PSPs are depots, AMC LCMC activities, software engineering centers and contractors).

Prognostics

The use of data in the evaluation of a system or component for determining the potential for impending failures.

Reliability

A fundamental characteristic of a system expressed as the probability that an item will perform its intended functions for a specified time under stated conditions. Reliability ensures that a materiel system is ready to undertake a mission whenever and wherever tasked with a minimum maintenance infrastructure.

Reliability centered maintenance

A disciplined logic or methodology used to identify preventive maintenance tasks to realize the inherent reliability of equipment at a minimum expenditure of resources. RCM is a continuous process that gathers data from operating systems performance and uses this data to improve design and future maintenance. These maintenance strategies, rather than being applied independently, are integrated to take advantage of their respective strengths in order to optimize facility and equipment operability and efficiency while minimizing life cycle costs. RCM involves identifying actions that, when taken, will reduce the probability of failure and which are the most cost effective. It seeks the optimal mix of condition-based actions, interval (time- or cycle-) based actions, failure finding, or a run-to-failure approach. RCM acknowledges design limitations and the operational environment. Maintenance cannot improve an item's inherent reliability. At best, maintenance can sustain the design level of reliability within the operating context over the life of an item.

Replaced system sustainment plan

The replaced system sustainment plan documents how the legacy materiel being replaced by new development materiel will be sustained until the legacy materiel has been replaced by the new materiel, or is no longer relevant to supporting the mission for which it was acquired.

Shortcoming

A fault that requires an action but does not create a nonmission capable state.

Source of repair

A source of repair is an industrial complex (organic, commercial contract, or inter-Service facility) with required technical capabilities to accomplish repair, overhaul, modification, or restoration of a given type of military hardware or software.

Source of repair analysis

A source of repair analysis is an analytical process used to determine the best repair activity for the complete repair, overhaul, modification or restoration of a materiel system or nonconsumable components (that is, depot level repairs, line replacement unit, and shop replacement unit) for noncore workloads. The process considers the maintenance plan, LORA, core logistics analysis, repair capabilities of each repair activity, resources and skills. A source of repair analysis will use best value analysis to determine the source of repair(s).

Supply support

Management actions, procedures, and techniques required to determine, acquire, catalog, receive, store, transfer, issue, and dispose of principal and secondary items. Includes provisioning for initial support as well as for replenishment supply support.

Support equipment

All ancillary and associated equipment (mobile or fixed) required to operate and support a materiel system, including associated support items of equipment and component items such as trucks, air conditioners, generators, ground-handling and maintenance equipment, tools, metrology, calibration and communications equipment, test equipment, and automatic test equipment with diagnostic software for both on- and off-equipment maintenance. Incorporates the planning and acquisition of support necessary for the operation and sustainment of the support and test equipment itself. Also includes additional support equipment required due to the aggregation of the new system into high organizational-level densities, such as additional line haul fuel trucks or ammunition carriers.

Supportability

That characteristic of a system and its support system design that provides for sustained system performance at a required readiness level when supported in accordance with specified concepts and procedures.

System support package

The set of support elements planned for a system in the operational (deployed) environment provided before and tested and evaluated during technical T&E and user T&E to determine the adequacy of the planned support capability. The system support package is a composite of the support resources that will be evaluated during an LD and tested and validated during developmental T&E. The system support package includes items such as spare and repair parts, TMs and/or IETMs prepared in accordance with current military standards, training package, special tools, TMDE, and unique software.

Technical data

The communications link between people and equipment. Specifications, standards, engineering drawings, task analysis instructions, data item descriptions, reports, equipment publications, tabular data, computer software documentation, and test results used in the development, production, testing, use, maintenance, demilitarization, detoxification, and disposal of military components and systems. Used in designing and executing an IPS program. Computer programs, related software, financial data, and other information relating to contract administration are not technical data.

Test, measurement, and diagnostic equipment

A system or device that can be used to evaluate the operational condition of a system or component to identify or isolate any actual or potential malfunction. Diagnostic and prognostic equipment, automatic and semiautomatic equipment, and calibration test and measurement equipment, whether identifiable as a separate end item or contained within the system.

Testability

A design characteristic that allows the functional or operational status of a unit and the location of any faults within the unit to be confidently determined in a timely fashion. The status of a unit refers to whether the unit is operable, inoperable, or degraded. Testability applies to all hardware levels of indenture (device, board, equipment, or system). To achieve testability goals, attention must be paid to all design indenture levels and to the integration of test and diagnostic strategies between these levels. The application of testability to the design has impacts in all test activities: manufacturing test in the factory environment, operational test during mission phases to determine overall mission capability, and maintenance testing at all maintenance levels or echelons as driven by the maintenance concept requirements.

Training device

A three dimensional object and associated computer software developed, fabricated, or procured specifically for improving the learning process. Training devices are justified, developed, and acquired to support designated tasks in developmental or approved individual and collective training programs, technical manuals, military qualification standards, or Army training and evaluation programs. Training devices are categorized as either system or nonsystem devices. A system training device is designed for use with one system. A nonsystem training device is designed for general military training or for use with more than one system.

Transportability

The inherent capability of an item to be moved efficiently by towing, self-propulsion, or carrier, using equipment that is planned for the movement of the item via rail, highway, water, and air.

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