Independent Logistics Assessment Guidebook

FOREWORD

I am pleased to release the Independent Logistics Assessment (ILA) Guidebook 2023, which is a major revision to the original Logistic Assessment (LA) Guidebook published July 2011. With this update, we have officially added the Independent "I" component to the guidebook aligning to statute and explicitly affirming our commitment as a Department to conduct assessments free of bias to maximize the objectivity and value of observations and findings. While the Military Departments have long executed ILAs in this manner, it is now officially reflected in OSD guidance.

The original LA guidebook, like many of our other Product Support guidebooks, was created in response to the DoD Weapon System Acquisition Reform Product Support Assessment and the 2010 "Better Buying Power" initiative, which focused on improved governance, affordability, and controlling cost growth. Since that time, product support statute, policy, and guidance have undergone significant changes. These include updates to Title 10, U.S. Code; publication of DoD Instruction 5000.91, *Product Support Management for the Adaptive Acquisition Framework*; establishment of the requirement for Sustainment Reviews; revision of the Product Support Manager (PSM) Guidebook; and the recently published DoD Life Cycle Sustainment Plan (LCSP) Outline Version 3.0.
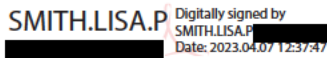
While much has changed, the fundamentals of an effective ILA remain the same. ILAs are a disciplined, tailored review of a program's supportability and are conducted prior to key acquisition decision points (including milestone decisions). Program Managers (PMs) and Product Support Managers (PSMs) utilize ILAs to ensure system design and product support performance are integrated to achieve sustainment objectives and identify corrective actions needed to prevent degraded materiel readiness or O&S cost growth. The early identification and resolution of findings have proven key to controlling weapon system costs, mitigating risk to the system's product support package, and providing the best possible support to our Warfighters. Additionally, the new revision includes an annex that updates Post IOC assessment considerations for systems not required to conduct Sustainment Reviews.

I highly recommend the use of this guidebook as a tool to assist the program managers and product support managers in executing their role as lifecycle managers for all programs, regardless of category (e.g., ACAT level, major and non-major weapon systems, and covered and non-covered systems).

Lisa P. Smith
Deputy Assistant Secretary of Defense for Product Support
Office of the Under Secretary of Defense for Acquisition and Sustainment
April 2023

ILA Guidebook – April 2023

Approved By

SMITH.LISA.P Digitally signed by
SMITH.LISA.P
Date: 2023.04.07 12:37:47

Signature: _____   **Date: 04/07/2023**

For questions regarding this guidebook, please consult your Component or Agency product support functional office. Recommendations for updates to this guidebook may be sent to:

The Office of the Deputy Assistant Secretary of Defense for Product Support
3500 Defense Pentagon
Room 5E621
Washington, D.C. 20301-3500
Office Phone: (703) 614-6082
E-mail: osd.pentagon.ousd-a-s.mbx.dasd-product-support@mail.mil

Table of Contents

List of Tables

List of Figures

Record of Changes

Date	Version	Change
July 2011	Version 0	First Logistics Assessment Guidebook published in response to the Weapon Systems Acquisition Reform Act (WSARA) Product Support Assessment and the Better Buying Power Initiative.
March 2023	Version 1	Major changes to this update - Renamed ILA Guidebook (formerly LA Guidebook). Updated for statutory, policy, and other fact-of-life changes.
		Removed service specific content to give services ability to tailor assessment criteria to meet their unique requirements.
		Added Sustainment Review (SR) information. Moved Post-Initial Operational Capability (IOC) assessment content to a stand-alone appendix.
		Updated IP section within Tech Data
		Moved HSI criteria from 10.1 to Design Interface 2.4 in the main ILA checklist and 10.5 to Design Interface 2.3 in Post-IOC ILA checklist to better align to PSM Guidebook breakdown structure for the IPS Elements.

INTRODUCTION

Purpose: An Independent Logistics Assessment (ILA) is the analysis of a program's product support planning. It is conducted by an independent and impartial team of Subject Matter Experts (SMEs) not directly associated with the program being assessed. An ILA is not a compliance audit, but an effective and valid assessment of the program office's product support strategy, as well as an assessment of how well this strategy will lead to successfully fielding, operating and sustaining a system at an affordable cost.[1] As part of the ILA, statutory, regulatory, and Component-required documentation is reviewed and assessed for completeness and compliance prior to the acquisition decision point or Milestone (MS) decision. The focus is on product support outcomes as identified by the product support strategy, as well as identifying features that are likely to drive future operating and support costs, changes to system design that could reduce these costs, and effective strategies for managing these costs through a comprehensive review of the 12 Integrated Product Support (IPS) elements, along with Product Support Budgeting and Funding, and Environmental Safety and Occupational Health. It is important to conduct ILAs early enough in the program life cycle, when the design can be influenced, and with the intent to achieve effective and efficient weapon system capability and life cycle management. Re-assessing the program sustainment planning at each MS, and periodically thereafter as the design matures, is critical to fielding a sustainable system.

Use: The ILA report, with identified risks, provides senior decision makers, including the Milestone Decision Authority (MDA), critical information for support planning, resourcing, and executability. It assists leaders in making strategic trades within and across various programs. This is especially important as acquisition programs are becoming increasingly complex and integrated with other systems.

---

[1] For more information see ACQuipedia article "Independent Logistics Assessment"

Governance

Governing statute and policy includes Title 10 U.S.C. § 4325(b)(8) and DoDI 5000.91, paragraph 4.10 and paragraph 7.2b(1). These references provide direction and policy on when to conduct ILAs on all major weapon systems at MS B and C and the Full Rate Production (FRP) decision. The requirement to conduct ILAs for systems not identified by statute or policy is determined by individual Components. During sustainment, Title 10 U.S.C. 4325(b)(10) requires periodic reviews of O&S costs of major weapon systems after such systems achieve initial operational capability. This enables the program to identify and address factors resulting in growth in O&S costs and adapt support strategies to reduce such costs. Finally, Title 10 U.S.C. 4323 requires Sustainment Reviews (SR) for covered systems beginning five years after achieving IOC and every five years thereafter. Table 1-1 gives general guidance on ILAs and SRs for each pathway within the Adaptive Acquisition Framework (AAF).

Table 1-1: General Guidance for ILAs & SRs within the AAF[2]

General Guidance		Adaptive Acquisition Framework (AAF) Pathway-Specific Guidance					
		UCA	MTA	MCA	Software	DBS	Services
ILA	Required for major weapon systems (ACAT I) prior to key acquisition decision points (including MS) (statutory) Conduct as above including the FRP decision After IOC, SRs satisfy the requirement for covered systems[3,4]	**	**	Conduct at MS B, MS C, and the FRP decision	Value Assessments will be performed annually (DoDI 5000.87, 3.1e and 3.3b(12))	Functional Lead and PM continue periodic assessments during capability support phase (DoDI 5000.75, 4.2e(1)(c))	Not required for Services not associated with a DoD system Periodic assessment is conducted as part of Step 7, "Manage Performance" (DoDI 5000.74, 4.5)
SR	Conduct for covered systems beginning 5 years after IOC, and repeat every 5 years until end of service date (statutory)	**	See Foot note[5]	Conduct for covered systems (ACAT I) in conjunction with revalidating PSBCA & updating LCSP	Not required for non-covered, stand-alone systems	Not required	Not required

**No pathway-specific guidance in addition to general guidance

---

[2]Refer to DoDI 5000.02 for more information on the AAF.
[3] DoDI 5000.91(7.2 b(2)(a)) states: "For covered systems the SR process is used to satisfy the requirement to conduct ILAs after initial operating capability is achieved."
[4] The definition of Covered System is included in Title 10 USC § 4324d(5).
[5] Required for MTA systems meeting the covered system funding threshold

In this Guidebook:

- Process for conducting ILAs
- Criteria for assessing a program during MS B, MS C, and FRP decision
- Reporting requirements
- Separate appendix covering recommended activities associated with post-IOC assessments that may be used at the discretion of the military Components

The ILA should be conducted by SMEs not assigned to the program being assessed, in accordance with Title 10 U.S.C. § 4325. An independent approach to an ILA is key to an objective evaluation of the system's supportability profile. This guidebook was developed with this independence in mind, as such an assessment mitigates the risk of bias during analysis and reporting. If an independent assessment is not feasible, the responsible program management office should certify to the MDA and other stakeholders an equivalent alternative assessment, conducted with maximum focus on a structured, objective, and transparent analysis.

Each Component may develop their own implementation processes and guidance to meet their unique requirements.[6] This guidebook does not supersede platform-, Component-, or Service-specific requirements. During acquisition, there are several other assessments, reviews, and test events between MS, including the Independent Technical Risk Assessment (ITRA) and Technical Reviews (TRs)[7]. These may be considered when scheduling ILAs, since information from these events can complement the ILA and provide valuable information for use by the ILA team.

For Joint programs, the lead Service should consult with other participating Service(s) in the preparation for and conduct of an ILA. This consideration includes selection of ILA team members and other relevant factors.

How ILAs Inform Milestone Decisions

The earlier a program office identifies product support issues and corrects them, the more potential there is for cost savings and avoidance. Cost benefits include improved use of manpower, reduced training expense, reduced maintenance time, and improved user acceptance– all of which decrease overall program costs while delivering improved operational availability and performance. Improved design trade-off decisions can also reduce life cycle costs and decrease the need for redesigns and retrofits.

Addressing factors such as Human Systems Integration (HSI)[8] or system design from the earliest stages of acquisition and throughout the acquisition process, regardless of acquisition pathway, can help a program realize Total System Performance[9] and Total Ownership Cost benefits. For example, during a review of ship manpower, the lead Service noted that the design did not reflect crew size for the appropriate number of officer and enlisted berthing. Had this been identified after ship construction, the cost and schedule impacts would have been significant. This is an

---

[6] For information on and links to Service-specific ILA instructions, pamphlets, and handbooks, see DAU Article: "Independent Logistics Assessment."

[7] DoDI 5000.88 para 3.5(a) and (b).

[8] For more information on the seven domains with Human Systems Integration, see DoDI 5000.95 and the HSI Guidebook.

[9] See HSI Guidebook for more information

example of a trade-off analysis within the manpower, personnel, and habitability domain which, when remediated earlier in the acquisition process, reduces total ownership costs.

Another example involved the integration of an aircraft and ground vehicle system. The lead Service identified integration issues early in the design phase, finding that the system and its elements were not compatible with the strategic lift platform from which they were planned to be deployed, if implemented. This included insufficient clearance for height and width and insufficient power requirements to support maintenance actions. There was also insufficient design of the predictive logistics system, which would have prevented the system from carrying out its mission once deployed. These issues resulted in senior leadership reviewing the design and implementing corrective actions.

While the above case issues are relatively straightforward to quantify in terms of costs incurred if not corrected, some issues with even greater cost impacts are found only by thorough analysis. Such results may suggest the program will not be able to achieve planned supportability thresholds. For example, several sampled ILAs found that reliability analysis was not conducted to support maintenance planning decisions (i.e., sparing levels, manpower determinations). Data from reliability testing indicated the program would not be able to meet the required reliability thresholds. Other analyses[10], such as maintenance task analysis, operator task analysis, and diagnostic analysis, while key to design and supportability decisions, may not always be completed, may be deferred, or may show the system will not be supported as planned. While "findings" are typically viewed in a negative light, they are intended to help the program in a positive manner, identifying issues that may need more senior-level attention to correct.

Guidebook Organization

The first part of this guidebook is divided into the four parts or sections of the ILA process, as shown in the graphic below. The four parts include a total of 14 steps. Each step provides detailed guidance to the program and ILA team on conducting, assessing, reporting, and closing the ILA. The remainder of this guidebook provides information to assist in the ILA process, including instructions on assessing risk, writing the final report, and using the ILA checklist.

---

[10] See relevant ACQuipedia article "Product Support Analysis"

Figure 1-1: ILA Guidebook Organization

Planning & Organizing	Conducting the Assessment	Assessing & Reporting Results	Resolving Findings
Step 1: Select Team Leader & Team Members	Step 5: Conduct Opening Meeting	Step 11: Draft Report	Step 14: Corrective Action & ILA Closure
Step 2: Conduct Pre-Assessment Meeting	Step 6: Review Requirements & Capabilities	Step 12: Issue the Final Report	
Step 3: Announce ILA	Step 7: Review PS Documentation & Planning	Step 13: Issue Product Support Certification	
Step 4: Deliver Documentation	Step 8: Review Contractual Documentation		
	Step 9: Review IMP/IMS		
	Step 10: Write & Compile Findings		

1 PLANNING AND ORGANIZING

1.1 Objective

The objective of this section is to ensure the required preparation takes place in sufficient time to properly initiate the ILA.

1.2 Timing

ILAs should be conducted in accordance with Title 10 U.S.C. § 4325 and DoDI 5000.91 which directs an ILA prior to each required MS or decision point to provide senior leadership with the ILA results and certification. For ACAT ID and special interest programs with an ILA completed to support MS B, MS C, and the FRP decisions, the certification should be provided to the Deputy Assistant Secretary of Defense for Product Support (DASD(PS)) at least 30 days prior to the MS or decision point. Services should provide guidance on certification of ACAT 1C and below. The report should be completed and distributed in accordance with Component directives.

1.3   Process

Figure 1-2: ILA Process, Steps 1-4

| Step 1 Team Leader: Select Team Leader & Team Members | → | Step 2 Team Leader: Conduct Pre-Assessment Meeting | → | Step 3 PEO/SYSCOM: Announce ILA | → | Step 4 Program Manager: Deliver Documentation |

Timeline for this process: 1-3 months
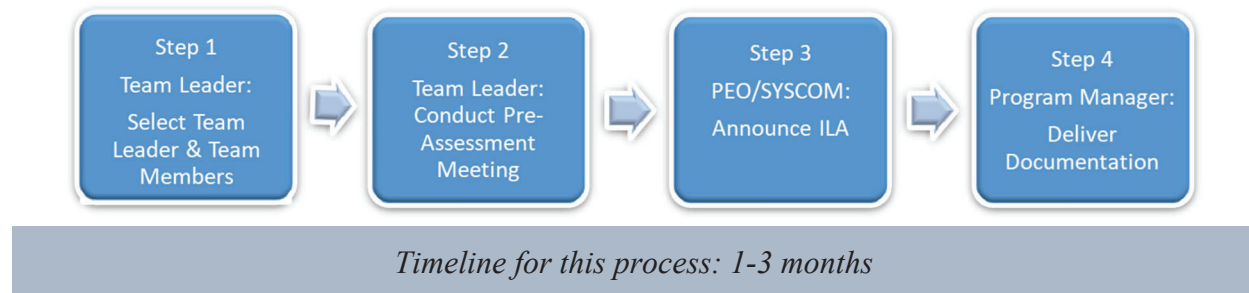
1.4   Process Description

1.4.1   Step 1: Select Team Leader and Team Members

As identified in Component implementation requirements, a qualified Team Leader is selected to establish and lead the assessment team. The Team Leader should be a Government employee who is Defense Acquisition Workforce Improvement Act (DAWIA) certified at the advanced tier in Life Cycle Logistics. Further selection criteria include the prospective Team Leader's experience with product support, along with ability to lead teams, and to interface effectively with senior leaders.

The potential for an objective assessment is higher when the Team Leader and team members are independent of the responsible program management office. The Components may define qualifications and independence in their own process guidance. Independence in this context may be generally defined as not active, nor has been recently active, in the management, design, test, production, or product support planning of the program being assessed, whether from the program office, supporting field activity, or as a member of a contractor activity. The Team Leader is also responsible for assembling and managing the assessment team and providing interface between the team and the program under review.

Note: The Team Leader needs to ensure that each member of the assessment team is proficient in the IPS knowledge element they are assessing.

1.4.2   Step 2: Conduct Pre-Assessment Meeting

The Team Leader conducts a pre-assessment meeting with the Program Manager (PM), Product Support Manager (PSM), or designee addressing the following:

- Confirm the responsibilities of the program office, Team Leader, and team members in support of the review.
- Confirm the purpose, scope, and timing of the review to include program ILA level of classification (e.g., CUI, Classified, Top Secret) to ensure all Operations Security (OPSEC) requirements are considered, planned for, and met and access to any required classified materiel is obtained.
- Coordinate the availability and location of product support and other program documentation.
- Discuss specific review procedures.
- Request a tailored listing of product support and program documentation be prepared prior to the assessment for distribution to team members.

- Clarify the assessment schedule of events and agenda.
- Identify the location of all assessment activities.
- Identify SMEs within the program to respond to ILA team member questions.
- Discuss the process of conducting the assessment, including program office responsibilities to develop a program brief.
- Discuss the issuance of draft and final reports.
- Discuss post-review procedures to include follow-up on identified issues.
- Discuss certification criteria and rating process.
- Discuss issuance of the ILA certification letter (this letter or memo certifies the program as either fully, conditionally, or not supportable).

1.4.3   Step 3: Announce ILA

Official correspondence announcing the ILA is defined by each Component, however, it is typically sent by either the Team Leader's organization, or a representative of the program office, Program Executive Office (PEO), or Systems Command (SYSCOM) of the system is being assessed. The announcement should include the dates of the ILA, scope, team member listing, document request list, meeting site, schedule, agenda, security and contact information. This correspondence is distributed to the participants and stakeholders as identified in Component policy and guidance.

1.4.4   Step 4: Deliver Documentation

The program office provides requested documentation to the ILA Team Leader as previously agreed to, typically at least 1–2 weeks before the opening brief. Documentation should reflect the most current version identified during the pre-assessment and subsequent meetings. The document request list provided in this guidebook outlines typical documentation that should be provided to the ILA team prior to the assessment. The scope and depth of product 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 and proprietary data issues. Team Leaders need to identify team member composition (including Government and contractors) to the program office to determine if there are sensitive and proprietary data issues, and to ensure non-disclosure agreements are completed, as required.

1.5   Process Deliverables

- Official ILA announcement containing:
  - o   Dates, scope, and classification level
  - o   Team member listing
  - o   Program Document Request List
  - o   Schedule, security, and contact information
- Program documentation

2   CONDUCTING THE ASSESSMENT

2.1   Objective

This section identifies the basic methodology for conducting a successful ILA when used in conjunction with the IPS Element Assessment Criteria, found in Section 7.

Periodic progress briefs should be conducted during the ILA, at a time agreed upon by the Team Leader and the program office representative. The purpose is to brief the program office of any issues noted during the assessment, and to resolve any remaining issues from previous progress briefs. During these briefs, the ILA Team Leader:

- Discusses new issues with the PM or authorized representative.
- Obtains the PM's or authorized representative's concurrence or non-concurrence on each finding, and in the final progress brief, the team leader's logistics certification recommendation.
- Follows up on open issues from previous progress briefs, as necessary.

2.2   Process

Figure 2-1: ILA Process, Steps 5-10

Planning & Organizing → Step 5 Conduct Opening Meeting → Step 6 Review Requirements and Capabilities → Step 7 Review Product Support Documentation & Planning ↓ Step 8 Review Contractual Documentation ← Step 9 Review IMP/IMS ← Step 10 Write & Compile Findings → Assessing & Reporting Results
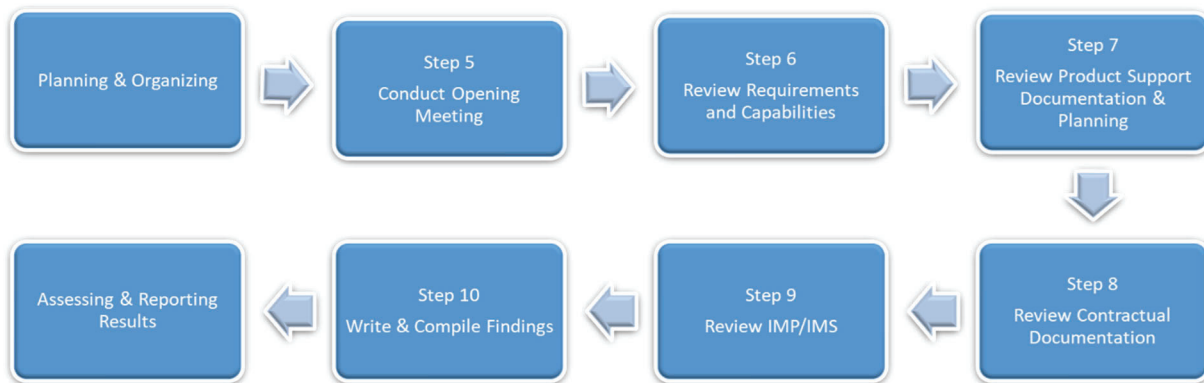
Timeline for this process from Step 5 through Step 10: 6-12 months; shorter for smaller programs

2.3   Process Description

2.3.1   Step 5: Conduct Opening Meeting

The opening meeting provides the ILA team with a foundation of information regarding program background, current status, and product support structure. It also provides a review of what is expected during the assessment. It is important to anticipate that assessment team members are not familiar with the subject program. As such, the opening briefs are the best opportunity to impart the needed information to understand the program in its proper context.

Note: The opening meeting is not the event for IPS element deep-dives, but rather the start of the assessment communication process.

The opening briefs may consist of the following:

Program Brief: The purpose of the program brief, normally presented by the PM or the Deputy PM, is to impart a basic understanding of the acquisition program. It can include:
- The general description of the system
- Phase within the AAF pathway

- A clear description of the scope of the program being assessed, including hardware/software elements
- Overview of the Acquisition Strategy (AS) including unique considerations and performance objectives, metrics, supportability requirements, contract status
- System interfaces, including modular system interfaces[11]
- Planned operational use of the system
- Current status of the program, including any pertinent history and program peculiarities
- Implementation of the Intellectual Property (IP) Strategy and Technical Data and IP Management Plan (technical data, computer software and rights for product support, configuration management approach or plans)
- Size of the program in terms of number of units and dollars
- Delivery schedules (end items and support elements)
- Program funding status
- Organizational structure of the program office
- Status of the program's documentation (outstanding items from the document request)
- Program office and logistics points of contact
- Identification of any developing or signed PM Warfighter Agreements and Performance Based Agreements (PBAs)
- Identification of any Memorandums of Agreement or Understanding (MOA, MOU), Expectation Management Agreements, etc. with participating or supporting organizations, including international or foreign military sales agreements

Product Support Brief: The product support brief, normally presented by the program PSM, addresses each of the areas of Product Support Management that are to be reviewed by the ILA team. At a minimum, it should address:

- Overview of the Product Support Strategy
- Structure of the product support organization
- Status of product support documentation (e.g., approval status)
- Product support enablers such as IP (Data rights and options, pursued or obtained) to support competition[12]
- Contracting approach to support sustainment of the system
- Results of any Business Case Analysis (BCA)
- Product support arrangements including support agreement strategies and status (e.g., extent of Performance Based Logistics (PBL) life cycle support (from industry or organic) and associated BCAs)
- Status of detailed supportability tasks, schedules, and MS tied to the Integrated Master Schedule (IMS) and Life Cycle Sustainment Plan (LCSP)[13] for each IPS element (a link to the LCSP Outline is contained in the footnote, below)
- Product support risk assessment, such as obsolescence risk
- Budgets (identifying the required, funded, and unfunded amounts) for each IPS element and related activities and capabilities
- Warranties

---

[11] DoDI 5000.88 para 3.7(a), Engineering of Defense Systems, November 18, 2020.
[12] Consider data needs and uses, appropriate rights, contract mechanisms, and current status of data deliverables and associated rights to support competition and implementation of the product support strategy.
[13] See "Life Cycle Sustainment Plan Outline" on the DAU Tool website for the most current outline.

- Any other special interest items
- Names and phone numbers of program office counterparts

Team Brief: The purpose of this brief, presented by the Team Leader, is to provide information to the ILA team members and program personnel on conduct of the review. This addresses the following:

- A review of the responsibilities of the Team Leader and team members
- Specific ILA schedule of events
- Instructions on documenting findings and desired format
- Guidance on determining the timeframe in which recommended actions need to be completed
- Post-review follow-up and certification procedures

2.3.2   Step 6: Review Requirements and Capabilities

Warfighter needs and capabilities form the basis for the support system performance requirements. ILA team members should familiarize themselves with not only the requirements but also the established metrics for assessing attainment of these Warfighter needs. Team members should understand and focus on Warfighter requirements when assessing the program using the individual assessment criteria.

Review the basic program requirements, including Performance Agreements; Key Performance Parameters (KPPs); and Key System Attributes (KSAs). Review Additional Performance Attributes (APAs); and Other System Attributes (OSAs). Obtain critical system parameters from the Initial Capabilities Document (ICD), Capability Development Document (CDD), or CDD Update, depending on the program phase. Review cost information from the Acquisition Program Baseline (APB), Acquisition Plan (AP), AS, Life Cycle Cost Estimate (LCCE) and Program Budget, Cost Analysis Requirements Description (CARD), and accompanying LCSP.

2.3.3   Step 7: Review Product Support Documentation and Planning

Review the AS, LCSP, Systems Engineering Plan (SEP), Test and Evaluation Master Plan (TEMP), and design specifications. Identify modular components and implementation of supportability plans to ensure the basic requirements have been translated into product support requirements. The LCSP should map to the primary support technical documentation and product schedules. It should be supported by the product support budget and funding; and it should be informed by appropriate predictive analysis and modeling, as required by Title 10 U.S.C. § 4324.

Note: Along with the document lists provided in this guidebook, another helpful resource is the [Adaptive Acquisition Framework Document Identification Site](#).

Determine if performance agreements, specified supportability KPPs, KSAs, APAs, and critical system parameters in the ICD, CDD or CDD update 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, R&M block diagrams, and R&M predictions. Other resources include development and operational test data; R&M and Built-In-Test (BIT) requirements in the contract design specifications; R&M analyses; and test results. If the RAM requirements and critical system parameters of the ICD, CDD or CDD update are not met, then the IPS elements need to be reassessed to determine what impact

the lower RAM numbers have on the supportability of the system. For instance, if the actual reliability value does not meet the stated threshold in the CDD, then the originally calculated requirements for spares may not be sufficient to meet user demand and should be recalculated.

If manpower is being reviewed, the manpower analysis may be at risk since it does not consider 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.

Review the primary and supporting documentation for each IPS element to ensure product support requirements are further detailed and required analyses have been performed to support the overall product support strategy. This includes a review of product support funding requirements for each IPS element in each Fiscal Year (FY) by appropriation, the amount funded, and any deltas between the two. Also consider the associated funding documents and exhibits to ensure funding requirements for each IPS element are appropriately identified, funding is available, and shortfalls are identified during the review. Assess whether each IPS element is funded in the year contractually required to produce the support deliverable in the correct timeframe, per the IMS.

Elements Requiring Review: The following 12 IPS elements require review during an ILA regardless of the support strategy. Assess Product Support Budgeting and Funding and Environment, Safety, and Occupational Health (ESOH) *separately* from the respective parent IPS elements of Product Support Management and Design Interface.

1. Product Support Management*
2. Design Interface**
3. Sustaining Engineering
4. Supply Support
5. Maintenance Planning and Management
6. Packaging, Handling, Storage, and Transportation
7. Technical Data[14]
8. Support Equipment (SE)
9. Training and Training Support
10. Manpower and Personnel
11. Facilities and Infrastructure
12. IT Systems Continuous Support
* Product Support Budgeting and Funding (part of Product Support Management)
** ESOH (part of Design Interface)

2.3.4   Step 8: Review Contractual Documentation

Review applicable contracts and ensure appropriate elements are identified and assessed for adequacy of supportability requirements. The review should include an assessment of:

- Supportability and related RAM requirements
- Required supportability, related RAM supportability tests and analyses, and the use of their results to impact design
- Compliance with critical completion and delivery dates

---

[14] FY23 NDAA Section 806 modifies Title 10 USC § 4324 to include a requirement for an "IP Management Plan for Product Support," which includes requirements for technical data, software, and modular open system approaches.

The solicitation package for the next phase, if available, can also be reviewed for adequacy to meet the requirements of the LCSP, ICD, CDD or CDD update (as appropriate) and other pertinent program documentation. This is critical for ensuring that planning is complete.

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

2.3.5   Step 9: Review Integrated Master Plan (IMP) and Integrated Master Schedule (IMS)

Review the IPS Element Assessment Criteria against the IMP and IMS. Review whether the tasks are reasonable and assess the likelihood of completion of each supportability-related task within the allocated schedule and manpower loading.

The program's IMS covers the schedule for all planned work to accomplish the Program Office's mission. Product support activities should be included in the program's IMS with appropriate linkages to all predecessor and successor tasking dependencies. The product support tasks for each IPS element should be planned, scheduled, and integrated with other program activities. The sequence and dependencies of one task upon another are assessed and included in determining schedule realism. The IMS timelines should be realistic and achievable within funding constraints when considering a bottom-up view of all required detail tasks and their inter-dependencies. The LCSP should contain the detailed Integrated Schedule (Product Support Schedule) for each IPS element for focused supportability management planning, testing, and implementation. The schedule should align with the program IMP and IMS.

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 sustainment plan is reviewed in context of the overall program schedule and the development MS. Product support schedules that are allocated from programmatic top-down requirements, however, may not be achievable within the allocated funding and manpower, especially when considering the Product Support Management team's ability to influence the design for optimized supportability. The program IMS identifies requirements for each product support factor, based on a bottom-up task analysis. Otherwise, product support efforts typically become focused on documenting the design without influencing the design.

The schedule and the detailed product support tasks developed and integrated into the overall program IMP should be realistically achievable and consider the sequence of all dependent and interconnected tasks to minimize program risks, regardless of pathway chosen. All tasks feeding into these MS and assessments should meet at those MS and assessment nodes. The critical path(s) should be reviewed to identify any product support tasks and supportability testing, followed by identifying the actual start or end dates and review progress of each task against its schedule, including the timeliness of the product support tasks. Schedules should reflect tasks, such as: prognostics or diagnostics; maintainability analyses and verifications; Failure Mode, Effects, and Criticality Analysis (FMECA); special test equipment identification; and development of the embedded training capabilities.

Note: Optimistic, success-oriented schedules that do not reflect realistic conditions may mask program cost growth and schedule delays.

2.3.6　Step 10: Write and Compile Findings

ILA team members should conduct their review using the IPS element assessment criteria contained in Section 7 of this guidebook, Components' ILA criteria, and any supplemental command, such as Life Cycle Management Command (LCMC), or SYSCOM, policy or criteria. Each Component may have a custom methodology or process for conducting assessments and documenting any noted issues.

A well-written finding identifies the criteria being evaluated (with references requiring the criteria wherever possible), clear description of the finding, impact if not corrected, recommended action(s), and whether the program representative concurs or does not concur with the finding(s). A summary of the results of each IPS element assessed, including all findings, is a best practice to include in the report as it provides the decision makers with an overall status of each IPS element. The report can also include best practices or other positive findings, if applicable. The Team Leader should review all issues or discrepancies turned in by the team members for accuracy to ensure the proposed rating given by the team member is commensurate with the rating criteria. Further details on ILA Report content including required ILA Findings and Recommendation content, ILA Finding Grading Guidelines, and suggested report format can be found in Section 5 and 6 of this guidebook.

2.4　Process Deliverables

- Draft Findings
- Draft Recommendations

2.5　Assessment Criteria

The assessment criteria contained in Section 7 of this guidebook, as well as the individual Component's requirements, should be used as a guide to assess the planning and status of the supportability program for the system under review, regardless of the support strategy (e.g., organic, PBL, traditional transactional support). These criteria are derived from DoD policy and best practices, both of which have been proven to produce optimal supportability. They are not Component or platform specific. Component, platform, or SYSCOM or LCMC unique requirements may be used to supplement or tailor these criteria. Additionally, varying program requirements and acquisition strategies may require further tailoring of the criteria, as they may not always fit program unique requirements.

As stated in the preceding paragraph, these criteria are used to assess support planning and execution for a program, not just the functions that fall under the purview of the PSM. The ILA is not just a logistics assessment; it is a program-wide assessment of how the program has planned and executed product support for the system being acquired and sustained. Integration between product support and program management, engineering and technical management, test and evaluation, business financial management and cost estimating, contracting, and other program disciplines is critical for proper support planning and execution, and the level of such integration is assessed during an ILA. Many disciplines, organizations, and stakeholders affect the ability of the PSM to execute a successful supportability program (e.g., conflicting requirements, lack of funding, inadequate design), and those need to be considered as part of the assessment with any negative impacts documented.

3   ASSESSING AND REPORTING THE RESULTS

3.1   Objective

This section addresses the preparation of the ILA report, coordination with the program office, and submission of the report to the cognizant PEO. The report serves as the basis for the product support certification decision.

3.2   Process

Figure 3-1: ILA Process, Steps 11-13
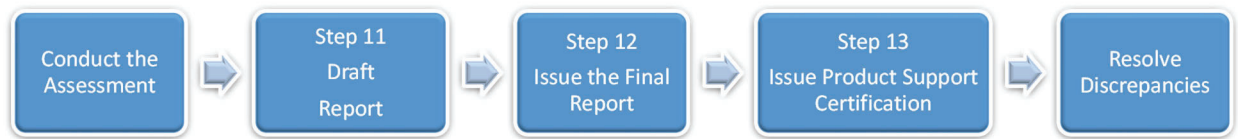
Timeline for this process from Step 11 through Step 13: 1-2 months

3.3   Process Description

It is the responsibility of the Team Leader to oversee development of the draft report, according to the following process.

3.3.1   Step 11: Draft Report

The Team Leader and team members (with appropriate communication with the program office):

- Document all findings and recommendations, compiling them into a report using the respective Component's internal formats or processes.
- Brief and provide the PM, PSM, and other key program office personnel the draft results of the assessment to ensure the content of the report is accurate and understood. This typically includes a discussion of the following:
  - Assessment overview
  - Summary of each deficiency
  - Rating for the program, including individual assessments
  - Any follow-up discussions on issues requiring action plans
  - Coordination of the final report prior to formal issuance
- Ensure findings describe the ILA Team's assessment of impact and recommended actions to resolve the deficiency, and include an appropriate Green, Yellow or Red Rating. Ratings can be defined in each Component's guidance, but rating criteria for individual findings, as well as the overall program rating, should be translatable to the DoD Rating Criteria defined in Section 5, ILA Rating Criteria, for reporting to DASD(PS).

3.3.2   Step 12: Issue the Final Report

The final report is distributed in accordance with Component or Service policy. For Joint programs, a courtesy copy of the ILA report should also be provided to the affected PEO and Component or Service Acquisition Executive, as appropriate.

3.3.3 Step 13: Issue Product Support Certification

Upon receipt of the final report, the cognizant certification authority, as identified by each Component, certifies the report. The certification for ACAT ID and special interest ILAs should be provided to DASD(PS) 30 days prior to a MS or decision point and should contain the reporting content identified in Section 6, ILA Report Content. Certification categories are: Ready to Proceed (Green), Conditionally Ready to Proceed (Yellow), and Not Ready to Proceed (Red).

3.4 Process Deliverables

For each completed ILA, the Team Leader provides the ILA report and a proposed certification memo for the certification authority to review and issue. The completed package should include:

- ILA report, with associated Plan of Action and Milestones (POA&M) for corrective actions
- Product support certification letter or memorandum

4 RESOLVING FINDINGS

4.1 Objective

The objective of this part of the process is to ensure the findings identified in the assessment report are adequately resolved. This is one of the most important tasks in the entire ILA process. If issues that result in a finding in planning, funding, design, or execution are only documented and not resolved, the end user may not receive the necessary program support required to sustain the system effectively and affordably. To ensure discrepancies are adequately resolved, the organization responsible for tracking findings through closure (typically the ILA Team Leader in conjunction with the PSM) should remain engaged with the program office until the completion of each deficiency can be verified.

4.2 Process

Figure 4-1: ILA Process, Step 14
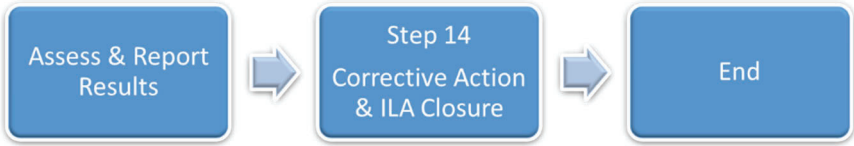
4.3 Process Description

4.3.1 Step 14: Corrective Action and ILA Closure

An ILA finding is closed when all corrective actions have been satisfactorily completed and verified per component guidance. Final corrective action status and ILA closeout should be documented and reported to Component leadership when completed. Responsibility for implementing and completing corrective actions remains with the PM. Written status of the

actions in the POA&M are provided to the organization responsible for tracking corrective actions—typically, the owning PEO or designee, and potentially a life cycle logistics functional office conducting trend analysis of ILA results. The regularity of these status reports should be agreed between the program office and the PEO or functional office, as appropriate.

4.4 Summary List of ILA Process Deliverables

- Periodic status reports
- Memo closing out the ILA to the PM, MDA, and DASD(PS), as appropriate

5 ILA RATING CRITERIA

5.1 Objective

The objective of this section is to provide rating and certification criteria for the program being assessed.

5.2 ILA Rating Process

The following provides guidance for rating individual findings and rolling up the overall findings, including:

- **Element Rating Criteria (Table 5-1)**: Used to rate individual issues and each element.
- **Overall Program Rating and Certification Criteria (Table 5-2)**: Used to provide the overall program rating as well as certification for the program. The overall program rating typically would match the program certification; however, these can differ if the Component certification authority identifies urgency factors or does not concur with the recommendations.
- **ILA Risk Matrix (Figure 5-1)**: Used to graphically represent the program's overall product support risk in accordance with the overall rating. The matrix provides a medium useful to present other programmatic risks—such as performance, cost, and schedule— in context with product support risk during reviews for the MDA. The ILA Consequence Decision Table (Table 5-3) and Likelihood Decision Table (Table 5-4) are used together to provide an overall rollup of findings into the risk cube.

Table 5-1: Element Rating Criteria

Grade	Cost	Schedule	Performance
Minor (Green)	● Minor or no impact to product support	● Minor or no impact to product support	● Minor or no impact to product support
Moderate (Yellow)	● Some product support impact; re-allocatable within program ● Funding is not available when needed; moderate impact to product support	● Some impact to product support tasks; internally adjustable with no milestone changes ● Delays in product support tasks impacting ability to meet milestones, but workarounds exist such that impact is minimal	● Some impact to readiness, but can be remedied by program ● Product Support 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 product support ● Product support cannot be achieved within the current funding profile	● Delays in product support tasks with significant milestone impact ● Delays in product support tasks with major impact to the ability to meet milestones or establish support capability	● Significant degradation below requirements thresholds ● Product Support performance requirements cannot be met

Table 5-2: Overall Program Assessment & Certification Criteria

NOT CERTIFIED (Red)	CONDITIONALLY CERTIFIED (Yellow)	CERTIFIED (Green)
A program is not certified 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 work arounds 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 conditionally certified.	A program is conditionally certified 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 certified.	A program is considered certified 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.

Figure 5-1: Blank ILA Risk Matrix
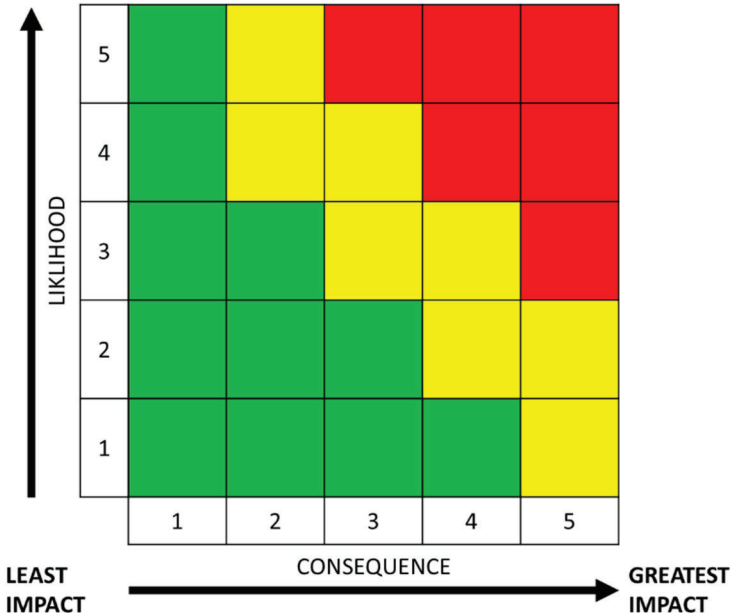
Table 5-3: Consequence Table - Impact on Program

Level	Cost	Schedule	Performance
1	Minor or no impact to product support	Minor or no impact to product support	Minor or no impact to product support
2	Some product support impact; re-allocatable within program	Some impact to product support 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 product support	Delays in product support tasks impacting ability to meet milestones, but workarounds exist such that impact is minimal	Product support 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 product support	Delays in product support tasks with significant milestone impact	Significant degradation below requirements thresholds
5	Product support cannot be achieved within current funding profile or not identified	Delays in product support tasks with major impact to the ability to meet milestones or establish support capability	Product support performance requirements cannot be met

Table 5-4: Likelihood Table

Level	Likelihood
1	Not Likely
2	Low Likelihood
3	Likely
4	Highly Likely
5	Near Certainty

6   ILA REPORT CONTENT

6.1   Objective

The objective of this section is to provide the reporting information and format for those programs that must provide information on their ILAs to DASD(PS). For programs not reporting to DASD(PS), information should be made available to the cognizant authority, as required by Component policy.

6.2   Process

The Component's designated authority certifies the results of the ILA in accordance with their processes and this guidebook. This is typically a one-page memorandum that certifies the program as Ready to Proceed (Green), Conditionally Ready to Proceed (Yellow), or Not Ready to Proceed (Red). The certification is based on the ILA Team Leader's recommended rating, although the Component's certification authority can deviate from that rating by providing rationale for any deviation. The following information is provided by the ILA team to the Component's certification authority as an attachment. The report identifies the original rating provided by the ILA team and includes:

I. Introduction

- Program: *(Identify program)*
- ACAT: *(Identify acquisition category)*
- Next MS or Decision Point: *(Identify next MS or Decision Point and date)*
- MDA: *(Identify the MDA)*
- PEO: *(Identify the PEO code or designation)*
- PM: *(Identify the program code or designation)*
- System Description: *(Brief overview of the system being addressed during this decision)*
- Support Concept: *(Brief overview of the product support concept)*
- Purpose of ILA Review: *(What MS or events are being addressed)*
- Scope of ILA Review: *(Identify the configuration of the system(s) being addressed)*
- Review dates: *(Start and finish of assessment)*

II. Summary of ILA

Provide a rating summary of each element in a table or similar format, as shown in the Table 6-1 populated with example ratings.

Table 6-1: Notional Product Support Element Rating Summary[15]

Integrated Product Support Elements	Rating (example)
Product Support Management*	Green
Design Interface*	Yellow
Sustaining Engineering	Yellow
Supply Support	Green
Maintenance Planning and Management	Green
Packaging, Handling, Storage, and Transportation	Green
Technical Data	Yellow
Support Equipment	Green
Training and Training Support	Green
Manpower and Personnel	Red
Facilities and Infrastructure	Yellow
IT Systems Continuous Support	Green
* Product Support Budgeting and Funding	Green
* Environmental, Safety, and Occupational Health	Green

III. Overall Program Rating and ILA Risk Matrix

Use the ILA Risk Matrix to identify the overall risk rating of the program. Figure 6-1 shows a notional matrix with overall risk rating for the program being assessed.

Figure 6-1: Notional Risk Matrix

---
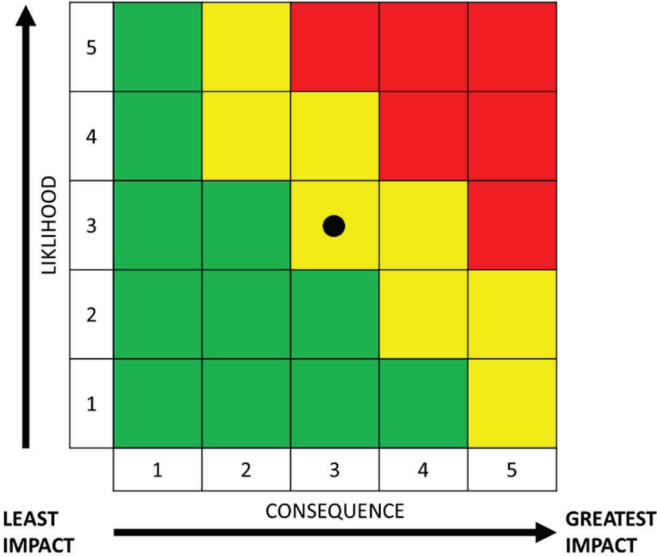
[15] Product support budgeting and funding as well as ESOH are subcomponents of product support management and Design Interface. These subcomponents typically require subject matter expertise specific to these areas to conduct the assessment.

IV. Summary

Provide a summary of individual red and yellow issues. This should include a brief description of the issue with the proposed corrective action and timeline for completion. It can provide any additional detail needed to summarize the overall health of the program and the associated risks carried forward and how they will be addressed. The report also may include a description of any positive findings or best practices that are significant enough to be highlighted.

7 IPS ASSESSMENT CRITERIA FOR MS B, MS C, and FRP

The objective of this section is to provide the assessment criteria used to conduct an ILA. The checklist aligns with the IPS elements defined by the DoD. References are included in parentheses, as appropriate.

Note: Stakeholder engagement is important to ensure SMEs are used for each of the IPS elements. Program Support Budgeting and Funding and ESOH should be broken out separately from their parent support element. Budgeting and funding is normally aligned with IPS element Product Support Management, and ESOH is aligned with Design Interface in the DoD Product Support Manager Guidebook. These are separate focus areas in this guidebook since they typically require a SME specific to that area to conduct the assessment

The IPS Element Assessment tables provide standard assessment criteria, which are neither platform nor system specific. Rather, these criteria are critical evaluation factors that may be further defined in respective Component guides and identify Component-specific or platform-unique requirements. Individual ILA team members should conduct their assessments using these criteria and any other Component, SYSCOM, LCMC, or PEO specific criteria, as assigned by the ILA Team Leader.

The MS columns in the Assessment Criteria tables are marked to indicate the MS that the criteria apply to for a typical program, with program initiation at MS B or MS A for ships. The MS columns are marked by an I, IP, F, or U. Definitions for each are provided below.

Note: Since programs vary in their acquisition approach and strategy (e.g., programs entering at MS C or programs utilizing non-MCA pathways such as Middle Tier of Acquisition, Defense Business Systems (DBS)), the letters in the MS columns may vary and should be used as a guide and not a hard requirement.

- **I (Initiated):** The strategy and approach have been defined and documented in program plans to include the IMS and funding is identified in the appropriate funding documents. The activity or product is included in contractual documentation (Request for Proposal (RFP), contract, tasking orders, etc.).

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

- **F (Finalized):** The activity or product has been completed and is finalized and has resulted in approval or decision by the approving or decision authority. The activity or product may also be in a completed state but not approved if a pending decision or approval will not affect dependent decisions or activities and the effort is finalized prior to the MS.

- **U (Update):** The activity or product has been updated to reflect changes in statute, policy, or new data as the product or process matures.

- **Blank:** No activity required for this phase. For instance, if an activity does not begin until a later MS.

1.0 Product Support Management			
ASSESSMENT CRITERIA	**MS B**	**MS C**	**FRP**
1.1 Program Staffing			
1.1.1 The program office billets are filled with sufficient personnel with the required experience and training.	F	F	F
1.1.2 A PSM responsible for the management of supportability during acquisition and fielding is in place with the needed experience, training and education, and certifications. The PSM is an equal participant in the applicable decision-making forums to ensure program support is considered during design, development, production, and deployment.	F	F	F
1.1.3 Personnel have the appropriate level Defense Acquisition Workforce Improvement Act (DAWIA) Certification Tier commensurate with their tasking.	F	F	F
1.2 Management Planning			
1.2.1 Processes to plan for and 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 which should be updated in accordance with DoDI 5000.91 and component specific documents. ***Assessor Note: Section 8 of this guidebook should be consulted to review documents that affect supportability. These documents (as well as program plans) should be stable and mature enough that the document can be approved by the MS. However, an unsigned document does not necessitate a finding.***	F	U	U
1.2.2 Program requirement documents quantify a threshold and objective range for each support and sustainment related performance parameter, with measurement metrics for each. Each parameter is associated with its programmatic resource cost to plan and execute across the projected life cycle. Supportability and Sustainment Key Performance Parameters (KPPs), Key System Attributes (KSAs), and Additional Performance Attributes (APAs) are defined consistently across documents. These include Joint Capabilities Integration and Development System (JCIDS) Documents, AS, LCSP, contractual documentation, and System and Subsystem Specification (SSS). (Per Chairman of the Joint Chiefs of Staff Instruction 5123.01I; Charter of the Joint Requirements Oversight Council and Implementation of the Joint Capabilities Integration and Development System, October 30, 2021; Manual for the Operation of the Joint Capabilities Integration and Development System, 2021)	F	U	U
1.2.3 Performance threshold values are on target or have been met for evaluation at IOT&E and thus on track for IOC. If not, a plan is in place to ensure they are met.	IP	F	F
1.2.4 A risk management program has been established. Product support program risks or issues, and mitigation plans have been identified and assessed. (DoD Risk, Issue, and Opportunity Management Guide, January 2017)	F	U	U

1.0 Product Support Management			
ASSESSMENT CRITERIA	**MS B**	**MS C**	**FRP**
1.2.5 Findings identified during previous ILA assessments; Technical Reviews (TRs) (e.g., Preliminary Design Review (PDR); Critical Design Review (CDR); Production Readiness Review (PRR)); program reviews; or testing that impact supportability planning have been corrected or an acceptable plan is in place to mitigate the deficiency. (DoDI 5000.88, Engineering of Defense Systems, November 18, 2020, para 3.5(a)), Technical Reviews)	F	F	F
1.2.6 A Systems Engineering Plan (SEP) has been developed in accordance with DoDI 5000.88 and DoD Systems Engineering Plan Outline, Version 4.0, September 2021. Specialty Engineering disciplines, including Reliability and Maintainability (R&M) engineering, System Safety, Corrosion Planning, and Human Systems Integration, and Supportability equities are synchronized to the relevant IPS elements and included and implemented during the engineering process.	F	U	U
1.2.7 A Security Classification Guide has been developed in accordance with DoDM 5200.45 as a required annex of the Program Protection Plan.	F	U	U
1.2.8 MOAs, MOUs, or other formal agreements have been developed between the program office, gaining command or platform, participating acquisition resource manager, user, (e.g., those identified in the LCSP or SEP), field activities, software support activities, etc. that define supportability requirements, administrative and personnel resources, funding, physical resources, and more. Examples include MOAs to a field activity to provide support, DoD activity to host a backup disaster recovery site.	I	IP	F
1.2.9 A standardization process or program is in place (and summarized in the AS) to reduce proliferation of non-standard parts and equipment and optimize parts commonality across system designs. The necessary technical data and software deliverables (e.g., operations data and form, fit, and function data) and license rights required to implement standardization, have been requested via a contract and delivery requested in a Contract Data Requirements List (CDRL), using GEIA-STD-0007 and DID, DI-SESS-81758 as directed. Tailoring of standardization programs occurs using analyses conducted in accordance with TA-STD-0017A and MIL-HDBK-502A." (Title 10 U.S.C. § 2451, Defense Supply Management and DoD Manual 4120.24, Defense Standardization Program Procedures, October 15, 2018)	IP	F	U
1.2.10 If a warranty is used: A cost-benefit analysis is conducted to determine the appropriate spares/warranty strategy. (Federal Acquisition Regulation (FAR) 46.7, Warranties, Defense Federal Acquisition Regulation Supplement (DFARS) 246.7, Warranties, September 29, 2022 and DoD Warranty Guide, October 30, 2020)	I	IP	F
1.2.11 If a warranty is used:	IP	F	U

1.0 Product Support Management			
ASSESSMENT CRITERIA	**MS B**	**MS C**	**FRP**
a written warranty plan has been developed that includes tracking and assessment of essential performance requirements as identified in the DoD Warranty Guide. (FAR 46.7, DFARS 246.7 and DoD Warranty Guide, October 30, 2020)			
1.2.12 A fielding and bed-down <u>schedule</u> has been developed.	IP	F	U
1.2.13 A fielding and bed-down <u>plan</u> has been developed. See example "[Materiel Fielding Plan (MFP)](#)" on the DAU website.	I	IP	F
1.2.14 Fielding authorizations have been obtained, including required certifications and approvals.		IP	F
1.2.15 Interim support planning for all required program support is in place.	I	IP	F
1.3 Business Case Analysis			
1.3.1 Product Support Business Case Analyses (BCAs) are conducted and revalidated*, per Title 10 U.S.C. § 4324; DoDI 5000.91; and the DoD Product Support BCA Guidebook. The Product Support BCA Guidebook identifies the following areas to be covered: • Executive Summary • Introduction • Desired Outcomes and Requirements • Assumptions and Methods • Alternatives • Mission and Business Impacts • Risk Analysis and Mitigation Plans • Sensitivity Analysis • Conclusion • Recommendations * The program will revalidate the business-case analysis performed in support of the PS Strategy prior to each change in the strategy or every five years, whichever occurs first.	F	F	U
1.3.2 Sufficient cost data is included to validate BCAs with actual costs during in-service reviews.	I	IP	F
1.4 Performance Based Logistics (PBL)			
1.4.1 System level performance metrics have been established between the Warfighter and the PM, and directly support KPPs. Metrics are in synchronization with the scope of support provider's responsibility. (DoDI 5000.91 and JCIDs manual)	I	F	U
1.4.2 PBL strategies have been considered for all support areas (including Technical Assist, Support and Test Equipment (S&TE), calibration requirements, training) which	I	IP	F

1.0 Product Support Management			
ASSESSMENT CRITERIA	**MS B**	**MS C**	**FRP**
incentivize performance, are metrics-based, and consider legacy systems. (DoDI 5000.91; DoD Performance Based Logistics Guidebook.)			
1.4.3 Does the PBL strategy support and maximize competition?	I	IP	F
1.4.4 A methodology has been established to collect supportability performance metrics. These metrics are defined and are measurable. Metrics should: • Be linked to system KPPs, KSAs, APAs, and OSAs • Incentivize system reliability and use of common DoD Components • Motivate desired long-term behavior • Be understood and accepted by all stakeholders • Be assessable and verifiable by system stakeholders	I	IP	F
1.4.5 Supportability performance metrics are collected and assessed.	I	IP	F
1.4.6 Performance-based options that range from single Product Support Integrator (PSI) to PBL opportunities with major sub-system and component Original Equipment Manufacturers (OEMs) have been evaluated. Has competition been considered and incentivized at the sub-system level to drive down cost?		IP	F
1.4.7 Work agreement or contract performance work statement includes required metrics, which are tailored to the unique circumstances of the PBL arrangements, for evaluating required performance results in support of CDD and PBA performance parameters. Metrics support overall DoD measures, including Operational Availability (A_o), Materiel Availability (A_m), Reliability, Maintainability, O&S Cost.		IP	F
1.4.8 Exit criteria have been established in the performance-based contracts to ensure the efficient transfer of performance responsibility back to the Government or another industry PSI or PSP upon completion or termination of the PBL contracts. Provisions are included 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	F
1.4.9 A support performance data collection system is planned or in-place and operating; trends are monitored and fed back for appropriate corrective actions. A corrective action process is defined if PBL performance does not meet Warfighter agreement thresholds.	I	IP	F
1.5 Schedule			
1.5.1 A program IMP has been developed that includes product support criteria that support program MS as specified within program requirements documents (ICD/CDD/CDD update). More information can be found in Guide to Program Management Knowledge, Skills, and Practices.	U	U	U

1.0 Product Support Management			
ASSESSMENT CRITERIA	**MS B**	**MS C**	**FRP**
1.5.2 A program IMS has been developed that: • Is reflective of the program IMP • Contains detail on program support activities for both Government and contractor, to include precursor and predecessor relationships • Is detailed for the current phase of the program's life cycle • Reflects tasks identified in the LCSP *Assessor Note: This is not a contractor delivery and activity schedule.*	U	U	U
1.6 Contractual Package			
1.6.1 The respective contractual package includes the logistics product data aligned with GEIA-STD-0007 (if directed) and deliverables aligned with events that enables the supportability efforts to be completed. Appropriate CDRLs and rights are included for all IPS activities. The package reflects the supportability efforts to be completed by the contractor as identified in program and program support planning documentation. *Assessor Note: When reviewing the contract package, ensure tasks or requirements identified as options have been exercised.*	F	F	F
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
1.6.3 Supportability requirements are flowed down to the appropriate specifications.	IP	F	F
1.6.4 Contracts include metrics for tracking and assessing contract performance.	F	F	F
1.7 Configuration Management (CM)			
1.7.1 Requirements are established ---configuration identification, control, status accounting, Configuration Control Board (CCB) processes and membership (to include product support participation), waivers or deviations, engineering changes, verification and audit functions--- for hardware, software, and product and technical data. These requirements should be reflected in an approved Government and contractor Configuration Management Plan (CMP). References should be consulted for additional information and best practices relating to CM. (DoDI 5000.88, para 3.4.c, MIL-HDBK-61B, Military Handbook, Configuration Management Guidance, April 7, 2020; SAE-GEIA-HB-649A, Configuration Management Implementation Guide)	F	U	U
1.7.2 Appropriate Configuration Audits have been conducted. * Functional Configuration Audit (FCA) are conducted after Development Test and prior to MS C, typically coinciding with System Verification Review (SVR) and PRR.	IP	*	*

1.0 Product Support Management			
ASSESSMENT CRITERIA	**MS B**	**MS C**	**FRP**
Physical Configuration Audit (PCA) are conducted prior to Full Rate Production (FRP).			
1.7.3 The appropriate baselines (e.g., functional, allocated, and product) have been established by the appropriate technical review events. *Functional Baseline at System Functional Review (SFR), Allocated Baseline at PDR, initial Product Baseline at CDR, final Product Baseline at PCA	IP	*	*
1.7.4 The status of configuration change activity and approvals, and the version descriptions for software Configuration Items (CIs) under development and installed in hosting locations are tracked within the Configuration Status Accounting (CSA) function within the program's CM processes per the CMP.	I	IP	F
1.7.5 The CSA 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 of any replaceable components within the product along with the associated product and technical data.	I	F	U

2.0 Design Interface[16]			
ASSESSMENT CRITERIA	**MS B**	**MS C**	**FRP**
2.1 Parts and Materials Selection			
2.1.1 Design guidelines for the contractor are provided that optimize supportability and maintainability of the system. The degree of adherence to the design guidelines for supportability and maintainability should be assessed at PDR and CDR. (DoDI 5000.91 and DoDI 5000.88)	F	U	U
2.1.2 System, subsystem, and component specifications reflect the Operational Mode Summary and Mission Profile (OMS/MP) for environmental, functional, and logistics use profiles.	IP	F	U
2.1.3 A Modular Open Systems Approach (MOSA) has been implemented to the maximum extent practicable. (DoDI 5000.88, Engineering of Defense Systems, November 18, 2020)	IP	F	U
2.1.4 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. (Title 10 U.S.C. § 2451)	IP	F	U
2.1.5 Interoperability between other DoD or allied systems has been considered.	IP	F	U
2.1.6 Predicted failure rates have been verified and used to estimate annual operating costs.	IP	F	U
2.1.7 For applicable programs, the process for establishing and managing critical items or critical safety items lists has been developed and follows the process delineated in the appropriate Component instructions. (DoDI 4140.01, DoD Supply Chain Materiel Management Policy, March 6, 2019)	IP	F	U
2.1.8 For applicable programs, provisions for identifying Critical Safety Items (CSI), Critical Application Items (CAIs), and non-critical items have been identified. (DoDI 5000-Series Pathway Instructions)	F	F	F
2.1.9 For applicable programs, CSIs, CAIs, and non-critical items management reporting requirements are incorporated in the Contract Statement of Work (SOW) and program office tasking. (DoDI 4140.01, March 6, 2019)	IP	F	U
2.1.10 For applicable programs, a preliminary list of CSIs, CAIs, and non-critical items has been reconciled with latest Logistics Product Data (LPD) data and submitted.	I	F	U

---

[16] Note: HSI factors are included in 10.0, Manpower and Personnel

2.0 Design Interface[16]			
ASSESSMENT CRITERIA	**MS B**	**MS C**	**FRP**
2.1.11 For applicable programs, the CSI or CAI lists 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
2.1.12 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
2.2 Testability and Diagnostics			
2.2.1 Preliminary Built-In-Test (BIT) and testability analysis is completed by PDR. (Manual for the Operation of the JCIDS System, 2021; DoDI 5000.89, Test and Evaluation, November 19, 2020)	IP	F	U
2.2.2 Detailed BIT and testability analysis is completed by CDR, and BIT effectiveness is validated with tests.		F	U
2.2.3 Contingencies for system selection or RAM or supportability design changes are considered when preliminary RAM thresholds are deemed unachievable.	I	IP	F
2.2.4 The BIT and testability concept is defined within the operation concept and the maintenance concept for all levels of maintenance.	IP	F	U
2.2.5 Design analyses (e.g., fault tree, FMECA) have been used to determine test point requirements and fault ambiguity group sizes.	IP	F	U
2.2.6 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.	I	IP	F
2.3 Reliability, Availability, and Maintainability (RAM)			
2.3.1 Product support elements are traceable to the following factors of the OMS or MP. (CJCSI 5123.01I and Manual for the Operation of the JCIDS) • Environmental profiles include the systems production, operation, and support environments with their associated timelines. The operating and non-operating requirements may include temperature, vibration, electromagnetic interference, electrostatic discharge, humidity, altitude, salt spray, fog, nuclear, chemical and biological, sand or dust, foreign object damage, production contaminants. (Ref: MIL-STD 810) • Functional profiles are prepared and detailed to the subsystem, assembly, and part levels as the system design progresses. They describe the system functional requirements and their associated mission and life cycle timelines.	F	F	F

2.0 Design Interface[16]			
ASSESSMENT CRITERIA	**MS B**	**MS C**	**FRP**
For more information see "OMS/MP" article on ACQuipedia.			
2.3.2 Metrics for System Sustainment (A_o, A_m, RAM, O&S Cost, etc.) objectives have been defined. Additional sustainment metrics, such as mean down time, customer wait time, and footprint reduction, as appropriate, have been assessed and defined in the ICD, CDD, or CDD update, LCSP, SEP, or Engineering and Manufacturing Development (EMD) contract). (CJCSI 5123.01I; DoDI 5000.91; and DoDI 3110.05, Readiness-based Materiel Condition Reporting for Mission-Essential Systems and Equipment, September 25, 2006)	F	U	U
2.3.3 RAM requirements are applied to all systems, including those that rely on or are developed with COTS or Non-Developmental Items (NDIs). (DoDI 5000.91; and DoDI 5000.88, para 3.6b)	IP	F	U
2.3.4 RAM measures (e.g., A_o, A_m, Mean Time Between Failure (MTBF), Mean Time to Repair (MTTR) and Mean Logistics Delay Time (MLDT), Fault Detection, Fault Isolation, and False Alarm) are defined in quantifiable and measurable terms in the ICD, CDD, or CDD Update, LCSP, SEP, or EMD contract. (CJCSI 5123.01-series)	F	U	U
2.3.5 RAM performance capability parameters are defined consistent with the ICD, CDD, or CDD Update, and flowed down to the TEMP, other programmatic documents, and RFP or contract, as appropriate. (CJCSM 5123.01-series)	F	F	F
2.3.6 A process has been implemented to assess achieved RAM performance by collection and analysis of user data for factory and fielded units.	I	IP	F
2.3.7 Predictions, analyses, and tests are conducted to verify if RAM requirements and KPPs can be met. (Reliability, Availability, Maintainability and Cost (RAM-C) Rationale Report Outline Guidance) Note: Where applicable, in accordance with the program's Digital Engineering Implementation Plan, digital models and simulations support RAM prediction and analysis. (DoDI 5000.88, November 18, 2020)	IP	F	U
2.3.8 Reliability growth program or other analyses and data indicate that system and subsystem reliability is appropriate to meet the stated requirement. A reliability growth plan has been implemented, as appropriate.	F	U	U
2.3.9 An approved readiness model (e.g., TIGER, OPUS, Readiness Based Sparing and Availability Centered Inventory Models) is used to assess the effects of various levels of redundancies, spares, downtimes, and maintenance concepts on operational availability.	I	F	U

2.0 Design Interface[16]			
ASSESSMENT CRITERIA	MS B	MS C	FRP
2.3.10 Reliability maturation tests (Accelerated life or reliability development tests) are used to mature equipment reliability. (DoDI 5000.88, November 18, 2020)	I	F	U
2.3.11 Contracts include the requirement for supplier to implement R&M programs and provide updated analyses towards the achievement of those requirements. (DoD R&M Engineering Management Body of Knowledge can be used as a reference for R&M contracting practices.)	I	F	U
2.4 **Human Systems Integration (HSI)**[17]			
2.4.1 HSI analysis has been performed addressing operator, maintainer, and support personnel. (MIL-HDBK-46855; MIL-STD-46855, Human Engineering Requirements for Military Systems, Equipment and Facilities, December 21, 2020). Human factors engineering domain, including but not limited to: • Standardization and interchangeability • Use of mock-ups, modeling, and simulation • Workspace physical accommodations and design • Design for effective handling and carrying • Controls and displays/User computer interface • Usability • Accessibility • Visibility • Human Reliability Analyses (HRA) • Manpower domain (e.g., Manpower estimates, manpower analyses, workload analyses) • Personnel domain (e.g., Target Audience Description (TAD), Knowledge, Skills, Abilities, and other Attributes (KSAOs), operational experience) • Training Domain • ESOH domain • Habitability domain • Workspace environment (e.g., heating, cooling, ventilation, illumination, noise, vibration) • Force Protection and Survivability domain (e.g., personnel survivability, fratricide, protection) • Testability • Complexity • Workload	IP	F	U

[17] Additional resources and guides can be found at the following DAU websites: "HSI Tool Resources", "Product Support Analytical Tools", "New DoD HSI Policy", and "DoD HSI Guidebook".

2.0 Design Interface[16]			
ASSESSMENT CRITERIA	**MS B**	**MS C**	**FRP**
2.4.2 Contracts include the requirement for supplier to implement HSI and provide updated analyses towards the achievement of those HSI and HSI-related requirements. SAE 6906 may be used as a reference for HSI contracting practices.	IP	F	F
2.4.3 Contingencies for system selection or HSI trade-space as a result of design changes are addressed if HSI domain thresholds are deemed unachievable.	IP	F	U
2.4.4 A human-readiness model (e.g., anthropometry modeling, American National Standards Institute/Human Factors Ergonomics Society (ANSI/HFES) 400) is used to assess the effects of various levels of human performance, human reliability, human-system redundancies, and operational and maintenance concepts on operational availability address human contribution to total system performance and inform HSI domain trade-off analyses.	IP	F	U
2.4.5 Broad cognitive, physical, and sensory requirements for the operators, maintainers, and support personnel that contribute to or constrain total system performance have been analyzed.	IP	F	U
2.4.6 An HSI plan has been developed, executed, and maintained, and has been coordinated with subsystem HSI plans and the overall SEP.	IP	F	U

3.0 Sustaining Engineering			
ASSESSMENT CRITERIA	**MS B**	**MS C**	**FRP**
3.1 Analysis			
3.1.1 Reliability growth data and curves show that reliability is improving.	IP	U	U
3.1.2 Information from Product Quality Deficiency Reports (PQDRs) is tracked for trends and product improvement. (See Component directed system of record such as PDREP.)		IP	U
3.2 Diminishing Manufacturing Sources and Material Shortages (DMSMS) *Assessors Note: Additional management questions can be found in the SD-22, DMSMS Guidebook of Best Practices for Implementing a Robust DMSMS Management Program, Appendix C.*			
3.2.1 The program has established a robust and proactive DMSMS program that identifies obsolescence due to DMSMS before parts are unavailable. This is reflected in a formal DMSMS Management Plan (DMP) approved and signed by leadership. The DMP should: • Identify roles and responsibilities of the prime/subcontractor and third-party vendors • Describe Government oversight of contractors performing DMSMS operational processes • Define and document operational processes • Support procurement of sufficient resources in the current and out-years and budgets are established, approved, and funded (DoDI 4245.15, Diminishing Manufacturing Sources and Material Shortages Management, November 5, 2020)	F	U	U
3.2.2 A DMSMS Management Team (DMT) has been formed. The team is meeting regularly to review open DMSMS cases, planned technology refresh events, current metrics, and any other DMSMS issues.	F	F	F

3.2.3 The program is successful in employing DMSMS resilience principles in the design
 	
• Parts management interfaces are successful in selecting items for the designs that enhance DMSMS resilience
• DMSMS management is a consideration when the system design approach is being determined to minimize impact supportability and sustainability
• The following is addressed:
  o Open system architecture
  o Order of precedence for parts selection
  o Minimized use of custom parts
	F	F	U

3.0 Sustaining Engineering			
ASSESSMENT CRITERIA	**MS B**	**MS C**	**FRP**
o Requirement for a preferred parts list and parts control before detailed design to minimize obsolescence issues o Identification of shelf and operating life requirements o Identification of technology life expectancies			
3.2.4 A DMSMS Management Evaluation Process has been established • Metrics are being reported to leadership • Metrics are being used for budgeting, improving process efficiency and determining Return on Investment	F	F	F
3.2.5 DMSMS forecasting and management tools and or service providers have been researched and selected (including a DMSMS case-tracking database. The program also has a strategy for obtaining: • Design disclosed items, including sub-tier hardware indenture levels • Form, fit, function and proprietary design items, including sub-tier hardware indenture levels • Results of forecasting or manual research are being used to identify immediate and near-term obsolescence issues • Vendor surveys are being conducted • A funded, formal technology roadmap and approved insertion or refreshment plan	IP	F	U
3.2.6 The DMT is collecting and preparing item data, including: • Items associated with critical functions have been identified • A CDRL is in place for delivery of the system Bill of Materials (BOMs) • Indentured BOMs for the systems have been acquired (DID: DI-MGMT-82274) and are loaded into the forecasting and management tool • The program has obtained design disclosed items including sub-tier hardware indenture levels and proprietary design items, including sub-tier hardware indenture levels • Single source items and those where the Government cannot obtain data rights have corrective action plans identified	IP	F	U
3.2.7 DMSMS exit strategy requires the PBL provider to ensure there are no end-of-life issues at completion of period of performance.	I	IP	F
3.3 Failure Reporting, Analysis, and Corrective Action System (FRACAS)			
3.3.1 FRACAS process, to include failure analysis and corrosion is established and failures are analyzed and trended for program support visibility. BIT indications and false alarms are analyzed and included in the FRACAS process.		IP	F

3.0 Sustaining Engineering			
ASSESSMENT CRITERIA	**MS B**	**MS C**	**FRP**
3.3.2 A FRACAS review is performed on engineering development models, pre-production units, production, and deployed units. Where applicable, the review is supported by data analytics, including artificial intelligence or machine learning.		IP	F
3.3.3 Safety and mishap reports associated with materiel and design deficiencies are linked with or provide input into the FRACAS.			
3.4 Corrosion Prevention and Control			
3.4.1 Corrosion prevention planning is in place in accordance with DoDI 5000.67 and DoDI 5000.88 (required for all ACAT I programs and included in the LCSP) which identifies corrosion prevention, monitoring, maintenance during operation, and long-term storage. The corrosion control process has been incorporated into maintenance planning, and corrosion considerations have been evaluated throughout the acquisition phases. Corrosion prevention and control are included in system design reviews.	IP	F	U
3.4.2 Those corrosion risks that are not mitigated through engineering design have been incorporated into maintenance planning, to include the development of corrosion inspection checklists. See the Department of Defense Corrosion Prevention and Control Planning Guidebook for Military Systems and Equipment, August 2022.	IP	F	U
3.4.3 The contractual package includes CPC Planning CDRLs (DI-MFFP-81403, Corrosion Prevention and Control Plan (CPCP), and DI-MFFP-81402, Finish Specification) and deliverables aligned with events to mitigate corrosion during design and engineering efforts. The package reflects the CPC management and design efforts to be completed by the contractor as identified in program and program support planning documentation.	F	F	F
3.4.4 Specifications for CPC design criteria and the current contract include verification criteria, which can be met (to include test, demonstration, analyses, and verification). CPC design criteria include military and industry standards such as NACE-SP21412-2016/SSPC-CPC-1, MIL-STD-1568, MIL-DTL-53072, SAE-AS12500, MIL-PRF-23236.	F	F	F
3.4.5 The program is utilizing Corrosion Prevention and Control (CPC) subject matter experts.		IP	F

4.0 Supply Support			
ASSESSMENT CRITERIA	**MS B**	**MS C**	**FRP**
4.1 Supply Chain Management			
4.1.1 Sparing analyses and levels: • Are based on the use of an accepted DoD- or Component-approved Readiness Based Sparing (RBS) methodology • Demand-based approved models are used when data is inadequate, or the RBS approach is not cost effective • Repair parts reduction initiatives have been considered	I	F	U
4.1.2 In instances where the provider is responsible for turnaround times and fill-rate metrics, but the Component owns materiel at the consumer level, an RBS is used to determine the consumer-level based on the operational scenario of the platform. Success is defined by meeting contracted supply chain management metrics.	I	IP	F
4.1.3 Support strategies have been considered that are consistent with the end-to-end materiel flow process, from factory to the ultimate customer, including "last mile." It also identifies turnaround times for spares, replacement parts, refurbished and reworked items, fleet and field returns, etc. (DoD Manual 4140.01, Volume 3, DoD Supply Chain Materiel Management Procedures: Materiel Sourcing, October 9, 2019; and DoDI 4140.01, March 6, 2019)	IP	F	U
4.1.4 Based on process capabilities, processes have been mapped, capabilities determined, and process improvement initiatives identified.	IP	F	U
4.1.5 End-to-end Supply Chain solutions are resilient (e.g., designed to withstand and recover quickly from disruptions) and have the flexibility to meet the full spectrum of contingencies with no loss of operational capability or tempo.	IP	F	U
4.1.6 Enterprise integration enables a single view of the supply chain of both organic and commercial provider asset inventories, as well as asset tracking.	IP	F	U
4.1.7 The inventory of spares to be procured is determined and spares records are maintained.		IP	F
4.1.8 Stock levels are determined. Parts have been funded to support both interim and initial spares, and post fielding requirements.		F	U
4.1.9 Provisions for surge requirements are identified and reflected in the contract as applicable.	IP	F	U
4.1.10 Provisioning planning has been completed and provisioning conferences are conducted, to determine if the contractor's provisioning preparation, documentation, and facilities are adequate.	IP	F	U

4.0 Supply Support			
ASSESSMENT CRITERIA	**MS B**	**MS C**	**FRP**
4.1.11 Provisioning screening has been conducted to: • Prevent duplicate entries in the DoD supply data system • Obtain most cost-effective support, including consideration of using existing supply items	IP	F	U
4.1.12 Item management codes are assigned, including Source, Maintainability, and Recoverability (SMR) codes and those for Hazardous Materials (HAZMAT).	IP	F	U

4.1.13 Provisioning data reports have been requested via contract using GEIA-STD-0007, as directed, then delivered, and generated in accordance with IMS, if appropriate. For example:
 	
    • Recommended repair parts list provided for pre-operational repair parts and training equipment
    • Provisioning Parts List (PPL) identifying the system components that will require National Stock Numbers (NSNs) and determining the range and depth of support items for an initial period of service (i.e., spares in support of the test program)
    • DoD Components are required to obtain National Stock Numbers (NSN) and catalog each item in accordance with DoDI 4140.01, DoD Supply Chain Materiel Management Policy, and DoD Manual 4100.39, Federal Logistics Information System (FLIS) Procedures. Additionally, DoD Components are required to perform all configuration management and technical data management responsibilities in accordance with DoD Instruction 4140.69, Engineering Support Instructions for Items Supplied by Defense Logistics Agency. DoD Components are required to conduct provisioning in accordance with DoDI 4140.01, DoD Manual 4100.39, and DoD Manual 4140.01, Volume 2, DoD Supply Chain Materiel Management Procedures: Demand and Supply Planning
Assessors Note: See SE for associated provisioning requirements.
	IP	F	U

4.1.14 The supply support provider has the capability to accept demand requisitions and provide status reports by electronic data interchange.		IP	F
4.2 Interim Support			
4.2.1 An interim support plan is in place that details the interim support requirements that the provider will be required to execute.	IP	F	U
4.2.2 The interim support item list identifies support requirements for a transitional operating period.	IP	F	U
4.2.3 Planning for contractor teams that are supporting fielded units is in place if Government support will not be available.		IP	F

4.0 Supply Support			
ASSESSMENT CRITERIA	**MS B**	**MS C**	**FRP**
4.2.4 If transitioning to organic supply management, the Government has documented the data deliverables that support transition to a standard Government supply system, in accordance with Title 10 U.S.C. § 2451, § 2454, and § 2458, in the LCSP's implementation plan.		IP	F
4.3 Automated Identification Technology (AIT)			
4.3.1 Radio Frequency Identification (RFID) planning and strategy have been developed/updated consistent with DoD and the respective Components' policy and guidance. (DoD Manual 4140.01, Volume 7, DoD Supply Chain Materiel Management Procedures: Supporting Technologies, March 6, 2019)	I	IP	F
4.3.2 Item Unique Identification (IUID) and Valuation Clause is added to all solicitations and contracts as appropriate. (DFARS Clause 252.211-7003, Item Unique Identification and Valuation, March 2022)	IP	F	U
4.3.3 IUID plan and strategy have been developed or updated consistent with DoD policy and guidance. (DoDI 8320.04, Item Unique Identification (IUID) Standards for Tangible Personal Property, September 3, 2015)	IP	F	U
4.3.4 Program IUID requirements are adequately addressed in the appropriate program supportability plans. (DoDI 8320.04, Item Unique Identification (IUID) Standards for Tangible Personal Property, September 3, 2015; and DoDI 4151.19, Serialized Item Management (SIM) for Life-Cycle Management of Materiel, January 9, 2014)	IP	F	U
4.3.5 IUID implementation and compliance metrics have been identified.	IP	F	U
4.3.6 IUID implementation and compliance metrics are tracked.	I	IP	F

5.0 Maintenance Planning and Management			
ASSESSMENT CRITERIA	**MS B**	**MS C**	**FRP**
5.1 Maintenance Concept, Design & Analysis			
5.1.1 Accessibility, Human Factors Engineering (HFE), diagnostics, repair and sparing concepts for all maintenance levels are established. (DoDD 4151.18, Maintenance of Military Materiel August 31, 2018 (Change 1); DoD Handbook 470A, Designing and Developing Maintainable Products and Systems, August 4, 1997; and DoDI 5000.92, Innovation and Technology to Sustain Materiel Readiness, May 7, 2021) *Assessors Note: Where applicable, maintainability analysis should be supported by models and simulations, such as a model-based Human Engineering Design Approach Document-Maintenance (HEDAD-M).*	F	U	U
5.1.2 Requirements for manpower factors that affect system design utilization rates (e.g., maintenance ratios) are identified.	F	U	U
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 the following (see references in 5.1.1): • Reliability (e.g., MTBF) • Maintainability (e.g., MTTR, and maintenance task analyses) • Availability (e.g., task-time limits) • Reliability and maintainability tests and demonstrations • Performance monitoring/fault detection/fault isolation and diagnostics • Fault Tree Analysis • Tasks and Function Analysis • Top-Down Requirements Analysis *Assessors Note: Identify Total, Non-, or Partially Mission Capable, Maintenance, Supply (TNMCM, TNMCS, NMCM, NMCS, PMCM, or PMCS), if applicable.*	IP	F	U
5.1.4 Life cycle supportability design, installation, maintenance, S&TE, calibration, and operating constraints (including safety and health compliance requirements) and guidelines are identified.	IP	F	U
5.1.5 Maintenance planning and analyses are consistent with statutory and regulatory requirements. (Title 10 U.S.C. § 2464, Core Logistics Capabilities; § 2460, Definition of Depot Level Maintenance and Repair; § 2466, Limitations on the Performance of Depot-Level Maintenance of Materiel; and § 2474, Centers of Industrial and Technical Excellence: Designation of Public Private Partnerships) • Core Logistics Analysis, (CLA) (Title 10 U.S.C. Code § 2464, and § 2466; DoDI 5000.91)	F	U	U

5.0 Maintenance Planning and Management			
ASSESSMENT CRITERIA	**MS B**	**MS C**	**FRP**
• Depot Source of Repair (DSOR), and Source of Repair Analysis (SORA) (DoDD 4151.18, March 31, 2004; and DoDI 4151.24, DSOR Determination Process, May 28, 2019)			
5.1.6 Economic and non-economic Level of Repair Analysis (LORA) is planned to help identify the least-cost feasible repair level or discard alternative.	IP	F	U
5.2 Maintenance Planning and Plan			
5.2.1 Condition Based Maintenance (CBM or CBM+) strategy is used to determine maintenance decisions to reduce scheduled maintenance and manpower requirements, while reducing operating and support and sustainment costs and ensuring the appropriate maintenance is performed. (DoDI 4151.22, Condition Based Maintenance Plus for Materiel Maintenance, August 14, 2020)	IP	F	U
5.2.2 Defines specific criteria for repair and maintenance for all applicable maintenance levels in terms of time, accuracy, repair levels, built-in-test, testability, reliability, maintainability, nuclear hardening, SE requirements (including automatic test equipment and special tools), manpower skills, knowledge, and abilities and facility requirements for peacetime and wartime environments.	IP	F	U
5.2.3 Defines the maintenance critical path alignment with depot standup and fielding.	IP	F	U
5.2.4 Defines the maintenance approach including level of repair and includes the results of the analysis to determine logical maintenance task intervals, grouping, and packaging.	IP	F	U
5.2.5 Defines the actions and support necessary to ensure that the system attains the specified Availability that is optimized considering Reliability Centered Maintenance (RCM), CBM+, and time-based maintenance.	IP	F	U
5.2.6 System anomalies and intermittent failures are analyzed for possible changes to the BIT design, thresholds and tolerances, or filtering.	IP	F	U
5.2.7 States specific maintenance tasks, including battlefield damage repair procedures, to be performed on the materiel system.	IP	F	U
5.2.8 Identifies hosting and requirements (e.g., interfaces) for the maintenance data reporting system if it will be used or deployed on a platform (e.g., ship, air vehicle, ground vehicle).	I	IP	F

5.0 Maintenance Planning and Management			
ASSESSMENT CRITERIA	MS B	MS C	FRP
5.2.9 Maintenance planning documentation identifies: • Tools and test equipment by task function and maintenance level • Category codes (e.g., SMR codes) • Manufacturer's part numbers, cage codes, nomenclatures, descriptions, estimated prices, and recommended S&TE quantities, including logistics (e.g., technical data, spares, test equipment) for S&TE	I	IP	F
5.2.10 RCM methods and FMECA are used to determine the evidence to select the appropriate type of maintenance (e.g., inspect and repair as necessary, disposal, or overhaul). (MIL-STD-3034, Reliability Centered Maintenance Process, October 18, 2010)	IP	F	U

6.0 Packaging, Handling, Storage, and Transportation (PHS&T)			
ASSESSMENT CRITERIA	**MS B**	**MS C**	**FRP**
6.1 General Requirements			
6.1.1 Packaging, storage, handling, and transportation profiles of the configuration items over the system life cycle from acceptance through disposal have been derived from the OMS and MP.	I	IP	F
6.1.2 PHS&T requirements such as weight, dimensions, fragility, electrostatic sensitivity, shelf-life, and hazardous material data are adequately specified in the required provisioning technical data. (MIL-STD-31000B).	I	F	U
6.1.3 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
6.1.4 If a new specialized reusable container is needed, requirements have been coordinated with the cognizant field activity.	I	IP	F
6.1.5 A PHS&T Plan 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. (DoD Manual 4140.70, DoD Supply Chain Materiel Management Procedures for Storage and Material Handling, October 12, 2017; DoDI 4140.01, DoD Supply Chain Materiel Management Policy, March 6, 2019; and DoD Manual 4140.01, Volume 9, DoD Supply Chain Materiel Management Procedures: Materiel Programs, August 26, 2022)	IP	F	U
6.2 Packaging			
6.2.1 MIL-STD-2073-1E, DoD Standard Practice for Military Packaging; and MIL-STD-129R (current version), DoD Standard Practice, Military Marking for Shipment and Storage is used, as necessary, for: • Items that cannot be protected and preserved in a cost-effective manner using commercial packaging • Items delivered during wartime for deployment with operational units • Items requiring reusable containers • Items intended for delivery-at-sea • An item where the Government has determined military packaging is the optimal solution • Items that may be in long-term storage	I	IP	F
6.2.2 Department of Agriculture requirements for packaging intended for international use have been meet as required. (DoD 4140.65-M Issue, Use, and Disposal of Wood Packaging Material, July 2, 2020; ISPM-15, 2002)	I	IP	F

6.0 Packaging, Handling, Storage, and Transportation (PHS&T)			
ASSESSMENT CRITERIA	**MS B**	**MS C**	**FRP**
6.2.3 DoD marking requirements for all unit, intermediate, and shipping containers have been met. (MIL-STD-129R, DoD Standard Practice, Military Marking for Shipment and Storage, February 18, 2014)	I	IP	F
6.2.4 PHS&T requirements for associated hazardous materials and wastes have been identified.	I	IP	F
6.2.5 Corrosion prevention safeguards are in place to ensure effects of corrosion are minimized during storage and transportation afloat and ashore.	I	IP	F
6.2.6 PHS&T issues (retrograde packaging, reusable containers, retrograde transportation, shipboard storage, damage in transit, etc.) raised by the user have been addressed by the program.			F
6.3 Handling			
6.3.1 Requirements for materiel handling devices for loading and unloading have been defined.	IP	F	U
6.3.2 Materiel handling devices and procedures for loading and unloading have been certified.	I	IP	F
6.3.3 For systems going onboard ships and submarines, packaging is designed to be compatible with shipboard handling equipment.	I	IP	F
6.4 Storage			
6.4.1 Storage monitoring requirements are incorporated into technical publications.	I	IP	F
6.4.2 Long-term storage and preservation requirements for systems such as ground and air vehicles have been identified to ensure lubrication, batteries, seals, etc. do not degrade. Accessibility for maintenance during long-term storage has been considered.	I	IP	F
6.4.3 Items requiring special storage requirements (e.g., freezers for storage of composites, HAZMAT) or shelf-life requirements have been identified and documented in the appropriate program supportability documentation. (DoD Manual 4140.70, DoD Supply Chain Materiel Management Procedures for Storage and Material Handling, October 12, 2017; DoD Manual 4140.27, Volume 1 DoD Shelf-Life Management Program: Program Administration and DoD Manual 4140.27, Volume 2 DoD Shelf-Life Management Program: Materiel Quality Control Storage Standards, July 6, 2016)	I	IP	F
6.5 Transportability/Transportation			

6.0 Packaging, Handling, Storage, and Transportation (PHS&T)			
ASSESSMENT CRITERIA	MS B	MS C	FRP
6.5.1 Transportability issues are addressed, including: • Modes of transportation • Oversized or overweight items • Items requiring special transportation modes • Items that are classified • Special transportation environments or anticipated conditions requirements (e.g. sea states, tunnel limitations for rail, desired sorties for complete systems) Certification (air, rail, Department of Transportation, etc.) or necessary waivers have been obtained for items intended for international shipment" (MIL-STD-1366, DoD Interface Standard for Transportability Criteria, October 31, 2006).	IP	F	U
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 the maintenance planning.	IP	F	U
6.5.3 Rail, air, and ship certifications have been obtained or are scheduled and coordinated with the appropriate platform manager or agency. This includes 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
6.5.4 Time delivery requirements for all shipments of spares have been identified.	I	I	F
6.5.5 Transportation requirements with federal and state agencies have been identified (such as height, weight) and any necessary waivers obtained for highway or rail transport.	IP	F	U
6.5.6. Transportation processes, hardware, and procedures for disabled systems (e.g., aircraft, ground systems) have been developed and tests have been scheduled or conducted.	I	IP	F
6.5.7 There are no interface issues between the system being transported and the transporting platform (e.g., height, turning radius). (MIL-STD-1366-DoD Interface Standard for Transportability Criteria, October 31, 2006)	I	IP	F
6.6 Testing			
6.6.1 Design validation testing has been conducted in accordance with MIL-STD-2073-1/E, Appendix F for all special packaging identified in the HF Tables for Logistics Product Data conforming to SAE GEIA-STD-0007.	I	IP	F
6.6.2 Ammunition tests have been conducted to ensure compatibility with host platform or facility requirements.	I	IP	F

6.0 Packaging, Handling, Storage, and Transportation (PHS&T)			
ASSESSMENT CRITERIA	MS B	MS C	FRP
6.6.3 HAZMAT 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 United States Code of Federal Regulation, Titles 29, 40, and 49.	I	IP	F

7.0 Technical Data			
ASSESSMENT CRITERIA	**MS B**	**MS C**	**FRP**
7.1 Technical Data/Intellectual Property (IP) Management Strategy[18]			
7.1.1 A BCA has been conducted (including product support, engineering, and contracting functional areas) to assess the cost and merit for purchasing IP, (e.g., technical data, computer software, and associated license rights).	IP	F	U
7.1.2 An IP Strategy and IP Management Plan have been developed that documents the IP Strategy in the AS and the IP Management Plan in the LCSP, supports MOSA and re-competition for production, sustainment, or upgrade, and addresses the merits of including contract mechanisms (e.g., priced contract options, escrow agreements, deferred delivery, deferred ordering, specially negotiated licenses) for future delivery of technical data and IP rights that address restricted use and data release. (DoDI 5010.44, Intellectual Property Acquisition and Licensing, October 16, 2019; DoDI 5000.91, November 4, 2021)	F	U	U
7.1.3 Technical data has been ordered using GEIA-STD-0007 as directed, through contract statements of work, CDRL, Data Item Descriptions (DID), and appropriate contract clauses. Government data rights have been agreed to and documented in the contracts.	IP	F	U
7.1.4 Authoritative Data Sources (ADS) and the associated change authority have been identified, described, and designated by the appropriate Components or Services, as the authorized data production source to create, manage, use, distribute, and archive and publish complete and accurate data for the end users.	IP	F	U
7.2 Integrated Digital Data Environment			
7.2.1 If applicable, all network compatibility issues are addressed, and mitigation steps identified. Security classification and exchange of data between product support providers is considered.	IP	F	U
7.2.2 A logistics data enterprise architecture has been generated which identifies electronic data repositories, information exchange requirements, and usage.	I	IP	F
7.3 Product/Technical Data Package and Publication			
7.3.1 A product and technical data and intellectual property management plan for product support that includes change control processes, and in-process review or validation and verification schedules, as appropriate, have been developed. (Title 10 U.S.C. § 4324, Life Cycle Management and Product Support; DoDI 5010.44, October 16, 2019; and DoDI 5000.91, November 4, 2021)	I	F	U

---

[18] The title for this section of the ILA checklist will be updated in accordance with Section 806 of the FY23 NDAA, when reflected in Title 10 U.S.C. § 4324.

7.0 Technical Data			
ASSESSMENT CRITERIA	**MS B**	**MS C**	**FRP**
7.3.2 Computer Aided Design (CAD), modeling, and engineering product source data is acquired in an acceptable digital format (such as XML) per the respective Component's policy and managed according to the Integrated Digital Environment (IDE).	IP	F	U
7.3.3 The product and technical data package is administered under a formal Configuration Management process and is consistent with the requirements contained in the CMP, the maintenance plan, calibration support plan, and the Information Support Plan (ISP) and provides a sufficient level of detail for re-procurement, upgrade, maintenance, and repair of hardware. The TDP is consistent with the LPD and tailored by analysis conducted in accordance with TA-STD-0017A and delivered as directed using GEIA-STD-0007. The product and technical data package normally includes: • Specifications, Technical Manuals (TM), publications, engineering drawings and product data models, calibration procedures, and special instructions such as for 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 maintenance requirements card • Environmental stress screening requirements (MIL-STD-31000B, Technical Data Packages, October 31, 2018), TA-STD-0017A, and GEIA-STD-0007)	I	F	U
7.3.4 The product and technical data package, or logistics product data elements have been specified in the contractual package. (MIL-STD-31000B, TA-STD-0017A, and GEIA-STD-0007, as appropriate)	F	F	F
7.3.5 The contract identifies and requires delivery of the technical data requirements and associated products as appropriate.		F	F
7.3.6 Changes have been made that were identified during the Physical Configuration Audit (PCA).			F
7.4 Technical Publications			

7.0 Technical Data			
ASSESSMENT CRITERIA	**MS B**	**MS C**	**FRP**
7.4.1 The contents of the product and TM have been validated and verified, considering the following: • Phased development schedule is in parallel with the system development • Contents are validated on production configured systems or equipment by the end user • COTS manuals have been evaluated using MIL-PRF-32216B, Evaluation of Commercial off the Shelf Manuals and Preparations of Supplemental Data, December 3, 2021 • Established a quality assurance plan to ensure the TMs and TDP have been validated and verified	I	IP	F
7.4.2 Verification and validation of software applications and other tools used to create, manage, update, present, and view TMs has been completed.	I	IP	F
7.4.3 A process for final Government approval and distribution of TMs has been established. A process for updating and correcting technical publication deficiencies is in place. Archival copies of editable, digital formats and rendered digital output files are retained. There is a plan for recission and disposal at the end of the TMs life cycle.	I	IP	F
7.4.4 Approved TMs will be available to support the end item and peculiar SE and in the quantities required.	I	IP	F
7.4.5 An approved calibration requirements list is available to support the end item, and all peculiar installed instrumentation.	I	F	U

8.0 Support Equipment (SE)			
ASSESSMENT CRITERIA	**MS B**	**MS C**	**FRP**
8.1 General Requirements			
8.1.1 The environmental and physical constraints, such as size, weight, power, temperatures, and interfaces have been factored into SE designs. (MIL-HDBK 2097A, Acquisition of Support Equipment and Associated Integrated Logistics Support, July 25, 1997)	F	U	U
8.1.2 Analyses to identify the optimum mix of automatic and manual fault detection and isolation equipment at each applicable maintenance level has been conducted.	IP	F	U
8.1.3 The decision between common SE and peculiar SE (new development) has been considered to minimize SE footprint.	IP	F	U
8.1.4 Overall support strategy for SE has been defined, and includes identification of the following: • SE recommendation data • Supply support • Interim spares • Manpower • Training • Technical data • Maintenance levels and maintenance task requirements • IT Systems Continuous Support • Calibration • Facility requirements • Requirements for SE	IP	F	U
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 technical data required to support and operate required SE throughout the life cycle of that product • Test fixtures and interfaces connecting the system to the test equipment	IP	IP	F
8.1.6 Requirements for the testing of SE have been identified.	F	U	U
8.1.7 Availability of calibration standards and procedures, SE, Test Program Sets (TPS), and tools at required maintenance sites and training schools have been verified, including types and quantity of SE for each location.	IP	F	U

8.0 Support Equipment (SE)			
ASSESSMENT CRITERIA	MS B	MS C	FRP
8.1.8 SE has been identified in the appropriate allowance lists.		I	F
8.1.9 A plan has been developed for certifying SE for use on host platforms or fielding sites, as appropriate.		F	U
8.1.10 SE has been certified for platform use. An installation change document has been developed for any changes to the system configuration resulting from SE requirements.		IP	F
8.1.11 For Major Defense Acquisition Programs (MDAP), 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 describes how unique tooling retention continue to be reviewed during the life of the program. Unique tooling designated for preservation and storage, should be serially managed, and should meet the requirements of IUID. (DoDI 8320.04 (IUID), Other references: Section 815 of Public Law 110-417, Preservation of Tooling for Major Defense Acquisition Programs, March 2, 2011, DoDI 5000.91 par 4.11(g).	IP	F	U

9.0 Training and Training Support			
ASSESSMENT CRITERIA	**MS B**	**MS C**	**FRP**
9.1 Training Analysis and Planning			
9.1.1 Manpower and Training Requirements Planning (MTRP), Front End Analysis (FEA), and Mission analysis (MA) is conducted	IP	F	U
9.1.2 The Training Plan is approved and updated as the system goes through design changes.	IP	F	U
9.1.3 Resource requirements are specified for training equipment, services, calibration standards, test equipment, materiel, 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 constraints. Requirements to bring training onboard a host platform, including local-area-network-based computer training, has been coordinated.	IP	F	F
9.1.4 The Course Curriculum and Instruction is developed and provided in accordance with Training Systems Plan and SOW and CDRLs. Ensure a Ready for Training (RFT) date is established and met. Ensure the Course Curriculum and Instruction is delivered as required to achieve: • Terminal training objectives • Initial training • Formal schools, OJT, and follow-on training • Computer-based training either standalone or embedded training • Individual and team training • Instructor training (train the trainer) • Trial teach the pilot course; establish RFT date • Information assurance compliance	I	IP	F
9.1.5 Terminal and enabling learning objectives are derived through appropriate learning analysis and formatted, per Service training development guidance.	IP	F	U
9.1.6 Operator, maintainer, and calibration training, along with job performance aids, are included in the appropriate manuals or embedded in the Interactive Electronic Training Manual (IETM), where applicable.	I	IP	F
9.1.7 Initial production equipment and TM for the new system's delivery and installation schedule are planned so the system is supportable by the first operational unit.	I	IP	F
9.2 Training Materials			

9.0 Training and Training Support			
ASSESSMENT CRITERIA	**MS B**	**MS C**	**FRP**
9.2.1 Technical publications are developed prior to the development of training materials. Ensure technical publications capture system changes and feed or update existing training.	I	IP	F
9.2.2 Instructor guides, course curriculum, other training aids, SE and student guides are planned or developed for classroom or other virtual training environments. *Assessors Note: Review applicable training materials for any updates to reflect system changes or upgrades and applicable contractual vehicles that address process to update when changes occur.*	I	IP	F
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.		IP	F
9.2.4 Contractor or Government test and evaluation activities are used to validate and verify training requirements, systems, and materials. There is a process in place to update training materials when deficiencies are identified.		IP	F
9.2.5 Initial user maintainer training for Operational Evaluation (OPEVAL) and Component introduction is in place.		F	U
9.3 Training Product and Support			
9.3.1 Training devices and simulators to support operator, maintainer, or calibration training are identified if needed. There is a process in place to update training devices when deficiencies are identified.	IP	F	U
9.3.2 A military characteristics document, or Training System Functional Description, is prepared for each training device, defining its basic physical and functional requirements.		IP	F
9.3.3 Logistics support (spares, SE, etc.) for the training schools is planned.	IP	F	U
9.3.4 If applicable, inter-Service training agreements have been established or updated.	IP	F	U
9.3.5 If applicable, requirements for training system integration into live, virtual, and constructive training environments have been planned for or met.	IP	F	U
9.3.6 Training Effectiveness Evaluation Plan (TEEP) has been developed and approved to support Training Effectiveness Evaluations (TEE) performed during testing and evaluation and in sustainment.	IP	F	U

10.0 Manpower and Personnel			
ASSESSMENT CRITERIA	MS B	MS C	FRP
10.1 Manpower and Personnel			
10.1.1 A Manpower Estimate (ME) for the operation and maintenance of the program has been developed for all programs.	F	U	U
10.1.2 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 and level, by year • Number of personnel by rate, maintenance level, and year • Operator, maintainer, and support provider organizational-level assignments defined • Peacetime and wartime	IP	F	U
10.1.3 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.	IP	F	U
10.1.4 Requirements for both organic and contractor manpower requirements are validated under representative operating conditions.		I	F
10.1.5 Changes (increases or decreases) in manpower and personnel requirements have been identified for any transition period between systems.	IP	F	U

11.0 Facilities and Infrastructure (and Platform Integration)			
ASSESSMENT CRITERIA	**MS B**	**MS C**	**FRP**
11.1 Facility Requirements			
11.1.1 The types of facilities and infrastructure (Research, Development, Test, and Evaluation (RDT&E), operations, calibration, maintenance, and training) required to support and sustain the new or modified system have been identified, such as: • Berthing space for ships (including utilities, dredging, special deck structural requirements for crane loads, and fendering systems) • Parking aprons and hangar space for aircraft • Maintenance hi-bays for ground vehicle systems • Support facilities, supply warehouses, transit sheds, maintenance facilities, calibration laboratories, dry-dock capability, training facilities, and ordnance handling and storage (for both classrooms and trainers for operational training and maintenance training, including required product and technical data to ensure efficient and effective support of facilities) • Facilities to support corrosion prevention and control (e.g., wash racks, paint and coatings facilities) • Land use requirements have been identified (as early as possible). Some issues that pertain to both land use and basic facility requirements are noise, such as the Air Installation Compatible Use Zones (ACUIZ); ordnance, such as Explosive System Quantity-Distance (ESQD), and leasing agreements • Facilities to support RDT&E and in-service engineering requirements (e.g., prototypes, 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 support sites • Maneuver and live fire facilities requirements	IP	F	U
11.1.2 The facilities and infrastructure support requirements are documented in the Program's facilities requirements documentation and platform facilities requirements or equivalent documentation and coordinated with base or installation planners.	F	U	U
11.1.3 The facilities and infrastructure support requirements are documented in the Facilities Requirements Plan or equivalent documentation.	IP	F	U
11.1.4 Facility requirements have been developed per the appropriate documents (e.g., MIL-HDBKs) using the system's product support requirements.	IP	F	U
11.1.5 All host tenant agreements are in place.	IP	IP	F
11.1.6 A site activation plan has been developed.	IP	F	U
11.2 Evaluation of Existing Facilities and Capabilities			

11.0 Facilities and Infrastructure (and Platform Integration)			
ASSESSMENT CRITERIA	**MS B**	**MS C**	**FRP**
11.2.1 All necessary changes to facility or platform spaces have been made to accommodate the installation and storage of hosted systems, SE, and related supplies.	IP	IP	F
11.2.2 System support and facility requirements are provided to the activities and regions expected to support operations, maintenance, calibration, training, and other logistical support related to the system. *Assessors Note: This is effective when done on a periodic (i.e., annual) basis as the system is being designed and constructed so that the receiving support activities may factor support requirements into their facility planning efforts at the earliest possible time. One mechanism for accomplishing this is a facility planning and criteria letter, issued by the PM.*	IP	F	U
11.2.3 Site surveys are scheduled, and criteria developed. Surveys have been coordinated through appropriate user introduction team or appropriate user representative.	IP	F	U
11.2.4 Site surveys have been conducted. 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 (e.g., DD1391 for Military Construction (MILCON) project). *Assessors Note: If repair and support facilities cannot be completed in time to meet mission requirements and satisfy the basic facilities requirements, a designated source of repair and support or work-around has been identified and received user concurrence.*	IP	IP	F
11.3 New Construction			
11.3.1 The program has assessed (e.g., site surveys and trade studies) all means of satisfying a facility requirement prior to selecting the use of MILCON.	IP	F	U
11.3.2 Estimates of facility requirement and associated costs have been refined and a detailed project documentation with cost estimates has been developed. The appropriate resource sponsor has been briefed and aware of costs and schedule associated with the needed MILCON projects(s).	IP	F	U
11.3.3 Deployment, basing, home porting, bed down planning, and other decisions have been completed with a signed Basing Letter and appropriate environmental documentation approved and signed. This permits the coordination of projects with the respective Regions and ensures successful advocacy through Force Management Budget, OSD, and congressional authorization.	IP	F	U

11.0 Facilities and Infrastructure (and Platform Integration)			
ASSESSMENT CRITERIA	**MS B**	**MS C**	**FRP**
11.3.4 Project (MILCON) documentation has been submitted for funding in the appropriate FY.	IP	F	U
11.3.5 Environmental documentation for projects —per National Environmental Policy Act (NEPA)/Executive Order (EO) 12114, Environmental Effects Abroad of Major Federal Actions —is completed, approved, and signed, or scheduled for completion to support the timelines for new construction or modification of existing facilities.	IP	F	U
11.3.6 Equipment (e.g., simulators, Air Traffic Control, Magnetic Silencing equipment) has been identified and budgeted in the appropriate FY. Its procurement is on track to support project completion schedules.	IP	F	U
11.3.7 Construction of MILCON projects are and on track to support introduction of the new or modified system to the user.	IP	F	U
11.3.8 Where applicable, interim facility support (e.g., *work-around*) has been identified to meet requirements earlier than can be met by the completion of new facility projects.	IP	F	U
11.4 Integration (Ship, Air, Ground Systems, Space; and Command, Control, Communications, Computer, and Intelligence (C4I))			
11.4.1 An integration Integrated Process Team (IPT) has been formed between the host platform, weapon system, space, and C4I PM integration facility, etc. to ensure all supportability planning is conducted upfront. The IPT has been formally chartered.	F	U	U
11.4.2 For ships, a Ship System Design Specification has been developed that addresses integration of all embarked systems and subsystems (including aviation) that ensures performance and support requirements can be met.	F	U	U
11.4.3 Facility and shipboard storage requirements (e.g., workspaces, storage, spaces storage for ordnance) have been identified and spaces allocated (see also criteria in PHS&T).	F	U	U
11.4.4 A site survey has been conducted for receiving the system. Access to allocated spaces has been modeled and verified to ensure height, length, turning radius, SE, etc. for movement of the weapon system, and spares, can be met to ensure proper access to allocated spaces.	IP	F	U
11.4.5 Flight surface (e.g., runway or deck) certifications have been obtained or are in the process of being obtained with no pending issues.	IP	F	F

11.0 Facilities and Infrastructure (and Platform Integration)			
ASSESSMENT CRITERIA	MS B	MS C	FRP
11.4.6 Power, water, chillers, overhead cranes, high-pressure service air, etc. requirements have been coordinated with the host platform to ensure maintenance actions can be conducted as planned.	IP	F	F
11.4.7 The program has identified the requirements, bandwidth, and interfaces with the host platform's local area network.	IP	F	F
11.4.8 Proper amount of bandwidth is available to support communications and required data flow between the user and host platform, and host platform and base or shore activity.	IP	F	F
11.4.9 Systems Integration facilities can handle work throughput (e.g., integration of electronic warfare systems and communication gear on ground vehicles).	IP	F	F

12.0 Information Technology (IT) Systems Continuous Support			
ASSESSMENT CRITERIA	MS B	MS C	FRP
12.1 Information Technology (IT)			
12.1.1 A computer and software security plan, including safety, has been developed per DoDI 8510.01, Risk Management Framework for DoD Systems, 2022.	IP	F	U
12.1.2 A process for IT Governance is in place, in accordance with DoDI 8115-02. The IT or PIT system is registered in the Component registry, in accordance with DoDI 8510.01		IP	F
12.1.3 A Program Protection Plan has been developed. (DoDI 5200.39, Critical Program Information (CPI) Identification and Protection Within Research, Development, Test and Evaluation (RDT&E), October 1, 2020; DoDI 5000.83, Technology and Program Protection to Maintain Technological Advantage and Reference (b) within DoDD 5142.01, Under Secretary of Defense for Intelligence and Security (USD(I&S)), October 24, 2014, as amended to include anti-tamper requirements) *Assessor Note: The Anti-Tamper Plan is an annex to the Program Protection Plan. (DoDD 5200.47E, Anti-Tamper, December 22, 2020)*	F	U	U
12.1.4 Software functional requirements and associated interfaces have been defined.	IP	F	U
12.1.5 Gap analysis has been performed on candidate COTS software to identify functionality shortfalls, as applicable.	IP	F	U
12.1.6 Requirements for system firmware and software documentation have been identified and integrated into the overall system test program.	IP	F	U
12.1.7 Software testing requirements have been identified and integrated into the overall system test program.	IP	F	U
12.1.8 Measures of effectiveness have been established for software.	IP	F	U
12.1.9 A software development plan has been developed and reflects program MS.	IP	F	U
12.1.10 Software maturity has been measured.	IP	F	U
12.1.11 Software data rights have been addressed in the EMD RFP and contract. Required software data rights have been obtained.	F	U	U
12.1.12 CBM+ software is developed for the operating and maintenance system for diagnostics and prognostics, as applicable.	I	F	U

12.0 Information Technology (IT) Systems Continuous Support			
ASSESSMENT CRITERIA	MS B	MS C	FRP
12.1.13 Software routines for scheduled maintenance procedures are addressed in Planned Maintenance System (PMS) development.	I	F	U
12.1.14 The Software Support Activity (SSA) has been designated or established for all software support (budget, personnel, tools, facilities, hardware, documentation, and support and test equipment).	I	IP	F
12.1.15 The software documentation support matches the software in use.	IP	F	U
12.1.16 Software support is described in the LCSP and implementing documentation.	IP	F	U
12.1.17 A process has been defined to manage (create, discard, track, and close) software trouble reports that is levied against the software product.	I	F	U
12.1.18 A mechanism for getting contractor support specific to support software/equipment, if needed, at the SSA's (e.g., resident expert help).	I	IP	F
12.1.19 A process has been established for distributing corrections and revisions of the software to the users.	F	U	U
12.1.20 There is adequate reserve capacity (Central Processing Unit, memory, disk space, bus capacity, etc.) for the life of the system to accommodate changes, expansion, and growth of the software. The hardware is easily upgraded without affecting the software.	I	F	U
12.1.21 There are plans for processor upgrades such that technology refresh can be accomplished with minimal software modifications.	F	U	U
12.1.22 HSI considerations have been incorporated into the software development, integration, and test phases. This includes graphical user interface, usability testing, control and display layout, human error and reliability analysis, and online user guides and documentation.	I	F	U
12.1.23 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
12.1.24 A process to proactively project vendor discontinuance of software support, software revisions, upgrades, etc. has been developed and documented to ensure both program software and software support tools can be sustained, and software refresh can adequately be planned.	F	U	U
12.1.25 Software support planning requirements and data (e.g., these guidebook criteria) are presented in the ISP.	F	U	U

Addendum to 12.0 Information Technology Systems Continuous Support for Stand-Alone Systems			
ASSESSMENT CRITERIA	**MS B**	**MS C**	**FDD**
12.2 General			
12.2.1 A governance board for the system to control business processes has been established.	F	F	F
12.2.2 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 the 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.	F	F	F
12.2.3 A fit or gap analysis has been conducted to determine if there are any functional requirements gaps not covered by COTS software and require custom code to be developed.	I	F	U
12.3 Data Migration			
12.3.1 A data migration plan has been developed for transfer of data from legacy systems.	I	F	U
12.3.2 Data Conversion Agreements have been signed.	I	F	U
12.3.3 Interfaces for migration of data between systems have been defined.	I	F	U
12.3.4 Data Interface Agreements (DIAs) have been signed.	I	F	U
12.3.5 Middleware requirements have been defined.	F	U	F
12.3.6 Middleware has been developed. Reports, Interfaces, Conversions, and Enhancements (RICE) objects have been defined.		F	F
12.3.7 A methodology and process for data cleansing, data translation mapping, data validation, and resources has been documented in a data migration plan.	I	F	U
12.3.8 Data and Resources MOAs between the gaining system activity and the transferring system activity are approved, and the actions required by each activity.	I	F	U

Addendum to 12.0 Information Technology Systems Continuous Support for Stand-Alone Systems			
ASSESSMENT CRITERIA	MS B	MS C	FDD
12.3.9 MOAs between the program office and commands where the system will be deployed to have been approved.	I	F	U
12.3.10 Mock loads with actual data have been conducted with no outstanding issues prior to cut-over.		F	F
12.4 System Reliability			
12.4.1 System Architecture has been defined to include redundancy, modularity, and impact on Availability due to server failure.	I	F	U
12.4.2 Requirements for Disaster Recovery (DR) or secondary site have been developed. DR reliability is factored into overall system reliability.	I	F	U
12.4.3 Agreements are in place for the command or activity hosting the DR center.	I	F	U
12.4.4 Requirements for the help desk have been defined and factored into the reliability of the system.	I	F	U
12.4.5 Trouble calls or tickets to the help desk are processed through a FRACAS system as an input to the reliability program.	I	F	F
12.4.6 The procedures for the help desk have been established.	I	F	F
12.4.7 The help desk staffing and knowledge, skills and abilities of personnel are adequate to support functions required by the help desk.	I	F	F

Product Support Budgeting and Funding			
ASSESSMENT CRITERIA	**MS B**	**MS C**	**FRP**
1.0 Cost Estimating			
1.1 A Program Life Cycle Cost Estimate (PLCCE) has been developed for the program (all ACATS). (DoDI 5000.91)	F	U	U
1.2 A Cost Analysis Requirements Description (CARD) has been developed by the program office for ACAT I programs and those ACAT II programs if an Independent Cost Estimate (ICE) is required. (Title 10 U.S.C. § 4252). There is a plan or process in place to update the CARD.	F	U	U
1.3 An ICE is completed for ACAT I programs conducted by the Cost Assessment and Program Evaluation (CAPE) group or the Component cost analysis activity (as appropriate). An ICE or Independent Cost Assessment (depending on MDA option) is developed or conducted for ACAT II programs, as required. The CARD is used as source data for the ICE.	F	U	U
1.4 Product support funding requirements are developed using accepted cost estimating methodologies appropriate to the program phase.	F	U	U
1.5 Cost and technical data collection in the form of Cost and Software Data Reports (CSDRs) is in place for all Government and contractor efforts that exceed the thresholds defined in the DoDI 5000.73, Table 1. This data is used to inform the life cycle cost estimate and future SRs.	IP	U	U
2.0 Funding			
2.1 Product support funding requirements have been established and documented and: • Supports the budgetary requirements of the LCSP and requirements documentation and is appropriately phased (e.g., initial spares, depot activation) • Includes rationale to support the documented funding amounts • Identifies the correct appropriations for each requirement for each FY; these are properly phased in advance of requirements to account for procurement lead-time, especially for spares and materiel • Funding shortfalls and impacts are identified, prioritized, fully documented, and addressed to the PM and resource sponsor • The documented quantities and dollars are traceable to appropriate budget exhibits	F	U	U
2.2 Life cycle cost estimates, including cost-reduction efforts, have been developed and validated.	F	U	U

Product Support Budgeting and Funding			
ASSESSMENT CRITERIA	MS B	MS C	FRP
2.3 Funding requirements identified in the replaced system sustainment plan are identified and funded, as appropriate.	F	U	U
2.4 End of life and disposal requirements are planned and funded, as appropriate.	F	U	U

Environmental, Safety, and Occupational Health (ESOH)			
ASSESSMENT CRITERIA	MS B	MS C	FRP
1.0 Environment			

1.1 A Program Environmental, Safety, and Health Evaluation (PESHE) has been developed that documents the status, results, and conclusions of the ESOH analyses and statutory compliance activities conducted as part of the systems engineering, product support management, and life cycle sustainment planning, processes, and addresses (at a minimum) the following:
 	
 • Identification of ESOH hazards and risks, current status of ESOH risks including acceptance of the ESOH risks by the appropriate approval authority
 • Identification of required external safety reviews, approvals, and certifications and the status of those reviews.
 • Assessment of compliance with all existing and applicable federal, state, and local environmental regulatory requirements for armed forces vessels with respect to regulated discharges and emissions.
 • A NEPA/EO 12114 Compliance Schedule that covers all known or project system-related activities that may trigger compliance requirements, such as but not limited to:
    o Contracting for design, development, testing, and production of the system or subsystem.
    o Conducting test and evaluation of the system or subsystem.
    o Planning for deployment, basing, home porting, bed down, and training locations.
    o Planning new or major upgrades to facilities or supporting infrastructure to support the system.
    o Demilitarization and disposal of the system documentation including the approval authority of the documents as detailed in DoD and Components policy.
 • The NEPA/E.O. Compliance Schedule is maintained and addresses the activities, timelines, locations, type of NEPA/E.O. 12114 documentation, and including the approval authority of the documents as detailed in DoD and Component policy.
 • Identification of HAZMAT pursuant to National Aerospace Standard (NAS)411 and NAS411-1, wastes, and pollutants (e.g., discharges, emissions, and noise) associated with the system for operation and maintenance, including efforts to eliminate or minimize usage of the HAZMAT, per NAS411-1.
	F	U	U

1.2 Environmental considerations (i.e., existing or lack of NEPA/EO 12114 coverage) that directly affect testing are addressed in the TEMP and test plans as limitations or conditions of the testing to protect personnel and the environment.	F	U	U
1.3 The Program Office maintains the documents listed in the NEPA/ and EO 12114 Compliance Schedule, which may include the following (as applicable): • Categorical Exclusion	F	U	U

Environmental, Safety, and Occupational Health (ESOH)			
ASSESSMENT CRITERIA	**MS B**	**MS C**	**FRP**
• Environment assessment and finding of no significant impact • Environment Impact Statement and record of decision based upon an environmental impact statement *Assessors Note: This is not an all-inclusive list of the type of NEPA/EO 12114 documents that could be applicable to a program office action.*			
1.4 All known ESOH risks have been accepted by the appropriate approval authority prior to T&E and the release of the system to the user. The ESOH hazards, risks, and mitigation measures have been communicated to the T&E organization(s) and user. The user representative has provided formal concurrence prior to all serious and high-risk acceptance decisions. (MIL-STD-882)	IP	IP	F
1.5 The program has a plan for safe demilitarization and disposal of the system, including munitions and HAZMAT disposition. Disposal planning information should be an Annex in the LCSP. *Assessors Note: This should consider system components and manufactured items with HAZMAT, such as coatings containing heavy metals which are not hazardous during use, may require special handling during disposal due to the HAZMAT (e.g., lead-containing microelectronics. (DoDI 4160.28, DoD Demilitarization Program)*	I	F	U
1.6 For munitions developments and systems containing energetics, identify insensitive munitions compliance requirements and plans, in accordance with DoD and Component policy.	I	F	U
2.0 Safety and Occupational Health			
2.1 Noise sources are identified and evaluated during the system's design and control measures are implemented to minimize personal exposure.	F	U	U
2.2 Personal 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
2.3 A system safety program to include interaction with systems engineering has been established, per MIL-STD 882 and Component policy requirements.	F	U	U
2.4 System safety design requirements are specified, and legacy systems, subsystems, and components have been analyzed and incorporated into the design requirements, as appropriate.	IP	IP	IP

Environmental, Safety, and Occupational Health (ESOH)			
ASSESSMENT CRITERIA	**MS B**	**MS C**	**FRP**
2.5 A closed-loop hazard tracking system is implemented to document hazards. Hazard analyses are performed during the design process to identify hazards and categorize the risks, including HAZMAT and associated processes. Risk mitigation measures are identified, selected, and implemented to eliminate the hazard —reduce the risk to the lowest acceptable level within the constraints of cost, schedule, and performance— by applying the system safety design order of precedence.	IP	IP	IP

8   DOCUMENT REQUEST LIST

The Milestone (MS) columns in the document tables are marked to indicate where the document should be in the development cycle – either finalized or updated. Definitions for each are provided below.

Since programs vary in their acquisition approach and strategy (e.g., programs entering at MS C or programs utilizing non-MCA pathways such as MTA, DBS), the letters in the MS columns may vary and should be used as a guide and not a hard requirement.

F (Finalized): The document has been completed and is finalized and has resulted in approval or decision by the approving/decision authority. The document may also be in a completed state but not approved if a pending decision or approval does not affect dependent decisions or activities and the effort can be finalized prior to the MS.

U (Update): The document is being updated to reflect changes in statute, policy, or new data.

IP (In process): Document development in process.

Table 8-1 Document Request List

Typical Document Request/Description		Source	MS/ Decision Point		
			B	C	FRP
Acquisition Program Baseline (APB)	Documents the agreement among resource and functional sponsors, PMs, 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.	Title 10 U.S.C. § 4214 Title 10 U.S.C. § 4377	F	F	F
Acquisition Strategy (AS)	The AS is a comprehensive, integrated plan that identifies the acquisition approach and key framing assumptions, and describes the business, technical, PS, security, and supportability strategies that the PM plans to employ to manage program risks and meet program objectives. The strategy evolves over time and should continuously reflect the current status and desired goals of the program.	Title 10 U.S.C. § 4211 DoDI 5000.85	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.	Title 40 U.S.C. § 11312; §811, P.L. 106-398 Title 10 U.S.C. § 4251 Title 10 U.S.C. § 4252 DoDD 5105.84	F	F	F
Business Case Analysis for Performance Based Decisions and Support Decisions	Evaluates alternative solutions for obtaining best value while achieving operational and capabilities requirements balancing cost, schedule, performance, and risk.	Title 10 U.S.C. § 4324 DoDI 5000.91	F	U	U
Capability Documents (ICD, CDD, CDD Update)	The ICD Guides the Concept Refinement and Technology Development phases of the acquisition process and supports the MS A decision. The ICD includes a description of the operational capability gap, threat, shortcomings of existing systems and (C4I) architectures, capabilities required for the system, program support, force structure, Doctrine, Organization, Training, Material, Leadership and Education, Personnel and Facilities analysis, and schedule/program affordability for the system. Replaces the mission needs statement. 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 MS B. If required, a CDD Update is approved at MS C.	CJCSI 5123.01I JCIDS Manual	F	F	F
Commercial-Off-The Shelf (COTS) Refreshment Plan and 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.	Component Directives SD-22		F	U

Typical Document Request/Description		Source	MS/ Decision Point		
			B	C	FRP
Configuration Management Plan (CMP)	Defines the technical and administrative directions and surveillance actions to identify, manage, and document the functional, allocated, and physical characteristics of a configuration item; to control changes; and record and report change processing and implementation status.	DoDI 5000.88 para 3.4.c MIL-HDBK-61A SAE-GEIA-HB-649	F	U	U
Contractual Documentation	Contains the program contractual requirements. This may include the Request for Proposal (RFP), SOW or objectives, specification, contract deliverables, performance agreements, and any other related contractual documentation that contains support criteria and requirements.		F	U	U
Corrosion Prevention Control Plan	Mandatory for covered systems, identifies the strategy and plan for managing and preventing corrosion.	DoDI 5000.67 DoDI 5000.88 DoDI 5000.91	F	U	U
Cost Analysis Requirements Description (CARD)	Describes the complete program and 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 are addressed in the cost analysis. It also should be flexible enough to accommodate the use of various estimation methodologies.	DoDI 5000.73	F	U	U
Depot Source of Repair/Core Analysis/Determination	Identifies the Maintenance Requirements to determine if they are a Core capability (e.g., capability the DoD wants to retain organically).	Title 10 U.S.C. § 2464; § 4251 Title 10 U.S.C. § 4252 §801 P.L. 112-81 DoDI 5000.91 DoDI 4151.20 DoDI 4151.24 DoDD 4151.18	F	U	U
Development Test (DT)/Operational Test (OT) Results	Provides results from developmental and operational testing on a system.	Title 10 U.S.C. § 4171 Title 10 U.S.C. § 139		IP	F
Diminishing Manufacturing Sources and Material Shortages (DMSMS) Management Plan (DMP)	A DMP documents the foundations of a DMSMS management approach established by program office leadership and identifies the risks associated with deviations from the standard DMSMS management processes described in this document. As such, the DMP establishes a robust DMSMS management framework for a program office. Without an adequate plan, a program office cannot have effective DMSMS management. However, like all plans, the DMP should be based on factors that are known or anticipated, not overly optimistic assumptions. As such, the DMP should be adjusted as actual conditions change.	DoDD 4140.1-R DoDI 4245.15 DoDM 4245.15	F	U	U
DoD Component Cost Estimate/Cost Position	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, operations, support and, where applicable, disposal.	DoDI 5000.73	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.	Component Directives	F	U	U

Typical Document Request/Description		Source	MS/ Decision Point		
			B	C	FRP
Failure Reporting, Analysis and Corrective Action System (FRACAS)	A closed-loop system for the identification of hardware/software failures/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.	MIL-HDK 2155 Component Directives	IP	F	F
Human Systems Integration (HSI) Plan	Describes how the system will meet the needs of the Users (i.e., human operators, maintainers, and support personnel). This includes Human Factors Engineering (HFE) domain, Manpower domain, Personnel domain, Training domain, habitability domain, Safety and occupational Health (SOH) domain, and force protection and survivability (FP&S) domain. Also describes how the program will meet HSI and HSI-related programmatic requirements and standards including front end analysis, mission analysis, functional analysis, task analyses, and manpower estimates to reduce manpower, improve personnel domain characteristics through MCDs and TADs development, improve human performance through Design Interface and human-machine interface analyses, and eliminate or control to minimize user risks, issues, or hazards. HSI is the integrated analysis, design, and assessment over the life cycle of a system and associated support infrastructure in the domains of MPT&E, HFE, personnel survivability, habitability, safety, and occupational health the systems engineering process and program management effort that provides integrated and comprehensive analysis, design, and assessment of requirements, concepts, and resources for the seven HSI domains (manpower, personnel, training, HFE, habitability, safety and occupational health (SOH), and force protection and survivability).	DoDD 5000.01 DoDI 5009.95 HSI Guidebook	F	U	U
Independent Cost Estimate	An independent estimate that covers the entire life cycle of the program, including the development, production, operations and support, and disposal phases, regardless of funding source. The term "independent" refers to organizational and analytic independence. Organizational independence means that the cost estimate is prepared by an entity that is outside of any organization that would provide undue influence over the estimate. Analytic independence means that the cost estimate is free of any bias or preconceived notions about the program's most likely cost.	DoDI 5000.73	F	U	U
Information Support Plan (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 ACAT programs, including both information technology and national security systems that connect to the communications and information infrastructure.	DoDI 8330.01 DoDI 8320.02 DoDI 8410.03	F	U	U

Typical Document Request/Description		Source	MS/ Decision Point		
			B	C	FRP
Integrated Master Schedule/ Management Plan	Depicts the overall structure of the program and the key processes, activities, and MS in an event-based plan. It defines the accomplishments and criteria for each event in the plan. Note: For more information on IMS follow link in the footnote to go to the IMP/IMS Preparation and Use Guide.[19]	MIL-STD-881F Component Directives	F	U	U
Intellectual Property (IP) Strategy	Identifies and manages the full spectrum of IP and related matters (e.g., technical data and computer software deliverables, patented technologies, and license rights) from the inception of a program and updated throughout entire product life cycle.	Title 10 U.S.C. § 3771, § 3772, and § 3774, Title 10 U.S.C. § 4211 DoDI 5010.44	F	U	U
Item Unique Identification (IUID) Plan	Annex to the SEP. Describes the plan for encoding data matrix symbols that are applied to parts using a Direct Part Marking process to facilitate electronic data capture and transmission. Data elements are then used to track parts throughout their life cycle.	DoDI 8320.04	F	U	U
Level of Repair Analyses (LORA)	Provides an analysis to determine whether an item could 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.	MIL-HDBK-1390 Component Directives		F	U
Life Cycle Sustainment Plan (LCSP)	The LCSP is the primary program management reference governing operations and support planning and execution from program inception to disposal. An LCSP, including a comprehensive product support strategy, is required for all covered systems and is the principal document establishing the system's product support planning and sustainment.	DoDI 5000.91 Title 10 U.S.C. § 4324 DoD LCSP Outline V3.0	F	U	U
Maintenance Concept	The concept provides a brief description of the concept for operational maintenance, constraints and plans for support of items under development.	DoDI 5000.91	F		
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 Level of Repair Analyses (LORA), maintenance analyses, etc.	DoDI 5000.91		F	F
Manpower Analysis and Manpower Estimate (ME)	The ME provides the official statement of manpower requirements and risk assessment for achieving and supporting those requirements.	DoDI 5000.95 Title 10 U.S.C. § 4324, as amended by FY23 NDAA Section 806 (Requires a ME for covered systems be provided in the LCSP)	F	U	U
Manufacturing 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 product engineering, manufacturing methods, production and material control, scheduling and manufacturing cycle times, personnel, tooling, defect prevention, etc.	Component Directives		F	U

---

[19] IMP/IMS Preparation and Use Guide

Typical Document Request/Description		Source	MS/ Decision Point		
			B	C	FRP
Memoranda 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 Software Support Activity (SSA), inter-service agreements, etc. Field tasking agreements include funding documents that contain statements of work.	DoDI 4000.19 Component Directives	F	F	F
OMS/MP	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.	Component Directives	F	U	U
Operational Test Agency Report of Operational and Test Evaluation Results (DOT&E and IOT&E)	Provides operational test results from the Components testing agencies.	Title 10 U.S.C. § 4171 Title 10 U.S.C. § 139	F	F	F
Planned Maintenance System (PMS) Documentation	Includes scheduled maintenance instructions provided on maintenance requirements cards and maintenance index pages. May be included in the interactive electronic technical manual.	Component Directives		F	U
Preferred Parts Selection List/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.	Component Directives		F	U
Product Support Funding Requirements	Product Support Funding Requirements document identifies the support functions and sub-functions required to establish affordable and effective product support. It identifies support resource requirements and the funds available to meet those requirements. The summary displays requirements versus available funding for all Integrated Product Support Elements (IPS elements) and related disciplines, by FY and appropriation, and is traceable to logistic support plan tasks and activities.	Component Directives	F	U	U
Program Environmental, Safety, and Health Evaluation (PESHE)	This document is a management tool used to help PMs identify and manage Environmental, Safety and Occupational Health (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.	Title 42 U.S.C. § 4321-4347 E.O. 12114	F	U	U
Program Protection Plan (Includes the Anti-Tamper plan as an Annex)	Prepared for programs with critical program information.	DoDI 5200.08 Ch 3 DoDI 5200.39 DoDI 5200.44 DoDI 5000.83	F	F	F
Quality Assurance Surveillance Plan	Provides the contractors plan and program for assuring the quality of the system.	Component Directives		F	U

Typical Document Request/Description		Source	MS/ Decision Point		
			B	C	FRP
Reliability, Availability and Maintainability-Cost (RAM-C) Rationale Report	The RAM-C analysis provides an assessment that the Sustainment KPP and supporting R&M and O&S cost attributes are valid and feasible. A composite model of the system is developed using the best available R&M data (historical, similar systems, vendor test data for technologies) and is included in the RAM-C.	DoD 5000.88 DoDI 5000.91 RAM-C Outline Component Directives	F	U	U
Replaced System Sustainment Plan (RSSP)	Identifies how the system being replaced will be sustained.	Title 10 U.S.C. § 4321	F	F	F
Results of Design Analyses	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.	Component Directives		F	F
Risk Management Plan/Assessment	Describes the approach to identify, assess, mitigate, continuously track, control, and document program risks.	Title 10 U.S.C. § 4211 Title 10 U.S.C. § 4212 Component Directives	F	U	U
Software Development Plan	Describes responsibilities, tasks, deliverables, 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.	Component Directives	F	U	U
Software Plan	Documents the procedures for identifying, organizing, controlling, and tracking the configuration of the software (i.e., selected software work products and their descriptions), systematically controlling changes to the configuration, and maintaining the integrity and traceability of the configuration throughout the software life cycle.	Component Directives	F	U	U
Software Security Plan	Addresses various aspects of security such as information assurance, protection of critical program information, and obtaining security certification and accreditation if not included in other documents.	Component Directives		F	U
Software Support/Sustainment Plan	Describes the activities to ensure that implemented and fielded software continues to fully support the operational mission of the software.	DoDI 5000.91 Component Directives	F	U	U
Supply Support Management Plan	Identifies the major supply support events, deliveries, and MS for an acquisition or configuration change with projected and actual delivery dates for each event from budgeting through sustainment.	DoDI 4140.01 Component Directives		F	U
Supportability Analysis Summaries	Includes Maintenance Planning & Repair Analysis; Support & Test Equipment; Supply Support; MPT&E; Facilities; Packaging, Handling, Storage, and Transportation (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 elements.	DoDI 5000.91 PSM Guidebook Component Directives		F	U

Typical Document Request/Description		Source	MS/ Decision Point		
			B	C	FRP
System Operating & Maintenance Documents	Contains information and instructions for the installation, operation, maintenance, training, and support of a system.	Component Directives		F	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. (See also IUID Plan, an annex to the SEP)	DoDI 5000.88 Component Directives SEP Outline V4.0	F	U	U
Systems Safety Analysis/Plan	Provides the plans and analyses to achieve acceptable safety risk through a systematic approach of hazard analysis, risk assessment, and risk management.	Component Directives	F	U	U
Test and Evaluation Master Plan (TEMP)	Documents the overall structure and objectives of the test and evaluation program consistent with the ICD or CDD and AS. It identifies the Development Test and Evaluation (DT&E), Operational Test and Evaluation (OT&E), Live Fire Test and Evaluation (LFT&E) activities and provides the framework to generate detailed T&E plans.	DoDI 5000.89	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.	Component Directives	IP	F	U
Training Plan	Identifies the resources required to establish and maintain an effective training program throughout the acquisition life cycle. It controls planning for meeting the training requirements and identifies personnel required to install, operate, maintain, or to otherwise use the system.	Component Directives	IP	F	U

9 ACRONYMS AND GLOSSARY

9.1 Acronyms

ACRONYM MEANING

ACAT   Acquisition Category
AICUZ   Air Installations Compatible Use Zones
AIT   Automated Identification Technology
A_m Materiel Availability
ANSI/HFES   American National Standards Institute/Human Factors and Ergonomics Society
APA   Additional Performance Attributes
A_o Operational Availability
AoA   Analysis of Alternatives
AP   Acquisition Plan
APB   Acquisition Program Baseline
AS   Acquisition Strategy

BCA   Business Case Analysis
BIT   Built-In-Test
BOM   Bill of Material

CAI   Critical Application Item
CAPE   Cost Assessment and Program Evaluation
CARD   Cost Analysis Requirements Description
CATEX   Categorical Exclusion
CBM   Condition Based Maintenance
CBM+   Condition Based Maintenance Plus
CCB   Configuration Control Board
CDD   Capability Development Document
CDR   Critical Design Review
CDRL   Contract Data Requirement List
CI   Configuration Item
CM   Configuration Management
CMP   Configuration Management Plan
CONOPS   Concept of Operations
COTS   Commercial-Off-The Shelf
CPI   Critical Program Information
CSA   Configuration Status Accounting
CSI   Critical Safety Item
CWT   Customer Wait Time
C4I   Command, Control, Communications, Computer and Intelligence

DAWIA   Defense Acquisition Workforce Improvement Act
DBS   Defense Business Systems
DFARS   Defense Federal Acquisition Regulation Supplement
DIA   Data Interface Agreement
DMSMS   Diminishing Manufacturing Sources and Material Shortages

DoD   Department of Defense
DT   Development Test
DASD(LOG)   Deputy Assistant Secretary of Defense (Logistics)
DASD(MR)   Deputy Assistant Secretary of Defense (Materiel Readiness)
DASD(PS)   Deputy Assistant Secretary of Defense (Product Support)

ECP   Engineering Change Proposal
ESOH   Environmental, Safety, and Occupational Health
ESQD   Explosive Safety Quantity Distance
EO   Executive Order

FCA   Functional Configuration Audit
FMECA   Failure Mode, Effects, and Criticality Analysis
FOC   Full Operational Capability
FONSI   Finding of No Significant Impact
FRACAS   Failure Reporting, Analysis, and Corrective Action System
FRP   Full Rate Production
FY   Fiscal Year

HAZMAT   Hazardous Material
HFE   Human Factors Engineering
HSI   Human Systems Integration

ICD   Initial Capabilities Document
ICE   Independent Cost Estimate
IDE   Integrated Digital Environment
IETM   Interactive Electronic Technical Manual
ILA   Independent Logistics Assessment
IMP   Integrated Master Plan
IMS   Integrated Master Schedule
IOC   Initial Operational Capability
IPS   Integrated Product Support
IPT   Integrated Process Team
ISP   Information Support Plan
ITRA   Independent Technical Risk Assessment
IUID   Item Unique Identification

JCIDS   Joint Capabilities Integration and Development System
JSCA   Joint Supply Chain Architecture

KPP   Key Performance Parameters
KSA   Key System Attributes
KSAO   Knowledge, Skill, Abilities, and Other Attributes

LCSP   Life Cycle Sustainment Plan
LCCE   Life Cycle Cost Estimate
LORA   Level of Repair Analysis
LPD   Logistics Product Data

MAM	Maintenance Assist Module
MDA	Milestone Decision Authority
MDAP	Major Defense Acquisition Programs
ME	Manpower Estimate
MILCON	Military Construction
MLDT	Mean Logistics Delay Time
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MPT&E	Manpower, Personnel, Training and Education
MS	Milestone
MTBF	Mean Time between Failure
MTTR	Mean Time to Repair
NATO	North Atlantic Treaty Organization
NDI	Non-Developmental Item
NEPA	National Environmental Policy Act
O&S	Operating and Support
O&S	Operations and Support (Phase)
OEM	Original Equipment Manufacturer
OMS/MP	Operational Mode Summary/Mission Profile
OSA	Other System Attributes
OSD	Office of the Secretary of Defense
OT	Operational Test
PBA	Performance Based Agreement
PBL	Performance Based Logistics
PCA	Physical Configuration Audit
PDR	Preliminary Design Review
PEO	Program Executive Officer
PESHE	Program Environmental Safety and Health Evaluation
PHS&T	Packaging, Handling, Storage, and Transportation
PM	Program Manager
PMCS	Partially Mission Capable Supply
PMS	Planned Maintenance System
POA&M	Plan of Actions and Milestones
POF	Perfect Order Fulfillment
PRR	Production Readiness Review
PSI	Product Support Integrator
PSM	Product Support Manager
PSP	Product Support Provider
R&M	Reliability and Maintainability
RAM	Reliability, Availability, Maintainability
RAM-C	Reliability, Availability, Maintainability, and Cost
RBS	Readiness Based Sparing
RCM	Reliability Centered Maintenance

RDT&E	Research, Development, Test and Evaluation
RFID	Radio Frequency Identification
RFP	Request for Proposal
RICE	Reports, Interfaces, Conversions, and Enhancements
ROD	Record of Decision
RTOK	Retest-OK
SE	Support Equipment
SEP	Systems Engineering Plan
SIM	Serialized Item Management
SME	Subject Matter Expert
SMR	Source, Maintenance, and Recoverability
SOW	Statement of Work
SR	Sustainment Review
SSA	Software Support Activity
SSS	System/Subsystem Specification
S&TE	Support and Test Equipment
SVR	System Verification Review
SYSCOM	Systems Command
TEMP	Test and Evaluation Master Plan
TPS	Test Program Sets
TSCMC	Total Supply Chain Management Cost
UID	Unique Identification

9.2   Glossary

A complete Glossary of acquisition terms is maintained on the Defense Acquisition University website. The Defense Acquisition University Glossary is located at https://www.dau.edu/tools/t/DAU-Glossary.

10   REFERENCES CITED

1.   Product Support Management

DoD Instruction 5000.91, Product Support Management for the Adaptive Acquisition Framework, (November 4, 2021)

Chairman of the Joint Chiefs of Staff (CJCS) Instruction 5123.01I; Charter of the Joint Requirements Oversight Council and Implementation of the Joint Capabilities Integration and Development System, (October 30, 2021)

CJCS, Manual for the Operation of the Joint Capabilities Integration and Development System, (2021)

DoD Risk, Issue and Opportunity Management Guide, (January 2017)

DoD Instruction 5000.88, Engineering of Defense Systems, (November 18, 2020)

DoD Systems Engineering Plan Outline, Version 4.0, (September 2021)

Title 10 U.S.C. § 2451, Defense Supply Management

DoD Manual 4120.24, Defense Standardization Program Procedures, (September 24, 2014, Change 2, October 15, 2018)

Federal Acquisition Regulation 24.7, Warranties

Defense Federal Acquisition Regulation 247.7, Warranties, (September 29, 2022)

DoD Warranty Guide, Version 2.0, (October 30, 2020)

Defense Acquisition University Glossary, Materiel Fielding Plan

Product Support Business Case Analysis Guidebook, (March 2014)

Performance Based Logistics Guidebook, (April 2016)

MIL-HDBK-61B, Military Handbook, Configuration Management Guidance, (April 7, 2020)

SAE-GEIA-HB-649A, Configuration Management Implementation Guide

2.   Design Interface

DoD Instruction 5000.85, Major Capability Acquisition, August 6, 2020

DoD Instruction 4140.01, DoD Supply Chain Materiel Management Policy, March 6, 2019

DoD Instruction 5000.89, Test and Evaluation, November 19, 2020

DoD Instruction 3110.05, Readiness-based Materiel Condition Reporting for Mission-Essential Systems and Equipment, September 25, 2006

Reliability, Availability, Maintainability and Cost (RAM-C) Rational Report Outline Guidance

3. Sustaining Engineering

DoD Instruction 4245.15 Diminishing Manufacturing Sources and Material Shortages Management, November 5, 2020

4. Supply Support

DoD Manual 4140.01, Volume 3, DoD Supply Chain Materiel Management Procedures: Materiel Sourcing, October 9, 2019

DoD Manual 4100.39, Federal Logistics Information System (FLIS) Procedures, March 8, 2017

DoD Instruction 4140.69, Engineering Support Instructions for Items Supplied by Defense Logistics Agency (DLA), September 30, 2016

DoD Manual 4140.01, Volume 7, DoD Supply Chain Materiel Management Procedures: Supporting Technologies, April 18, 2019

DFARS Clause 252.211-7006, Passive Radio Frequency Identification, December 2019

DFARS Clause 252.211-7003, Item Unique Identification and Valuation, March 2022

DoD Instruction 8320.04, Item Unique Identification (IUID) Standards for Tangible Personal Property, September 3, 2015

5. Maintenance Planning and Management

DoD Directive 4151.18, Maintenance of Military Materiel March 31, 2004

DoD Handbook 470A, Designing and Developing Maintainable Products and Systems, August 4, 1997

Title 10 U.S.C. § 2460, Definition of Depot Level Maintenance and Repair

Title 10 U.S.C. § 2464, Core Logistics Capabilities,

Title 10 U.S.C. § 2466, Limitations on the performance of depot-level maintenance of materiel

Title 10 U.S.C. § 2474, Centers of Industrial and Technical Excellence: designation; public private partnerships

DoD Instruction 5000.02, Operation of the Adaptive Acquisition Framework, January 23, 2020

Military Specification MIL-P-24534A, Planned Maintenance System; Development of Maintenance Requirement Cards, Maintenance Index Pages, and Associated Documentation, May 7, 1985

6. PHS&T

MIL-STD-2073/1E, Department of Defense Standard Practice for Military Packaging, May 23, 2008

MIL-STD-129R, Department of Defense Standard Practice, Military Marking for Shipment and Storage, February 18, 2014

GEIA-STD-0007C, Logistics Product Data, April 16, 2014

7. <u>Technical Data</u>

DoD Instruction 5010.44, Intellectual Property (IP) Acquisition and Licensing, October 16, 2019

Title 10 U.S.C. § 4324, Life Cycle Management and Product Support,

MIL-STD-31000B, Technical Data Packages, October 31, 2018

MIL-PRF-32216B, Evaluation of Commercial off the Shelf (COTS) Manuals and Preparations of Supplemental Data, December 3, 2021

8. <u>Support Equipment</u>

MIL-HDBK 2097A, Acquisition of Support Equipment and Associated Integrated Logistics Support, July 25, 1997)

MIL-STD-130N, Identification Marking of U.S. Military Property, December 17, 2007

Section 815 of Public Law 110-417, Preservation of Tooling for Major Defense Acquisition Programs, March 2, 2011

9. <u>Training and Training Support</u>

DoDD 1322.18, Military Training, October 3, 2019

10. <u>Manpower and Personnel</u>

MIL-HDBK-46855A, Human Engineering Requirements for Military Systems, Equipment, and Facilities, May 24, 2011

11. <u>Facilities and Infrastructure (and Platform Integration)</u>

National Environmental Policy Act (NEPA)/Executive Order (EO) 12114, Environmental Effects Abroad of Major Federal Actions

12. <u>Information Technology (IT) Systems Continuous Support</u>

DoD Instruction 5200.39 (Reference(b)

DoDI 5000.02 (Reference(a)), DoDD 5200.47e, Anti-Tamper

DoDD 5000.01, The Defense Acquisition System, September 9, 2020

APPENDIX A – POST IOC ASSESSMENTS

A1   RECOMMENDED APPROACH FOR POST-IOC ASSESSMENTS

A1.1 Objective

This section addresses the process specific to Post-IOC assessments. It describes the differences between the ILA conducted for programs pre-IOC, and assessments conducted post-IOC. Processes that are similar between the pre-IOC and post-IOC assessments are not restated.

A1.2 Introduction

Covered systems[20] will conduct Sustainment Reviews.[21] SRs are governed by Title 10 U.S.C. § 4323 and are required for all active and in-service covered weapon systems. SRs begin 5 years after IOC and repeat every 5 years thereafter. SRs end 5 years before a covered system's planned end of service date. The SRs focus on statutory sustainment elements and track Operating and Support (O&S) cost growth. SRs satisfy the requirement for ILAs (for applicable programs) after that program has achieved IOC.

Post-IOC criteria listed below can be tailored and used at component's discretion for non-covered systems. Such assessments are conducted to assess if the PM delivered to the user a system that is supportable per the planned requirements, was executed to the program planning documentation, and is within the estimated ownership costs. It also reviews the status of progress addressing deficiencies noted during previous assessments or during operations, such as low reliability. It also assesses any IPS elements where the planning was implemented to the requirement but the requirement itself was not adequate. If threats or support postures have changed, the assessment should review the "as planned" supportability posture to determine how to best support the system in the new environment.

ILAs conducted prior to acquisition MS during system development serve to support that particular MS decision at hand. However, the Post-IOC assessment results are a snapshot of the system after fielding and provide the basis for a system review unto itself. The Post-IOC assessment brings together sponsors, operators, and stakeholders to resolve any shortfalls or issues that may have emerged since the beginning of operations. The initial Post-IOC assessment represents a key transition point between acquisition and sustainment in the system life cycle.

Assessment results can influence future requirements for modifications or upgrades to the system, as well as future capability needs met through successor acquisition programs. Institution of the Post-IOC assessment notifies and influences PMs and PSMs of systems in development that actual outcomes of the planned product support strategy is assessed by senior stakeholders after fielding. Post-IOC ILAs address each IPS element as applicable, including in-service metrics established in the program requirements documents. Overall, Post-IOC assessments assist the PM in the successful implementation of total life cycle management of the product support strategy.

A1.3 Timing

For non-covered systems, assessments are recommended to be continued after IOC, with timeframes determined by the services. However, first post-IOC assessment should be scheduled

---

[20] Definition of Covered System included in 10 USC 4324
[21] Requirement for Sustainment Reviews included in 10 USC 4323

5 years after the FRP decision, even if IOC status is declared before this 5-year period. The recommended default period for conducting Post-IOC assessments is every 5 years; however, a review of past best practices indicate certain conditions could trigger this assessment to be conducted earlier. These triggers include:

- If A_o or A_m is < 15% from stated requirements and continues for four consecutive reporting periods
- If the O&S Cost KSA is > 15% from stated requirements for four consecutive reporting periods.
- If the Business Case Analysis supports fundamental changes in the product support strategy and related contracts.
- When requested by an operational commander.
- When program risk factors warrant an early Post-IOC assessment.

A1.4 Process

The Post-IOC assessment focuses on program performance to date. The following entrance criteria should be completed prior to the assessment:

- The program has declared IOC.
- An update is completed of the program life cycle cost estimates with any actual sustainment costs and expenditures known as a result of achieving IOC status and operating the fielded system.
- The LCSP has been updated as required.
- Any other entrance criteria levied on the program following a previous system review or ILA.

Recommended criteria for Post-IOC assessments are contained in this appendix. Post-IOC assessments may include (as applicable):

- Validation that actual supportability performance is meeting design thresholds identified in KPP, KSA, and APA measures of support called out in the program's CDD or Warfighter end-user performance-based arrangement, if applicable.
- Validation of LCCE, including a comparison of actual costs to the amount of funds budgeted and appropriated in the previous 5 years, and if funding shortfalls exist, an explanation of the implications on equipment availability.
- Assessment that the product support strategy, as delineated in the LCSP, is being executed as planned or has been revised to ensure satisfactory support of major design and product support improvements based on updated support analyses.
- Confirmation of satisfactory configuration control.
- Assessment of obsolescence and DMSMS.
- Validation with the Product Support Integrator (PSI) and Product Support Provider (PSP) that actual costs and performance are within cost and performance baselines established by the BCA.
- Assessment of training effectiveness, customer satisfaction, and product improvements.
- Assessment of Configuration Status Accounting, including sponsor owned material, Government-owned material, and plant property.
- Assessment of the weapon system supply chain.
- Assessment of contract execution as related to system sustainment.
- Assessment of technology, manufacturing, or supply chain risks.

- Resolution of test and evaluation issues.
- Confirmation of satisfactory delivery and Government acceptance of all contractually ordered technical data and computer software, including confirmation of correct data rights and distribution markings on delivered data.
- Assessment of overall system and sustainment effectiveness, including system/subsystem failure rates, down time, turn-around times, associated delay times, or allowance effectiveness.
- Assessment whether initial product support is meeting performance and cost expectations of the operational commands and repair facilities, including an analysis of the most cost-effective source of repairs and maintenance.
- Assessment of customer satisfaction (the degree of satisfaction with the performance of the end item and the overall supportability program).
- Determination how the sustainment strategy will evolve to accommodate continued system effectiveness, affordability, and execution.

Post-IOC assessments essentially follow the same process as described in the rest of this guide. However, there are some differences, as identified below:

Step 2: For Post-IOC assessments, request a tailored listing of assessment criteria.

Step 5: Conduct the opening meeting including major command representatives.

Step 7: Review Requirements, Capabilities, and Metrics: Typically, there is no process change, although some documents or material to be reviewed may differ, or the original requirement may have changed, due to changes to Concept of Operations (CONOPS) or threat.

Step 8: Review Product Support Documentation and Execution: Typically, there is no process change, although some documents or material to be reviewed may differ.

Step 11: Draft Report: Rating Criteria for Post-IOC ILAs differ from the pre-IOC ILAs – see below section in this appendix.

Step 12: Issue the Final Report: The distribution of the report may be different for Post-IOC assessments as defined by the Component.

Step 13: Issue Product Support Certification: Individual Service or Component policy and governance dictates how formal sustainment reviews and briefs provide the follow-up decision forum for presenting the results of Post-IOC assessments.

A1.5 Rating and Certification

The overall program and each of the IPS elements receive a rating based on the criteria in the attached checklist. Program certification is based on these criteria as well. These criteria are different from the rating criteria for pre-IOC assessments.

Table A-1 Rating and Certification

Grade	
Minor (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, KSAs, 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 (Yellow)	• 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/threat has changed. • Supportability KPPs, KSAs, 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/KSAs are being impacted. • Supportability KPPs, KSAs, 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. • All Supportability Products have been delivered to the requirements but the requirement is inadequate, either because the requirement was misstated or the mission profile/threat has changed. • 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.

A2. POST IOC ASSESSMENT CONSIDERATIONS

Note: Covered systems will conduct Sustainment Reviews.[22] Use of this checklist for non-covered systems is at the discretion of the military Component.

1.0 Product Support Management
ASSESSMENT CONSIDERATIONS
1.1 The Product support management processes are mature. These are identified in the LCSP. (DoDI 5000.91)
1.2. The program office billets are filled with sufficient personnel who have the required experience and training.
1.3 Product Support risks and mitigations are tracked and reported in the risk management process. (DoDD 5000.91, para 4.3(b.6))
1.4 Deficiencies identified by the user (e.g., Failure Reports, deficiency reports, technical publication deficiency reports, help desk tickets) are processed within the stated time frame and to the metrics identified in program documentation.
1.5 Product Support Arrangements, such as MOAs, are in place between the program office, gaining command or platform, participating acquisition resource manager, user, (e.g., those identified in the SEP), field activities, software support activities, and others that define supportability requirements, administrative and personnel resources, funding, physical resources, etc. The work is being executed as tasked. Examples are MOAs to a field activity to provide support, DoD activity to host a backup disaster recovery site.
1.6 All Operational Test findings of deficiency are resolved or are in the process of being mitigated.
1.7 Ensure program MS and initial program baseline deliveries in support of Full Operational Capability (FOC) and ensure product improvement solutions are tracking against IMS.
1.8 The program office is staffed for all core and sub-product functions. These positions are fully funded, either with mission funding or by Working Capital funds.
1.9 Sustainment metrics are defined and measurable. Metrics: - Are linked to system KPPs/KSAs/APAs and other supportability performance indicators   - Are used to substantiate in-service issues and budget priorities   - Address system reliability and incentivize use of common DoD components   - Motivate desired long-term behavior   - Are understood and accepted by all stakeholders   - Are assessable and verifiable
1.10 Contracts include metrics for tracking and assessing contract performance

---

[22] DoDI 5000.91 para 7.2b(2)

1.0 Product Support Management
ASSESSMENT CONSIDERATIONS
1.11 The process to collect product support performance metrics is in place and metrics are reported, collected, tracked, and assessed to measure PSI and provider performance. Trends are monitored and fed back for appropriate corrective actions.
1.12 Corrective actions are taken to correct performance that is not meeting required metrics.
1.13 Exit criteria have been established in the performance-based solution. The product support arrangements are in place to ensure the orderly and efficient transfer of performance responsibility back to the Government upon completion or termination of the product support contracts. The arrangements contain 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.
1.14 The respective contractual packages for support tasking reflect IPS element efforts to be completed and delivered.
1.15 The contractual package clearly identifies the functions, responsibilities, and authorities of Field Component Representatives, if used. The contract is adequately funded.
1.16 The LCSP has been reviewed and coordinated with the user.
1.2 Configuration Management (CM)
1.2.1 A process for configuration identification, control, status accounting, Configuration Control Board processes and membership (to include product support participation), deviations, engineering changes, and verification/audit functions is established for hardware, software, and product/technical data, and is being executed per the approved Government and contractor CMP. (DoDI 5000.88, para 3.4.c, MIL-DBK-61A; SAE-GEIA-HB-649)
1.2.2 All nomenclature has been established where appropriate.
1.2.3 The Configuration Status Accounting (CSA) 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 information regarding any replaceable components within the product and the associated product/technical data (See refs above.)
1.2.4 An effective process is in place for processing Engineering Change Proposals (ECPs), deviations, and the like. ECPs, deviations, and the like are tracked and managed per the program's configuration management plan and process.
1.2.5 The status of proposed engineering changes from initiation to final approval and contractual implementation has been recorded and reported in the CSA records/data base (See refs above.)

2.0 Design Interface[23]
ASSESSMENT CRITERIA
2.1 General
2.1.1 Failure rates have been verified and used to update spares requirements and annual operating costs.
2.1.2 For applicable programs, provisions for identifying CSI, CAI, and non-critical items have been identified
2.1.3 The list of CSIs, CAIs 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.
2.1.4 Built-In-Test (BIT) metrics are collected to validate BIT effectiveness and performance against requirements.
2.1.5 BIT and diagnostics are meeting performance requirements (e.g., false alarm rates, percent fault isolation).
2.2 Reliability, Availability & Maintainability (RAM)
2.2.1 RAM measures (e.g., A_o, A_m, MTBF, MTTR and MLDT, Fault Detection, Fault Isolation, and False Alarm) are defined in quantifiable terms and are being measured.
2.2.2 RAM parameters defined in the requirement documents (e.g., MTBF, MTTR, and BIT effectiveness) are achieved.
2.2.3 Required programs are reporting the Sustainment KPP metrics comprising of Ao, Am, and supporting attributes (Reliability, Maintainability and O&S cost) into the appropriate sustainment data bases (Advana) as required by DASD(MR)   *Note: The PM and PSM will utilize Advana (and/or any future successor systems) and service visibility and management of O&S cost reporting systems such as VAMOSC, OSMIS, AFTOC to support ILAs/SRs that track sustainment metrics and O&S costs across the program's life cycle.*
2.2.4 Field data is collected from systems in production and fielded units to verify if the Sustainment KPP and supporting R&M attributes are being met. Note: Use of on-board and off board data along with the optimized use of sensors combined with telemetry is desired, consistent with the program's CBM+ strategy.
2.2.5 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.
2.2.6 Other Sustainment metrics are being tracked and achieved as defined by program documentation.

---

[23] HSI factors are included in 10.0, Manpower and Personnel

2.0 Design Interface[23]
ASSESSMENT CRITERIA
2.2.7 A process has been implemented to assess achieved performance of the Sustainment KPP and supporting R&M and O&S cost attributes by collection and analysis of user data, for factory and fleet.
2.2.8 A process is in place or included in the failure reporting system for the reporting of Re Test-OK (RTOK). This is documented in a formal process and requirements are imposed on the commercial or organic activity.
2.3 Human Systems Integration (HSI)
2.3.1 HSI analysis has been performed addressing operator, maintainer and support personnel. (MIL-STD-46855A, Human Engineering Requirements for Military Systems, Equipment, and Facilities, May 24, 2011 –re-validated December 2020): • Accessibility • Visibility • Human factors/ergonomics • Testability • Complexity • Standardization and interchangeability • Use of mock-ups, modeling, and simulation • Operational experience • Workspace Environment (e.g., heating, cooling, ventilation, illumination, noise, vibration) • Design for effective handling and carrying • Controls and displays • User computer interface • Usability A human-readiness model (e.g., anthropometry modeling, ANSI/HFES 400) is used to assess the effects of various levels of human performance, human reliability, human/system redundancies, and operational and maintenance concepts on operational availability address human contribution to total system performance.
2.3.2 An HSI plan has been developed, resourced, executed, and maintained, and has been coordinated with subsystem HSI plans and addressed in the LCSP and SEP.

3.0 Sustaining Engineering
ASSESSMENT CRITERIA
3.1 Analysis
3.1.1 Reliability Growth data and curves reflects that reliability is improving.
3.1.2 Reliability verification testing has been planned/conducted for all components as applicable, including COTS components, to ensure they meet or exceed overall system reliability requirements.
3.1.3 Information from Product Quality Deficiency Reports (PQDRs) is tracked for trends and product improvement.
3.1.5 Support posture is still valid to meet mission requirements as currently defined in CONOPS, OMS/MP, and DRM.
3.2 Diminishing Manufacturing Sources and Material Shortages (DMSMS)
3.2.1 The DMSMS program is being executed per the formal DMSMS program and management plan that has been established and documented consistent with DoD and each Component's policy and guidance. (DoD 4140.1, DoD Supply Chain Materiel Management Regulation of May 23, 2003)
3.2.2 Updates to the BOM are regularly updated and loaded into a DMSMS forecasting/management tool and/or service, and the program is receiving forecasts on a scheduled basis. All identified DMSMS risks (e.g., end of life issues) have been mitigated, or the solution and funding to mitigate the risk has been identified.
3.2.3 The program has defined DMSMS metrics and tracks DMSMS cases, trends, and associated solutions and costs, and has established a plan to report these findings IAW each Component's policy and guidance.
3.2.4 The DMSMS program is effective in resolving DMSMS cases or end-of-life issues.
3.3 Failure Reporting, Analysis and Corrective Action System (FRACAS)
3.3.1 Failures are analyzed and trended via FRACAS for IPS element visibility. BIT indications and false alarms are analyzed and included in the FRACAS process. (DoD R&M Engineering Body of Knowledge; DI-SESS-80255B, Failure Summary and Analysis Report; MIL-HDBK-338B Electronic Reliability Design)
3.3.2 A FRACAS review is performed on production and deployed units.
3.3.3 Safety/mishap reports associated with material and design deficiencies are linked with or provide input into the FRACAS.
3.4 Corrosion Prevention and Control
3.4.1 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. (DoDI 5000.67, CPC Guidebook, 2022; and DoDI 5000.91)

4.0 Supply Support
ASSESSMENT CRITERIA
4.1 Supply Chain Management
4.1.1 Sparing analyses and levels are being continuously conducted based on consumption levels and failure data. On-Board Repair Parts reduction initiatives are continuously being assessed.
4.1.2 Level one Joint Supply Chain Architecture (JSCA) metrics (Perfect Order Fulfillment (POF), Customer Wait Time (CWT), and Total Supply Chain Management Cost (TSCMC)) and management processes are being used for tracking and assessing end-to-end supply chain performance.
4.1.3 Supply chain metrics below JSCA level one are being used to identify and prioritize opportunities for improvement (e.g., turnaround times, repair times, delivery times).
4.1.4 Operating and support cost estimates are compared to the baseline in the O&S KSA or APA.
4.1.5 End-to-end logistics chain sustainment solutions have the flexibility to meet the full spectrum of contingencies, to include surge capacity, with no loss of operational capability or tempo.
4.1.6 Support strategies are supporting "last tactical mile (e.g., base, port or stock point to deployed user)" and deployed systems in austere environments.
4.1.7 A supply chain management process has been established to address and eliminate the introduction of counterfeit components into the weapon system during repair.
4.1.8 Enterprise integration enables a single view of the supply chain of both organic and commercial provider asset inventories and asset tracking (i.e., Total Asset Visibility).
4.1.9 The inventory of spares and critical spares is procured, and spares records are maintained.
4.1.10 Allowances are determined and updated as required.
4.1.11 Provisions for surge requirements are identified and planned for.
4.1.12 Item management codes are assigned, including SMR codes for HAZMAT.
4.1.13 Provisioning data reports have been generated and are updated based on usage/failure data. All requirements have been met for DoD Components to obtain National Stock Numbers (NSN) and catalog each item. (DoD Instruction 4140.01, DoD Supply Chain Materiel Management Policy, and DoD Manual 4100.39, Federal Logistics Information System (FLIS) Procedures)[24]

---

[24] More information on configuration management and technical data management responsibilities can be found in DoD Instruction 4140.69, Engineering Support Instructions for Items Supplied by Defense Logistics Agency, and provisioning in accordance with DoD Instruction 4140.01, DoD Manual 4100.39, and DoD Manual 4140.01, Volume 2, DoD Supply Chain Materiel Management Procedures: Demand and Supply Planning.

4.0 Supply Support
ASSESSMENT CRITERIA
Examples include: • Recommended repair parts list provided for pre-operational repair parts and training equipment • Provisioning parts list determining the range and quantity of support items for an initial period
4.1.14 The supply support provider has the capability to accept demand requisitions and provide status reports by electronic data interchange.
4.1.15 Interim supply support requirements are in place and effective.
4.1.16 Transition planning is conducted to ensure attainment of full operational support beyond the interim support period for all applicable sustainment factors.
4.1.17 Contractor teams supporting fielded units are providing the requisite level of support and expertise when Government support may not be available.
4.1.18 IUID DFARS Clause 252.211-7003 / 252.211-7007, Item Identification and Valuation added to all solicitations and contracts as appropriate.
4.1.19 IUID Program plan and strategy have been developed and updated consistent with DoD and each Component's policy and guidance, including: • DoDI 8320.04 - IUID Standards for Tangible Personal Property, 2019 • DoDI 8320.03 CH 3 Unique Identification (UID) Standards for Supporting a DoD Information Enterprise, 2021
4.1.20 Program IUID (DoDI 8320.04, Item Unique Identification (IUID) Standards for Tangible Personal Property) and Serialized Item Management (SIM) are adequately addressed in the appropriate program supportability plans. (DoDI 4151.19, Serialized Item Management (SIM) for Life-Cycle Management of Materiel)
4.1.23 IUID Implementation and Compliance Metrics have been identified and are tracked.

5.0 Maintenance Planning and Management
ASSESSMENT CRITERIA

5.1 Maintenance task times (e.g., MTTR) metrics are met for all maintenance and repair actions.
5.2 Maintenance skill levels and number of maintenance and support provider personnel do not exceed documented requirements.
5.3 Performance monitoring, fault detection, fault isolation, and diagnostics (e.g., BIT) are performing to specified requirements and optimized to meet maintenance and manning requirements.
5.4 Economic and non-economic Level of Repair Analysis (LORA) is conducted as part of the decision process to determine what items are repairable or can be discarded.
5.5 Metrics are collected on maintenance programs (e.g., Condition Based Maintenance Plus (CBM+) program or RCM) to determine where adjustments can be made to reduce scheduled maintenance and manpower requirements, while reducing operation and support costs and ensuring the appropriate maintenance is performed.
5.6 Specific criteria for repair and maintenance for all applicable maintenance levels in terms of time, accuracy, repair levels, built-in-test, testability, reliability, maintainability, nuclear hardening, SE requirements (including automatic test equipment), manpower skills, knowledge and abilities, and facility requirements for peacetime and wartime environments are defined and are being met.
5.7 Maintenance and repair manuals state specific maintenance tasks, including battlefield damage repair procedures, to be performed on the materiel system.
5.8 Maintenance manuals and Interactive Electronic Technical Manuals (IETM) have been delivered and are in adequate quantities to support maintenance and repair actions. When IETMs are used, they are accessible in the areas where work is being accomplished.
5.9 Hosting requirements (e.g., interfaces) for the maintenance data reporting system are adequate when used/deployed on a platform (e.g., ship, carrier).
5.10 Maintenance planning documentation identifies: • Tools and test equipment by task function and maintenance level • Category codes (e.g., Source, Maintenance and Recoverability (SMR) codes) • Manufacturer's part numbers; nomenclatures; descriptions; estimated prices and recommended S&TE quantities, including S&TE for S&TE
5.11 System anomalies and intermittent failures are analyzed for possible changes to the BIT design, thresholds/tolerances, and/or filtering.
5.12 A corrosion prevention control program is in place and has been incorporated into maintenance planning for all required ACAT I programs and all programs that are susceptible to degradation from corrosion.

5.0 Maintenance Planning and Management
ASSESSMENT CRITERIA
5.13 Final preventive maintenance system products have been certified, are resident in the authoritative database, and have been delivered to the users.
5.14. The depot(s) is/are ready to accept workload.
5.15 If a commercial depot is used, the contract has been awarded.
5.16 The depot manager has certified the depot is ready to support the system. If not certified, the anticipated certification date and criteria have been identified and that date is valid to support the system.
5.17 Required organic depot personnel have been trained and all required equipment, tools, etc. are in place to perform depot maintenance.
5.18 The planning efforts have a requirement for depot capability establishment for hardware and software no later than four years after achieving IOC. Per Title 10 U.S.C., § 2464, depot level repairables identified as having a Core capability requirement must establish 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).
5.19 Maintenance planning and analyses consistent with statutory, regulatory, and policy requirements have been provided to include, but not limited to: • Title 10 U.S.C. § 2464, Core Logistics Capabilities • Title 10 U.S.C. § 2466, Limitations on the Performance of Depot Level Maintenance of Materiel • DoDD 4151.18, Maintenance of Military Material • DoDI 4151.20, Depot Maintenance Core Capabilities Determination Process • DoDI 4151.24, Depot Source of Repair Determination Process

6.0 Packaging, Handling, Storage, and Transportation (PHS&T)
ASSESSMENT CRITERIA
6.1 Materiel handling devices for loading, unloading, etc. are in place and certified.
6.2 Storage monitoring equipment is installed as applicable, and requirements are included in TM.
6.3. There are no accessibility issues for maintenance during long-term storage or storage during transport/forward staging (e.g., ground and air vehicles on ships that require running time to ensure that lubrication, batteries, seals) do not degrade.
6.4 Items requiring special storage requirements (e.g., freezers for storage of composites, HAZMAT) and/or shelf-life requirements have been identified in the appropriate manuals/publications. (DoD Manual 4140.70, DoD Supply Chain Materiel Management Procedures for Storage and Material Handling, DoD Manual 4140.27, Volume 1 DoD Shelf-Life Management Program: Program Administration and DoD Manual 4140.27, Volume 2 DoD Shelf-Life Management Program: Materiel Quality Control Storage Standards)
6.5 There are no transportability issues, such as: • Oversized/overweight items • Items requiring special transportation modes • Items that are classified • Certification (Air, rail, Department of Transportation, etc.) • Necessary waivers have been obtained • Packaging intended for international use
6.6 Anti-tamper requirements (and security processes while in storage and transit) are in place for both hardware and software.
6.7 There are no interface issues between the system being transported and the transporting platform (e.g., height, turning radius).
6.8 Time delivery requirements for all shipments of spares to the user are being met.
6.9 Transportation processes, hardware, and procedures for disabled systems (e.g., aircraft, ground systems) are in place.
6.10 Systems receiving systems (e.g. aircraft receiving guns) have resourced and provided required supportability products (e.g., storage space, containers).
6.11 PHS&T has been standardized as applicable to minimize new designs and to ensure interoperability between Components and North Atlantic Treaty Organization (NATO) allies.
6.12 PHS&T issues (retrograde packaging, reusable containers, retrograde transportation, shipboard storage, damage in transit, etc.) raised by the User have been addressed by the program. (DoD Manual 4140.70, DoD Supply Chain Materiel Management Procedures for Storage and Material Handling,

6.0 Packaging, Handling, Storage, and Transportation (PHS&T)
ASSESSMENT CRITERIA
DoDI 4140.01, DoD Supply Chain Materiel Management Policy; and DoD Manual 4140.01, Volume 9, DoD Supply Chain Materiel Management Procedures: Materiel Programs)
6.13 Have PHS&T requirements for hazardous materials and associated wastes been identified and are processes in place for their storage, handling, or disposal
6.15 Are processes or procedures in place to ensure the care of items in storage e.g., a periodic storage surveillance process?

7.0 Technical Data
ASSESSMENT CRITERIA
7.1 If applicable, all network compatibility issues related to Interactive Electronic Technical Manual (IETM) operation or update or related to the Product Lifecycle Management (PLM) solution, if applicable are addressed and mitigation steps identified.
7.2 Authoritative Data Sources and the associated change authority have been identified. Databases developed or procured with the acquisition of product and technical data have been registered in the Respective Component's Database Management System, if applicable.
7.3 The product/technical data package elements have been specified in the contractual package in accordance with the requirements of MIL-STD-31000, TA-STD-0017A and SAE-GEIA-STD-0007C as appropriate.
7.4 A process for distribution of TM is in place.
7.5 Approved TM in support of the end item and peculiar SE are available and in the quantities required, and are registered in the authoritative database.
7.6 An approved Calibration Requirements List is available to support the end item and all peculiar installed instrumentation.
7.7 TMs and IETMs include notes, aids, and procedures to minimize environmental risks and personnel exposure during maintenance activities such as warnings, and cautions.
7.8 TM can be specifically identified and documented in the Disposal Plan. At the end of service life, all TMs (to include IETMs) should be removed from the national stock and disposed of.
7.8.1 A process is in place to expeditiously handle technical publication deficiency reports submitted post-IOC.

8.0 Support Equipment (SE)
ASSESSMENT CRITERIA
8.1 There are no environmental and physical constraint issues (e.g., size, weight, power, temperatures, and interfaces) between the SE and hosting platform.
8.2 Types and quantity of SE for each location have been identified and available to support test of fielded systems.
8.3 Support for SE is in place, to include: • SE Recommendation Data • Supply Support • Spares • Manpower • Training • Technical Data • Maintenance levels and maintenance task requirements • Computer Resources Support • Calibration • Facility Requirements • Requirements for SE
8.4 Technical documentation to support the SE is accurate and provided in required quantities: • Procedures to perform the required tests and diagnostics • Test measurement and diagnostic equipment, calibration requirements, procedures, and associated technical parameters • All product/technical data required to support and operate required SE throughout the life cycle of that product • Test fixtures and/or interfaces to connect the system to the test equipment
8.5 Test Program Sets (TPS) and associated documentation have been evaluated and verified.
8.6 Availability of calibration standards and procedures, SE, TPSs, and tools at required maintenance sites and training schools have been verified.
8.7 SE are identified in the appropriate allowance/equipage lists as appropriate.
8.8 SE have been certified for use on the host platform or facility, as applicable.
8.9 For MDAPs, a plan for preservation and storage of unique tooling is in place and implemented. 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 continues to be reviewed during the life of the program

8.0 Support Equipment (SE)
ASSESSMENT CRITERIA
• Unique tooling designated for preservation and storage is serially managed and meets the requirements of IUID and is adequately addressed in the appropriate program supportability plans. (Preservation and Storage of Tooling for MDAP, MIL-STD-130, and Section 815 of Public Law 110-417; DoDI 5000.91 para 4.11(g), DoDI 8320.04, Item Unique Identification (IUID) Standards for Tangible Personal Property; and Serialized Item Management (SIM); DoDI 4151.19, Serialized Item Management (SIM) for Life-Cycle Management of Materiel)

9.0 Training and Training Support
ASSESSMENT CRITERIA
9.1 Training is being executed per the training plan.
9.2 Cross training and personnel drills are being conducted.
9.3 Training equipment, services, calibration standards, test equipment, materiel, facilities, and personnel are in place and adequate to support the system. Training facilities and the host platform, trainers, and units dedicated for training are adequate to handle throughput for both personnel and hardware.
9.4 The effectiveness of training, using measures such as MTTR, is measured and corrective action implemented when required. Training Effectiveness Evaluations (TEE) are performed according to approved Training Effectiveness Evaluation Plans (TEEP).
9.5 Safety procedures, warnings, cautions and advisory labels have been incorporated into training materials and curriculum.
9.6 Instructor guides, course curriculum, and other training aids and SE and student guides are in place for classroom or other virtual training environments.
9.7 Training courses are adequate, accurate, and complete, and trained on the fielded configuration(s). This includes pre-faulted modules or software to simulate faults for diagnostics training.
9.8 Training simulators and devices are in place and instructor and support personnel have been trained on their use and maintenance.
9.9 A military characteristics document or Training System Functional Description is prepared for each training device, defining its basic physical and functional requirements.
9.10 Delivered content uses an Information Assurance compliant delivery mechanism and has been accredited.
9.11 Logistics support (spares, SE, etc.) for the user training schools is in place.
9.12 Training to support end items across acquisition pathways are in place and adequate.
9.13 Feedback loops exist that allow operating forces to inform the training command and PM of training shortfalls or changes needed resulting from experience(s) obtained in an operating environment.

10.0 Manpower and Personnel
ASSESSMENT CRITERIA
10.1 Actual manpower requirements are in accordance with the ME for operation and maintenance of the program.
10.2 Manpower and personnel requirements are adequate 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 • Peacetime and wartime
10.3 Changes (increases and/or decreases) in manpower and personnel requirements have been identified for any transition period between systems.
10.4 Manpower and personnel requirements include affected duties beyond operational, maintenance, and support (e.g., watch standing, collateral duties).

11.0 Facilities and Infrastructure (and Platform Integration)
ASSESSMENT CRITERIA

11.1 Facility Requirements

11.1.1 The types of facilities and infrastructure (RDT&E, operations, calibration, maintenance, and training) required to support and sustain the new or modified system are in place to include, as necessary:

- Berthing space for ships (including utilities, dredging, special deck structural requirements for crane loads, and fendering systems)
- Parking aprons and hangar space for aircraft
- Support facilities, supply warehouses, transit sheds, maintenance facilities, calibration laboratories, dry-dock capability, training facilities (for both classrooms and trainers for operational training and maintenance training, including required product and technical data to ensure efficient and effective support of facilities) and ordnance handling and storage, and associated administrative spaces
- Land use requirements are resolved, such as Noise Air Installations Compatible Use Zones (AICUZ), Ordnance Explosive Safety Quantity Distance (ESQD), and leasing agreements.
- Transient support requirements when the system requires some level of support for continental US and outside continental U.S. activities that are not regular homeports/support sites

11.1.2 The facilities and infrastructure support requirements are documented in the program's Facilities Requirements Document or equivalent documentation.

11.1.3 All host-tenant agreements are in place.

11.1.4 All site activation plans have been developed and implemented or are on schedule.

11.1.5 All necessary changes to host platform or facility spaces have been made to accommodate the installation and storage of systems, SE, and related supplies.

11.1.6 System support and facility requirements have been provided to the Component's activities/regions expected to support operations, maintenance, calibration, training, and other logistical support related to the system.

Assessor Note: This is effective when done on a periodic (e.g., annual) basis as the system is being designed and constructed so that the receiving support activities may factor support requirements into their facility planning efforts at the earliest possible time. One mechanism for accomplishing this is a facilities planning/criteria letter issued by the program manager.

11.1.7 Site Activation Plans and other appropriate facility project documents (e.g., DD1391 for MILCON project) have been completed or are on schedule.

Assessor Note: If repair/support facilities cannot be completed in time to meet mission requirements and satisfy the basic facilities requirements, a designated source of repair/support or work-around has been identified and received User concurrence.

11.1.8 Formal decisions have been completed with a signed Basing Letter and appropriate environmental documentation approved and signed. This permits the coordination of projects with the

11.0 Facilities and Infrastructure (and Platform Integration)
ASSESSMENT CRITERIA
appropriate facility commands and ensures successful promulgation through Force Management Budget, OSD, and congressional authorization.
11.1.9 Project documentation has been submitted for funding in the appropriate FY. For instance, if beneficial occupancy is needed by FY62 (project year is FY24), the project needs to be submitted to the appropriate facility commands by the second quarter of FY21.
11.1.10 Environmental documentation for projects per NEPA/EO 12114 is completed, approved, and signed or scheduled for completion to support the timelines for new construction or modification of existing facilities.
11.1.11 Construction of MILCON projects have been completed to support the system or are on track to support introduction of the new or modified system to the User.
11.1.12 Where applicable, interim facility support (aka "work around") has been identified to meet requirements earlier than can be met by the completion of new facility projects.
11.2 Integration
11.2.1 Facility or on-board storage requirements (e.g., workspaces, storage, spaces storage for ordnance) are adequate.
11.2.2 Bandwidth and interfaces with the host platform's local area network are capable of handling required throughput.
11.2.3 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.
11.2.4 Systems Integration facilities can handle work throughput (e.g., integration of electronic warfare systems and communication gear on air or ground vehicles).

12.0 Information Technology (IT) Continuous System Support
ASSESSMENT CRITERIA
12.1 General Requirements
12.1.1 Program developed an Information Assurance computer and software security plan, including safety per DoDI 8510.01, Risk Management Framework for DoD Systems, July 19, 2022.
12.1.2 A Program Protection Plan has been implemented in accordance with DoDI 5200.39, "Critical Program Information (CPI) Identification and Protection within Research, Development, Test and Evaluation (RDT&E)," 2020, which includes Anti-Tamper requirements.
12.1.3 The SSA has been designated or established for all software support (budget, personnel, applications, data, documentation, tools, SE, test equipment, hardware, network interconnectivity, and facilities).
12.1.4 The software documentation support matches the software in use.
12.1.5 Software support is described in the LCSP and implementing documentation.
12.1.6 A process has been defined to manage (create, discard, track, and close) software trouble reports that can be levied against the software product.
12.1.7 A mechanism for getting prime contractor (and subcontractor) support specific to support software and equipment, if needed, at the SSAs (e.g., resident expert help).
12.1.8 A process is in place for distributing corrections and revisions of the software and firmware to the users.
12.1.9 There is adequate reserve capacity (central processing unit, memory, disk space, bus capacity, etc.) for the life of the system to accommodate changes, expansion, and growth of the software. The hardware can be easily upgraded without affecting the software.
12.1.10 There are plans for processor upgrades so that tech refresh be accomplished with minimal software modifications.
12.1.11 A process to proactively project vendor discontinuance of software support, software revisions, upgrades, etc. has been developed and documented to ensure both program software and software support tools are sustainable and software refresh can adequately be planned.

Defense Business System (DBS) Specific Criteria
Addendum to 12.0 Information Technology (IT) Support
ASSESSMENT CRITERIA

12.2 General Requirements

12.2.1 A proactive process is in place for continued support of software to include system and third-party software to effectively:

1) Forecast software sustainment issues and identify time periods for software availability and support

2) Capture the cost trade-off criteria for full or partial software updates

3) Identify upgrade schedules to reduce transition costs associated with updates

4) Identify accurate budget estimates; and 5) provide a process that can be used to help manage and optimize the efficiency and effectiveness of software tech refreshment.

12.3 Data Migration

12.3.1 All data migration issues have been resolved.

12.3.2 Data Conversion has been completed per Data Conversion Agreements.

12.3.3 Data cleansing, data translation mapping, data validation and resources is completed.

12.3.4 Data and Resources MOAs between the gaining system activity and the transferring system activity are approved and detail the actions required by each activity.

12.3.5 MOAs between the program office and commands where the system is deployed are current.

12.4 System Reliability

12.4.1 The system is meeting its RAM measures and KPPs.

12.4.2 The Disaster Recovery/Secondary Site is fully operational. Disaster recovery reliability is factored into overall system reliability.

12.4.3 Agreements are current for the command/activity hosting the disaster recovery center.

12.4.4 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.

12.4.5 Trouble calls/tickets to the help desk are processed through a FRACAS system as an input to the reliability program.

12.4.6 The help desk/procedures for the help desk are adequate for recomplete with another provider.

12.4.7 Help desk staffing and KSAs of personnel is adequate to support functions required by the help desk.

Product Support Budgeting and Funding
ASSESSMENT CRITERIA
1. The program budget is funded to the requirements identified in the ownership cost estimates.
2. Affordability analysis is being performed, including fielding and Operational and Support costs to date.
3. Post-IOC cost estimates and the projection of the affordability objective versus Operation and Support Cost O&S baseline are substantiated by assessed fielded systems performance-, operations-, and sustainment-related expenditure to date.
4. The sustainment requirements funding documentation is maintained up to date and identifies all appropriations: • It supports LCSP budgetary requirements; other documentation and is appropriately phased. • Rationales to support funding amounts in the product support funding requirements documentation are documented. • The correct appropriations (including Operations and Maintenance Funding) are identified for each product support requirement for each fiscal year. These are properly phased in advance of requirements to account for procurement lead-time, especially for spares and materiel). • Funding shortfalls and impacts are identified, prioritized, fully documented, and addressed to the program manager and resource sponsor. • Product support requirements funding numbers/dollars are traceable to appropriate budget exhibits.
5. Life cycle cost estimates, including cost-reduction efforts, have been developed and validated optimizing affordability objectives.
6. Cost and technical data collection in the form of Cost and Software Data Reports (CSDRs) is in place for all Government and contractor efforts that meet the thresholds defined in the DoDI 5000.73 Table 1. If not, there are corrective actions being taken, as appropriate.
7. Life cycle cost drivers such as reliability and maintainability are tracked and corrective measures funded, as appropriate.
8. Funding requirements identified in the replaced system sustainment plan are identified and funded, as appropriate.
9. End of life phase out and disposal requirements are planned and funded as, appropriate.
10. The program has complete and accurate cost data being reported in the Service's VAMOSC system. If not, there are corrective actions being taken, as appropriate.

Environmental, Safety, and Occupational Health (ESOH)
ASSESSMENT CRITERIA
1. A process is in place to manage ESOH risks/hazards as identified in the hazard tracking system.
2. The user representative has provided formal concurrence prior to all serious and high-risk acceptance decisions.
3. The program has a plan for end-of-life cycle demilitarization and disposal, including munitions and HAZMAT disposition.
4. Noise sources are identified and evaluated during system's design and control measures implemented to minimize personal exposure.
5. Personnel protective equipment is in place as specified in maintenance instructions and training manuals for relevant operations. Specified products are compliant with all federal and consensus American National Standards Institute (ANSI) standards.
6. A system safety program to include interaction with systems engineering has been established per MIL-STD 882 for any system upgrades/changes.
7. A closed-loop hazard tracking system is implemented.
8. Weapon System Explosive Safety Review Board approval is scheduled or obtained for system upgrades/changes.
9. All systems containing energetic materials comply with insensitive munitions criteria.
10. HAZMAT and associated processes whose use cannot be avoided have been documented in IPS element planning documents 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 Non-Developmental Items (NDI) during production, materials required for maintenance, and hazardous wastes generated from maintenance processes).
11. There is a plan for tracking, storing, handling, and disposing of HAZMAT and hazardous waste consistent with each Component's requirements.
12. HAZMAT requirements and mitigation measures are incorporated into technical data publications and materials (e.g., the training program for all system-related personnel, maintenance repair cards, maintenance manuals, IETMs) as applicable.
13. The user installation has the capability in place to recycle or dispose of system replaceable and disposable components such as metals, plastics, electronic components, oils, coolants, and refrigerants.
14. The PESHE- and NEPA/EO 12114 Compliance Schedule are included as an annex to the LCSP.

A3. DOCUMENT REQUEST LIST FOR POST IOC ASSESSMENTS

The following documents apply to systems that are conducting Post-IOC assessments. These are in addition to the documents identified in the ILA assessment section of this guidebook. This list should be tailored for each program by the assessment team lead and the program office.

System Operational Verification Tests (SOVT) List of deficiencies upon system installation.	Component Directives
Maintenance History, Supportability, and Cost Drivers Component failures per installed population.	Component Directives
Diagnostic Help History Tech assists per system.	Component Directives
Configuration Management Information Configuration control and change history, including the number of Engineering Design Changes (EDC), etc. Note: may be managed in Product Lifecycle Management (PLM) system or Integrated Digital Environment.	Component Directives
Performance Based Logistics (PBL) Performance Information on how the PBL provider is performing against required metrics.	Component Directives
Training Performance Training effectiveness and issues.	Component Directives
Depot Performance Component repairs per installed population and platform depot maintenance metrics, if applicable, such as flow days, quality, and cost.	Component Directives
Planned Maintenance System (PMS) Performance User feedback on PMS program.	Component Directives
Product Data Performance User feedback on technical data.	Component Directives