



DoD INSTRUCTION 5000.91

PRODUCT SUPPORT MANAGEMENT FOR THE ADAPTIVE ACQUISITION FRAMEWORK

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Approved by: Gregory M. Kausner, Performing the Duties of the Under Secretary of Defense for Acquisition and Sustainment

Purpose: In accordance with (IAW) the authority in DoD Directive (DoDD) 5135.02, this issuance:

- Establishes policy, assigns responsibilities, and prescribes procedures for product support management to establish product support factors early in the requirements development and acquisition process to achieve effective and efficient weapon system capability and life cycle management.
- Prescribes procedures for program managers (PMs), product support managers (PSMs), and life cycle logisticians (LCLs) to implement the adaptive acquisition framework (AAF) tenets to:
 - Emphasize sustainment.
 - Make data driven decisions.
 - Tailor product support.

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SECTION 1: GENERAL ISSUANCE INFORMATION

1.1. APPLICABILITY.

This issuance applies to the OSD, the Military Departments, the Office of the Chairman of the Joint Chiefs of Staff and the Joint Staff, the Combatant Commands, the Office of Inspector General of the Department of Defense, the Defense Agencies, the DoD Field Activities, and all other organizational entities within the DoD (referred to collectively in this issuance as the “DoD Components”).

1.2. POLICY.

The DoD will conduct comprehensive product support and sustainment planning for defense systems across the program’s life cycle.

SECTION 2: RESPONSIBILITIES

2.1. UNDER SECRETARY OF DEFENSE FOR ACQUISITION AND SUSTAINMENT (USD(A&S)).

The USD(A&S), as the Defense Acquisition Executive (DAE):

- a. Oversees the issuance, maintenance, framework, and comprehensive guidance on life cycle management and product support strategies (PSSs).
- b. Issues and maintains the requirements for the development of the PSS and the content and approval process of the life cycle sustainment plan (LCSP).
- c. Coordinates with the Under Secretary of Defense for Research and Engineering (USD(R&E)) to:
 - (1) Implement Section 2443 of Title 10, United States Code (U.S.C.).
 - (2) Ensure that engineering and product support activities are seamlessly integrated.

2.2. ASSISTANT SECRETARY OF DEFENSE FOR SUSTAINMENT (ASD(S)).

Under the authority, direction, and control of the USD(A&S), the ASD(S):

- a. Approves the program LCSP for Acquisition Category (ACAT) 1D and special interest programs.
- b. Ensures sustainment attributes are included in capabilities designs to ensure the cost effective readiness throughout the service life of weapon systems.

2.3. DIRECTOR, DEFENSE LOGISTICS AGENCY (DLA).

Under the authority, direction, and control of the USD(A&S), the Director, DLA:

- a. Supports product support management processes with supply chain information for:
 - (1) Storage and distribution facilities, locations, and capacity.
 - (2) Logistics support activity supply chain planning and execution, in coordination with the Military Departments, to maintain efficient inventory levels.
- b. Collaborates with PMs on:
 - (1) Using DLA storage and distribution capacity and public-private partnership arrangements.

(2) Transferring U.S. Government-owned inventory from commercial to DLA facilities.

(3) Coordinating national stock number assignments with PMs and PSMs, who provide the data necessary for the relevant life cycle management command to coordinate with DLA to support stocking, storing, and issuing of parts through the standard supply system.

2.4. UNDER SECRETARY OF DEFENSE FOR PERSONNEL AND READINESS.

The Under Secretary of Defense for Personnel and Readiness provides policy and oversight for product support training for Defense Acquisition System (DAS) programs.

2.5. USD(R&E).

The USD(R&E):

a. Advises the Secretary of Defense and the DAE on technology and program protection risks, including adversary risks to DoD-sponsored programs, research, technology, systems, and capabilities throughout the life cycle of a system.

b. Provides DoD-wide policy framework and direction for technical and engineering protections to manage the risks to research, programs, and systems from hardware, software, cyber, and supply chain risk management (SCRM) vulnerabilities, and battlefield loss reverse engineering throughout the life cycle of a system.

c. Establishes policy and provides procedures for the Program Protection Plans IAW DoD Instruction (DoDI) 5000.83.

d. In coordination with DoD Chief Information Officer (CIO), establishes policy and procedures to manage information communications technology and SCRM for systems throughout the systems' life cycles.

e. Coordinates with the USD(A&S) to ensure the seamless functioning of product support governance e.g., systems engineering plan, reliability, availability, maintainability, and cost (RAM-C), LCSP, for:

(1) Technical activities such as in Paragraph 2.q. of DoDD 5137.02.

(2) Completing technical assessments, especially in the areas of reliability and maintainability, among others.

(3) Transferring emerging technologies from research into acquisition programs and sustainment pursuant to DoDI 5000.92.

2.6. DOD CIO.

- a. Establishes policy and provides oversight, review, and assessment of programs' information and communications technology and SCRM.
- b. Establishes policy and provides oversight for interoperability, information technology (IT) products and services for hardware and software, and the IT systems used to manage product support technologies.
- c. Ensures cybersecurity and cyber threat considerations are integrated into the AAF.
- d. Coordinates with the USD(R&E) and the USD(A&S) to ensure that cybersecurity policies and standards are integrated into the DAS IAW DoDD 5000.01.
- e. Supports and informs the USD(A&S) on all IT and cyber infrastructure acquisition matters and investment decisions, including IT-intensive software systems, such as business systems, to ensure that cybersecurity policies and standards are integrated into the DAS IAW DoDD 5000.01.

2.7. UNDER SECRETARY OF DEFENSE FOR INTELLIGENCE AND SECURITY.

The Under Secretary of Defense for Intelligence and Security oversees intelligence support to the acquisition life cycle and oversees DoD intelligence support to cybersecurity.

2.8. DIRECTOR, COST ASSESSMENT AND PROGRAM EVALUATION (CAPE).

The Director, CAPE:

- a. Advises the USD(A&S) on schedule, resource allocation, affordability, systems analysis, cost estimation, and the performance implications of product support management decisions.
- b. Establishes policies and prescribes procedures for the collection of cost data and cost estimates for programs using any acquisition pathway at any point in the life cycle, as appropriate.

2.9. DOD COMPONENT HEADS.

The DoD Component heads:

- a. Establish requirements, budget, and acquisition and sustainment processes to support development, deployment, and operational use of:
 - (1) Weapon systems, including embedded software and software applications.
 - (2) Upgrades of weapon systems, including embedded software and software applications.

b. Through their Component Acquisition Executive (CAE), serve as decision authority for programs within the AAF, unless such decision authority has been retained by the DAE or another designated official for a system. As the decision authority, the CAE:

(1) Oversees and makes key decisions for the AAF programs IAW this issuance and related Component policies.

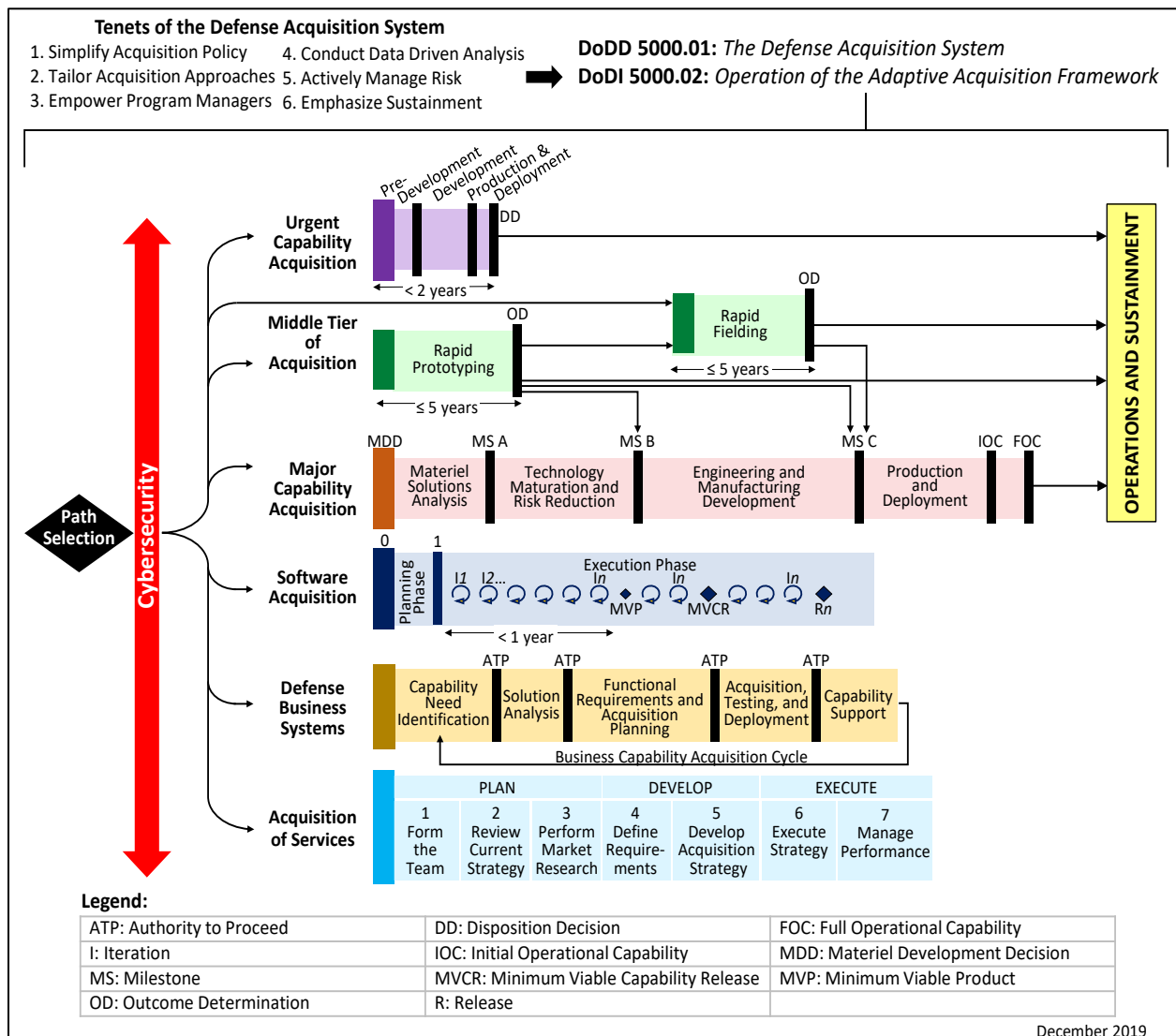
(2) Designates PSMs. All covered systems and ACAT II programs will be supported by a PSM, no later than at program initiation, throughout the life of the system. IAW DoDI 5000.80, all programs using the middle tier of acquisition (MTA) pathway will also be assigned a PSM. Assignment of a PSM is encouraged for all other programs.

(3) Approves LCSPs for all ACAT 1B or 1C programs and below, unless this responsibility is delegated to a designated official.

SECTION 3: MANAGEMENT PRINCIPLES AND COMPONENT OVERSIGHT OVERVIEW

DoDD 5000.01 establishes policy and assigns responsibilities for managing all acquisition programs in the DAS. DoDI 5000.02 describes the AAF that supports the DAS with the objective of delivering effective, suitable, survivable, sustainable, and affordable solutions to the end user in a timely manner. To achieve this objective, the DoD utilizes the AAF comprised of acquisition pathways, each tailored for the unique characteristics and risk profile of the capability being acquired. The PSM will tailor the program’s product support approach depending on the pathway(s) used during development. Figure 1 depicts the various AAF pathways and associated key events.

Figure 1. Adaptive Acquisition Framework



SECTION 4: GENERAL PRODUCT SUPPORT PROCEDURES OVER THE PROGRAM'S LIFE CYCLE

4.1. PRODUCT SUPPORT MANAGEMENT.

a. Product support is critical to achieving and sustaining warfighter readiness and lethality and must begin at program inception to ensure effective and affordable readiness outcomes. Product support management is the organization and coordination of life cycle activities, products, processes, and data required to achieve defined program supportability cost, schedule, and performance objectives. Product support management includes planning, cost estimating and budgeting, developing, implementing, and managing an effective PSS that addresses all 12 integrated product support (IPS) elements to accomplish materiel and system readiness for systems covered by Section 2337 of Title 10, U.S.C. (covered systems), major systems, sub systems, components, and embedded software.

b. Product support also involves selecting product support integrators (PSIs) and product support providers (PSPs) as appropriate to execute the PSS, IAW the product support arrangements.

c. The 12 IPS elements that comprise the PSS are:

- (1) Product support management.
- (2) Design interface.
- (3) Sustaining engineering.
- (4) Maintenance planning and management.
- (5) Supply support.
- (6) Support equipment.
- (7) Technical data.
- (8) Training and training support.
- (9) IT systems continuous support.
- (10) Facilities and infrastructure.
- (11) Packaging, handling, storage, and transportation.
- (12) Manpower and personnel.

d. The PM is the single point of accountability for DoD systems support and total life cycle systems management for all programs; however, the PSM is responsible to the PM for life cycle

product support. The PSM supports the PM in the development of a performance-based life cycle PSS required for all covered systems in the DAS, IAW DoDD 5000.01 and DoDI 5000.02.

e. PSMs will:

- (1) Be a part of the life cycle logistics functional workforce, meet all LCL certification and training requirements, and be a Military Service member or DoD civilian employee.
- (2) Report to and provide system product support subject matter expertise to the PM for the development, implementation, and execution of the system's PSS.
- (3) Perform the functions set forth in Section 2337(c)(2) of Title 10, U.S.C., for covered systems.
- (4) Develop, update, and implement a detailed LCSP.
- (5) Conduct life cycle logistics management and product support activities for the AAF pathways IAW DoDD 5000.01 and DoDI 5000.02.
- (6) Collaborate with the chief engineer and systems engineers to provide sufficient program supportability and cost data and analysis to the PM, CAE, and USD(A&S) to enable effective operation, management, and tracking of reliability, availability, and maintainability (RAM) and operating and support (O&S) costs. All cost estimates and analysis will be completed IAW DoDI 5000.73.

4.2. LIFE CYCLE PRODUCT SUPPORT.

Product support planning and PSS development begins prior to program initiation, and the resultant method of executing product support (i.e. the product support solution) is re-evaluated and updated throughout the program's life cycle. The PM, with the support of the PSM, will begin life cycle product support planning by conducting early risk identification, mitigation, and product support analyses that inform best value solutions. The PSM must have input into systems engineering requirements, design, maintenance planning, and contract development. The PSM will collaborate with the lead systems engineer, who is responsible for executing a comprehensive reliability and maintainability program, to ensure implementation of reliability and maintainability through design, development, test, production, and sustainment. The PM and the PSM must consider total life cycle costs, schedule, performance, and risks when making programmatic decisions, including decisions impacting life cycle product support.

4.3. THE PSS AND THE LCSP.

a. The PSS is the overarching strategy to meet sustainment requirements. The PSM will document the initial PSS within the acquisition strategy at program inception, and then in the LCSP, at Milestone A or an equivalent decision event for covered systems pursuant to Section 2337 of Title 10, U.S.C. The LCSP is the detailed product support plan, including

sustainment metrics, risks, costs, and analyses used to deliver the performance-based best value strategy covering the IPS elements.

b. The LCSP is the primary program management reference governing operations and support planning and execution from program inception to disposal. An LCSP is required for all covered systems and is the principal document establishing the system's product support planning and sustainment, pursuant to Section 2337 of Title 10, U.S.C. For covered systems, a detailed LCSP will include:

- (1) A comprehensive PSS;
- (2) Performance goals, including:
 - (a) Sustainment key performance parameters (KPPs).
 - (b) Key system attributes.
 - (c) Other appropriate metrics.
- (3) An approved life cycle cost estimate for the system.
- (4) Results of the Product Support Business Case Analysis (PS BCA).
- (5) Affordability constraints and key cost factors that could affect the system's O&S costs and proposed mitigation plans.
- (6) Sustainment risks, SCRM, and diminishing manufacturing sources and material shortage (DMSMS) risk management and proposed mitigation plans.
- (7) Engineering and design considerations, including DMSMS resilience, that support cost-effective sustainment for the system.
- (8) A technical data and intellectual property (IP) management plan for product support.
- (9) Major maintenance and overhaul requirements for the system's life cycle.
- (10) A plan to leverage enterprise opportunities across programs and DoD Components.

c. A tailored LCSP may be used for all systems that are not covered by Section 2337 of Title 10, U.S.C. (non-covered systems), as approved by the LCSP signature authority. At a minimum, a tailored LCSP will include:

- (1) Actions for achieving supportability and sustainment requirements.
- (2) Methods to identify individuals responsible for sustainment planning.
- (3) Required elements of sustainment planning.
- (4) Timing of sustainment planning activities in the acquisition process.

- (5) Measures and metrics to assess compliance with the LCSP.
- (6) Actions to continuously monitor PSIs' and/or PSPs' performance and ensure compliance with the LCSP.
- (7) The content and implementation status of the product support solution (including any sustainment contracts) to achieve and maintain the product support.
- (8) Description of IP (e.g., technical data and software deliverables and associated license rights) necessary to enable cost-effective product support.
- (9) Identification of PSPs and PSIs.
- (10) Results of the PS BCA.
- (11) Core depot analysis (see Paragraph 4.11. of this issuance).
- (12) Predictive analysis and modeling tools to improve materiel availability (A_M) and reliability, increase operational availability (A_O), and reduce O&S costs.
- (13) A bed-down plan defining system quantity by year until system retirement and disposal.

d. The PSM will implement the PSS via the LCSP through arrangements with various public and/or commercial PSIs and/or PSPs. The PSM will use product support analysis data, as described in Paragraph 4.4. of this issuance, to support the PS BCA (see Paragraph 4.5. of this issuance), PSS, and LCSP. The PSM will conduct a PS BCA to assess courses of action being considered and document the recommended course of action in the LCSP that achieves readiness goals, manages risks, and is cost-effective. The PSM will collaborate with users, systems engineers, cost analysts, and other stakeholders to develop risks and assumptions unique to the systems. The LCSP will be reviewed and updated as necessary, following approval or revalidation of the PS BCA and before sustainment reviews (SRs) are conducted, to incorporate program bed-down plans through retirement and disposal of the system, and other updates as warranted.

4.4. PRODUCT SUPPORT ANALYSIS.

The PSM will establish a cross-functional team of subject matter experts (SMEs) to develop accurate assumptions, capture data, and perform data analysis to develop and refine the product support analysis, also referred to as the supportability analysis. This analysis will support DoD Component engineering and product support solutions. As a program progresses through development, the PSM will use the team of cross-functional SMEs to ensure product support analysis activities are executed to develop accurate logistics product data, reduce redundancy, and form a baseline for developing product support documentation (e.g., technical manuals, training manuals). The PSM will work with the cross-functional team to conduct a thorough analysis using analytical tools and modeling techniques to facilitate informed decisions on supply support, manpower, training, maintenance and maintenance planning, and other IPS

elements. Pursuant to DoDI 5000.88, supportability analyses will be included in the evolution of the digital authoritative source of truth which is managed and maintained throughout the life of the program.

4.5. PS BCA.

a. The PS BCA is a structured methodology and document that aids decision making by identifying and comparing product support alternatives, examining the mission and business impacts (both financial and non-financial), risks, and sensitivities. The PS BCA is the summary of the analysis, assumptions, performance, risks, and costs of analyzed courses of action, and the rationale for the selection of the recommended course of action. The warfighter's requirements and the PSS is used to structure the PS BCA. The PS BCA will include alternatives that balance cost effective readiness and organic sustainment requirements. The PS BCA development process is iterative in nature and the results of the PS BCA and detailed planning may lead to subsequent PSS refinement.

b. The output of the PS BCA helps determine a best value solution for meeting the PSS. The PM uses recommendations from the PS BCA to support sustainment funding requirements in the programming, planning, budgeting, and execution process. The PM and PSM will revalidate the PS BCA based on changes (to systems, hardware or software, constraints, and operational environment) or every 5 years, whichever occurs first. The PS BCA provides O&S cost projections associated with the PSS, as reflected in the LCSP, which informs the PM's program objective memorandum (POM) input, in time to allocate funds required for the PSPs and the PSIs to execute sustainment activities.

c. As the program progresses, the PSM will use supportability analyses, operational data, and forecasting (prognostics) to develop updates to the PS BCA to ensure the product support solution is still satisfying the PSS as critical parts, system configuration, and concept of operations (CONOPS) changes occur over the program life cycle.

4.6. PRODUCT SUPPORT AND THE IP STRATEGY.

The PM and PSM will coordinate with IP SMEs, including consultation as appropriate with the Component's IP representative identified pursuant to DoDI 5010.44, in the development of product support input into the IP strategy. The IP strategy addresses the acquisition of tailored data deliverables and license rights to enable competition for life cycle product support and organic depot maintenance. Flexible mechanisms such as priced data options and specially negotiated license agreements should be considered to address uncertainty and changes in support requirements over time. The IP strategy identifies, and acquisition contracts should secure, sufficient technical data, manuals, and publications to enable informed Government decisions to acquire maintenance and repair through Government organic capability and/or contractor-provided solutions.

4.7. PERFORMANCE-BASED LIFE CYCLE PRODUCT SUPPORT.

a. The PM, with the support of the PSM, will develop and implement an effective performance-based life cycle PSS (synonymous with performance-based logistics strategy) that will deliver an integrated and affordable product support solution designed to optimize system readiness for the warfighter. The performance-based life cycle PSS will be the basis for all product support efforts and lead to a product support package to sustain warfighter requirements.

b. At the program level, all product support solutions will be performance based. Product support solutions will include an appropriate mix of product and process metrics with threshold values to monitor performance that may be adjusted as needed to satisfy warfighter requirements. The PSM will employ effective planning, development, implementation, and management in developing a system's product support arrangements in support of the product support solution.

c. While performance-based product support arrangements may be a key component of a program's performance-based lifecycle product support solution, this does not mean that all arrangements with industry will be performance-based logistics contracts. Performance-based logistics contracts are utilized when analysis indicates they can effectively reduce cost and improve performance. Performance-based logistics contracts will be structured to specific program needs and may evolve throughout the life cycle.

d. The PSM will maximize the best use of public and private sector capabilities through Government and industry partnership initiatives when developing the PSS.

4.8. SUSTAINMENT METRICS.

The PM and PSM will use RAM and O&S cost metrics to conduct analyses to develop cost targets and develop strategies for providing product support at an affordable cost. The PSM will coordinate with the requirements developers to influence these metrics during requirements development. The PSM will track metrics through the initial contract and system development process. Once the program transitions from development to production or sustainment, the PM and PSM will track and incentivize PSIs' and PSPs' performance against these and other operational sustainment metrics.

a. Sustainment KPPs.

The sustainment KPPs, as defined in the Joint Capabilities Integration and Development System (JCIDS) Manual Sustainment KPP Guide, consist of two complementary KPPs: A_M and A_O . A_M and A_O are defined in compliance with Section 118 of Title 10, U.S.C.

(1) A_M .

A_M is a measure of the percentage of the total inventory of system operationally capable of performing an assigned mission at a given time. A_M is based on the entire system inventory, including attrition reserve and prepositioned systems. This KPP will cover the timeframe from placement into operational service through the planned end of service life. The A_M KPP has

direct impact to the acquisition as the quantity to be procured is informed by the sustainment strategy impacts to fleet availability.

(2) *A_O*.

A_O is a measure of the degree to which a piece of equipment or weapon system can be expected to work properly when it is required; that is, the percent of time the equipment or weapon system is available for use. *A_O* requirements derive directly from CONOPS or operational mode summary mission profile.

b. Key System Attributes and Additional Performance Attributes.

The key system attributes and additional performance attributes (i.e., RAM and O&S cost) in JCIDS are the following:

(1) *Maintainability (Corrective Maintenance and Maintenance Burden)*.

Corrective maintenance, and the required maintenance burden, impact to design, and the program's *A_O* and O&S cost.

(2) *Reliability*.

Mission reliability and logistics reliability measure whether a program is meeting required performance parameters. They are the design metrics that have the most significant impact on the program's *A_O* and O&S cost.

(3) *O&S Cost*.

Establishing and monitoring O&S cost estimates during development ensures that the projected total life cycle cost associated with availability and reliability is considered in balancing the design decisions for a program.

c. RAM-C.

(1) The PSM will work with systems engineers and users to develop the RAM-C rationale report to ensure supportability, maintenance, and training are incorporated into the design through early user assessments; and to incorporate user feedback into supportability planning. This collaboration will ensure sustainment thresholds are valid and feasible. More detail on the RAM-C rationale report may be found within relevant engineering instructions (e.g., DoDI 5000.88) and in Annex D paragraph 2.4 of the JCIDS Manual, Enclosure B.

(2) The PSM will ensure contracts, arrangements, and agreements with PSIs and PSPs require sustainment activities and that performance metrics are iteratively reported. This provides the PM the ability to assess cost, schedule, performance, and supportability metrics over the program's life cycle. The PM and PSM will utilize ADVANA (and/or any future successor systems) and service visibility and management of O&S costs to support SRs that track sustainment metrics and O&S costs across the program's life cycle.

4.9. CYBERSECURITY, INTELLIGENCE, AND PRODUCT SUPPORT.

The PM and PSM will coordinate, as applicable, with the DoD CIO Community to ensure the PSS and any PSIs or PSPs incorporate cybersecurity over the program's life cycle, IAW DoDI 5200.44. The PM and PSM will utilize, as applicable, Intelligence Community provided data sources IAW DoDI 5000.86, other relevant intelligence instructions, DoDD 5250.01, and updated program protection plan and life cycle mission data plan. The PM and PSM should coordinate with systems engineers to ensure PSIs and PSPs conducting sustainment activities, including SCRM, do not compromise the program's security or integrity.

4.10. INDEPENDENT LOGISTICS ASSESSMENT (ILA) AND SR.

a. The ILA identifies features that are likely to drive future O&S costs, changes to system design that could reduce such costs, and effective strategies for managing such costs. ILAs are conducted prior to key acquisition decision points, milestone decisions, and the full rate production decision.

b. SRs are governed by Section 2441 of Title 10, U.S.C., and are required for all active and in service covered weapon systems. SRs begin at 5 years after initial operational capability and repeat every 5 years thereafter. SRs end 5 years before a covered system's planned end of service date. The SRs will focus on statutory sustainment elements and track O&S cost growth. SRs satisfy the requirement for ILAs after a program has achieved initial operational capability.

4.11. ADDITIONAL PRODUCT SUPPORT ACTIVITIES:

a. Materiel Management and Materiel Storage.

The PM, through the PSM, will evaluate and select materiel management solutions that balance support goals, total supply chain costs, and performance factors IAW DoDI 4140.01, DoDI 4140.69, Volume 5 of DoD Manual 4140.01, DoDI 4245.15, and DoD Manual 4140.70. The PSM will use existing organic storage and warehousing facilities (DLA or other similar organic warehousing and storage) to the maximum extent practicable before establishing additional capacity at either organic or private warehouse or storage facilities. Additional requirements for DMSMS, SCRM, and materiel, equipment, and inventory management are detailed in DoDI 4140.01, DoDI 5000.64, and DoDI 5200.44. Serialized item management instructions are detailed in DoDI 8320.04.

b. Unique Test, Measurement, and Diagnostics Equipment (TMDE), Tools, and Support Equipment.

The PM, through the PSM, will minimize unique TMDE, tools, and support equipment by using Military Department- or DoD-approved families of TMDE, tools, and support equipment in DoD field and depot operations to the maximum extent possible.

c. Facilities and Real Property.

The PM, through the PSM, will conduct planning for facilities management of real property investments (i.e., facilities and infrastructure) necessary for the system's operations and support, IAW DoDI 4245.14.

d. Core Capability.

The PM, with support of the lead Military Department, will conduct a core logistics analysis pursuant to Section 2464 of Title 10, U.S.C. The core logistics analysis will identify and quantify the workloads to support the program's capabilities and help inform the necessary technical data, computer software, and associated data rights required to accomplish maintenance. The core logistics analysis is part of the depot source of repair decision process governed by DoDI 4151.24.

e. Corrosion Prevention and Control.

On behalf of the PM, as part of the corrosion prevention and mitigation planning required by Section 2228 of Title 10, U.S.C., the PSM will work with systems engineers to incorporate DoDI 5000.67 required corrosion prevention and control planning to mitigate the impact of corrosion on materiel readiness and O&S costs. Pursuant to Section 2366b of Title 10, U.S.C., the PSM will ensure that corrosion prevention and control is incorporated into life cycle sustainment planning and will evaluate sustainment costs, including the costs related to corrosion prevention, throughout the program's life cycle.

f. DMSMS.

The PM, through the PSM, will develop, ensure funding, and execute a DMSMS management plan and conduct proactive risk-based DMSMS management per that plan to identify current DMSMS issues, forecast future DMSMS issues, program and budget for resolving DMSMS issues, and implement those resolutions IAW DoDI 4245.15. Implementing DMSMS issue resolutions will take into account a parts management process that considers SCRM, supportability, loss of technological advantage, and obsolescence when selecting parts used in DMSMS resolutions. In addition, the PSM will use both current and forecasted DMSMS issues in developing product roadmaps for supportability.

g. Preservation and Storage of Unique Tooling Plan.

For covered systems, preservation and storage of unique tooling plan, as outlined and required by Section 815 of Public Law 110-417, is prepared to support Milestone C. The preservation and storage of unique tooling plan must include the review cycle for assessing tool retention across the life of the system. If a Milestone Decision Authority (other than the DAE) determines that preservation and storage of unique tooling is no longer required, a waiver will be submitted to the DAE. The DAE is required to notify Congress that this requirement has been waived.

h. Counterfeit Material Prevention

The PM will implement a risk-based process to prevent counterfeit material from entering into the DoD supply chain and to prevent the DoD from acquiring counterfeit material, pursuant to Section 818 of Public Law 112-81, and IAW DoDI 4140.67 and Sections 252.246-2007 and 252.246-2008 of the Defense Federal Acquisition Regulation Supplement.

i. Demonstrating and Evaluating Performance.

In support of the PM, the PSM will work with systems engineers and the testing and user communities to incorporate costs and manpower planning necessary to conduct user supportability related demonstration and evaluation events into the program test strategy. Developmental, live fire, and operational test and evaluation programs provide critical data that are used to inform and support acquisition decisions regardless of acquisition pathway. All acquisition programs must include an adequate and properly resourced developmental, operational, and live fire test and evaluation program.

SECTION 5. PRODUCT SUPPORT MANAGEMENT FOR THE URGENT CAPABILITY ACQUISITION (UCA) PATHWAY

5.1. OVERVIEW.

a. This section describes:

(1) The application of product support planning, policies, and procedures to provide supportability and sustainment applicable to the UCA pathway, as outlined in DoDI 5000.81.

(2) The elements of the PSS needed to achieve desired materiel readiness outcomes and reduce total life cycle costs, should the disposition analysis and determination, pursuant to DoDI 5000.81, direct the capability being acquired to transition to a program of record (PoR).

b. Statutory product support requirements apply to an acquisition using the UCA pathway only to the extent provided in the applicable underlying statute.

5.2. PRODUCT SUPPORT MANAGEMENT FOR THE UCA PATHWAY.

The PM will coordinate with an LCL or consult with a Military Department PSM in developing the PSS and should consider requiring data collection from the original equipment manufacturer as part of the initial contract for the urgent capability. No later than one year after an urgent need capability enters the operation and support phase (or earlier if directed by the DoD Component), the DoD Component will appoint a disposition official, pursuant to DoDI 5000.81, to conduct a disposition analysis. The PSM or LCL assigned by the DoD Component will advise the disposition official on supportability and sustainment planning.

a. Disposition Analysis.

The PM and the PSM (or LCL) will use operational data, including an assessment of the fielded urgent need capability's operational utility, as well as user feedback concerning its performance, to help inform the disposition official's recommendation and highlight key risk areas. The PSM or LCL will identify risks to inform any follow-on procurement and product support performance metrics to incentivize future improvements in the capability's design to achieve A_O and control costs should it transition to a PoR.

b. Disposition Determination.

When the disposition official recommends transitioning the capability to a PoR, the PSM or LCL will use field operational data to conduct an economic level of repair analysis IAW MIL-HDBK-502A and any other related analyses to develop a PS BCA.

SECTION 6. PRODUCT SUPPORT MANAGEMENT FOR THE MTA PATHWAY

6.1. OVERVIEW.

This section describes the application of product support planning, policies, and procedures to provide supportability and sustainment applicable to the MTA pathway, as outlined in DoDI 5000.80.

a. MTA Rapid Prototyping Pathway.

Prototype programs are conducted IAW DoDI 5000.80. The objective of an acquisition program using the rapid prototyping pathway is to rapidly produce a prototype and provide for a residual operational capability within 5 years of the program's start date.

(1) In accordance with DoDI 5000.80, a PSM will be assigned to all programs using the MTA pathway. The PSM will support the PM in developing and implementing an LCSP, or a tailored LCSP for non-covered systems.

(2) The PSM will provide data to support and inform designing for supportability through input into the CONOPS and system performance and cost threshold and objective metrics.

(3) The PSM will further influence design through coordination with users to assess models or physical prototypes, to ensure maintainability and usability within an operational environment. The PSM will provide user feedback, along with system and operational data, to systems engineers to support the development of modeling tools to improve the prototype's design.

(4) To reduce risk to achieving A₀ and total ownership costs to programs transitioning into another acquisition pathway, PMs and PSMs will tailor their effort to the contracting methods and strategies outlined in Section 4 of this issuance.

b. MTA Rapid Fielding Pathway.

Pursuant to DoDI 5000.80, the objective of the rapid fielding pathway is to rapidly deploy proven technologies. To expedite deliverables, the PM and PSM will develop agile processes and structure teams to gather data, share information, and make rapid changes across all program areas in time to meet materiel release and materiel support decision requirements within the rapid fielding pathway's timelines.

(1) In accordance with DoDI 5000.80, a PSM will be assigned to all programs using the MTA pathway. The PSM will support the PM in developing and implementing an LCSP, or a tailored LCSP for non-covered systems.

(2) DoD Components will develop an LCSP for covered systems, or a tailored LCSP for non-covered systems, upon initiation for each program using the rapid fielding pathway that will consider life cycle costs. The LCSP will address logistics support and training; system, joint, and coalition interoperability; and planning for cooperative opportunities, including foreign sales.

(3) The PSM will use data from a prototype system transitioning into rapid fielding, when applicable, to assess performance and risk. When a rapid fielding program is commercial off-the-shelf, Government off-the-shelf, or non-developmental item(s) that have not gone through a prototype development, the PSM will follow the guidance in Section 4 of this issuance in order to develop realistic sustainment performance and cost thresholds and objectives.

6.2. PRODUCT SUPPORT MANAGEMENT FOR THE MTA RAPID PROTOTYPING PATHWAY.

a. Operational Needs.

(1) The PM, with the PSM's support, will coordinate with the contracting officer to ensure contracts incentivize original equipment manufacturers to include suitability attributes in prototype development and design specifications.

(2) The PSM will utilize appropriate product support analyses to support development of a PSS that informs product support inputs into the acquisition and IP strategies.

b. Demonstrating and Evaluating Performance.

(1) In support of the PM, the PSM will work with systems engineers and the testing and user communities to incorporate the costs and manpower planning necessary to conduct user supportability related demonstration and evaluation events into the test strategy.

(2) The program's schedule will include development and review timelines to ensure logistics products (e.g., technical data and computer software) used to conduct assessments, evaluations, and sustainment (e.g., supply chain, quality standards) are delivered in time to meet user evaluation, verification, and supply support planning events.

c. Transitioning Rapid Prototyping Programs.

(1) To support the transition into another pathway or to continue to rapid fielding under the MTA pathway, the PSM will submit the transition plan to the PM and use operational data to track and measure trends related to system performance, reliability, and maintainability. The transition plan will include all risk reduction activities and contract requirements (e.g., deliverables, escrow accounts, or deferred data) used to support the program's transition.

(2) The PSM will conduct product support risk management activities in support of MTA rapid prototyping activities to address the following considerations:

(a) Product support risks and cost drivers during transition to rapid fielding activities.

(b) Product support risks and cost drivers after fielding of the prototype system.

(3) An LCSP (or a tailored LCSP for non-covered systems) will be completed prior to transitioning a prototype program to rapid fielding and document the transition plan in the LCSP, including sustainment performed by interim contract support as well as the timeline for those activities to transition to an organic PSP or PSI or a best value mix of organic and contract PSI(s) and/or PSP(s).

6.3. PRODUCT SUPPORT MANAGEMENT FOR THE MTA RAPID FIELDING PATHWAY.

a. Operational Needs and PSM Input in Requirements Development.

The PM and PSM will track the rapid fielding system's performance to measure reliability, availability, maintainability, and cost metrics performance.

b. Demonstrating and Evaluating Performance.

The PM and PSM will track test results IAW DoDI 5000.80 paragraph 3.2b (e.g., reliability, availability, maintainability, cost, or other metrics) and objectives metrics and follow risk mitigation plans per the contract, system test plan, and acquisition strategy. The PSM, in support of the PM, will work with the contracting officer to incentivize supportability through contract requirements and use an iterative quality review process of product support and logistics related deliverables. Data from both initial developmental test and evaluation and operational test and evaluation will be used to inform and update initial product support analysis.

c. Contract, Acquisition, and Funding Strategies.

(1) In order to support the PM in developing realistic cost estimates that include IPS elements, the PSM will provide operational data and PS BCA analyses to the business financial manager and lead cost estimator to be used in estimates.

(2) The PSM will document the initial PSS in the acquisition strategy. Costs associated with the initial PSS will be included in the funding and acquisition strategies.

(3) The PSM and PM will consider flexible mechanisms, such as priced data options and specially negotiated license agreements, to address uncertainty and changes in long term support requirements.

d. Transitioning Rapid Fielding Programs.

(1) In order to develop the transition plan when transitioning a rapid fielding program to another AAF pathway, the PSM will use operational data to track and measure trends, then identify areas to utilize sustainment cost and performance metrics to reduce or maintain O&S costs. The transition plan will include all risk reduction activities and contract requirements (e.g., deliverables, escrow accounts, or deferred data) used to support the program's transition to the new pathway.

(2) To ensure funds are planned for and allocated to implement the PSS, the PSM should work with the PM and business financial manager to provide product support input into the POM for forecasted PSI and/or PSP activities at least 2 years before sustainment activities start. The LCSP (or for a non-covered system the tailored LCSP) will document the program's transition plan and include the PSS, including sustainment activities performed by a contractor and the timeline for those activities to transition to an organic PSP or PSI, or a best value mix of organic and contract PSI(s) and/or PSP(s)

SECTION 7. PRODUCT SUPPORT MANAGEMENT FOR THE MAJOR CAPABILITY ACQUISITION (MCA) PATHWAY

7.1. PURPOSE.

- a. A program utilizing the MCA pathway may also be using other pathways to meet program goals. The PSM must emphasize supportability as a key consideration in the system's design and in the initial contract, to both reduce O&S costs and achieve operational outcomes.
- b. The PSM supporting an MCA pathway program and a program developing software using the software acquisition pathway for embedded software will use Section 8 of this issuance to develop the software sustainment strategy and document it within the system's LCSP.
- c. The PSM supporting an MCA pathway program and product support for component upgrades or capability solution insertion through the MTA pathway will detail the PSS in a tailored format as part of the acquisition strategy within the overarching PSS and LCSP. The LCSP will be updated at each milestone, full rate production decision, and prior to each change in the PSS, or every 5 years.

7.2. PRODUCT SUPPORT MANAGEMENT FOR THE MCA PATHWAY

a. Product Support Development, Implementation, and Tracking.

Refer to DoDI 5000.85 for the phase descriptions and product support inputs over the life cycle of MCA programs.

b. Product Support Assessments and Reviews.

The PM and PSM will continually assess the product support approach for DoD Component-level program product support assessments and technical reviews (e.g., systems engineering and test) to ensure the system design and product support performance are integrated to achieve the sustainment objectives and provide data to inform applicable modeling and simulation tools. Assessments and reviews assist the PM, PSM, system operators and maintainers, resource sponsors, and materiel enterprise stakeholders in taking corrective action to prevent degraded materiel readiness or O&S cost growth.

(1) ILAs.

Pursuant to Section 2337a of Title 10, U.S.C., DoD Components will conduct ILAs for major weapon systems before key acquisition decision points, including Milestones B and C and the full rate production decision, to assess the sustainment strategy's adequacy and to identify sustainment cost elements, factors, risks, and gaps that are likely to drive future O&S costs or identify changes to system design that could reduce costs, and to develop effective strategies for managing such costs. Additional guidance can be found in the Logistics Assessment Guidebook.

(2) SRs.

(a) Pursuant to Section 2441 of Title 10, U.S.C., DoD Components will conduct SRs of covered systems (ACAT I programs) no later than 5 years after initial operational capability, and then every 5 years thereafter, to assess the program's performance and O&S costs. The SR will be conducted in conjunction with revalidating the PS BCA and updating the LCSP. For covered systems the SR process is used to satisfy the requirement to conduct ILAs after initial operational capability is achieved.

(b) A SR will answer each of the statutory elements specified in Section 2441 of Title 10, U.S.C. The Military Departments will conduct an independent cost estimate (ICE) of the program IAW DoDI 5000.73. This ICE will be compared to prior ICEs to track O&S cost growth against earlier estimates. Any critical growth above the parameters set in Section 2441 of Title 10, U.S.C., will be addressed via a remediation plan or certification of necessary cost increases in the SR. The SR briefings and any subsequent remediation plans and certifications will be submitted to the congressional defense committees by the Military Departments at the end of each fiscal year. SR briefings will also be uploaded into the Acquisition Information Repository located in the Defense Acquisition Visibility Environment for future review at the end of each fiscal year. The Government Accountability Office will select and assess SRs for 10 covered systems each year pursuant to Section 802(d) of the National Defense Authorization Act for Fiscal Year 2021.

SECTION 8. PRODUCT SUPPORT MANAGEMENT FOR THE SOFTWARE ACQUISITION PATHWAY

8.1. PURPOSE.

This section describes the application of product support planning, policies, and procedures to provide supportability and sustainment for the software acquisition pathway, established by DoDI 5000.87, which emphasizes information sharing as early and often as possible across functional areas.

8.2. PRODUCT SUPPORT ACTIVITY.

The PSM or LCL executes product support development on behalf of the PM. Effective product support management for the software acquisition pathway involves early integration between the requirements team, the development team, and users, seamlessly built into the acquisition process. This will help ensure software acquired through this pathway is aligned with agile development tenets and rapid capability delivery.

a. Product Support at Program Inception.

Product support management planning for software begins at program inception pursuant to DoDI 5000.87.

(1) Agile process teams will share data real-time to rapidly incorporate required changes to support continuous integration and continuous development.

(2) Software quality, security, and the development environment directly affect affordability. Affordability goals are achieved over time as software quality increases and the best value product support package is implemented.

(3) The PSM (or the LCL, when a PSM is not assigned) is crucial in the software development and delivery process, as the PM's advocate for IPS element cost input into the planning, programming, budgeting, and execution and POM process, to ensure funds are available to execute future product support activities.

(4) The PSM tracks software development impacts to the IPS elements. The PSM will collaborate with cross-functional teams via product owners to update the product support impacts as they become known and incorporate appropriate user feedback. The PSM will work with the PM and contracting officer to incentivize and track PSP and PSI performance for the software development effort.

b. Product Support in the Planning Phase.

(1) Product Support and the Capability Needs Statement.

The capability needs statement establishes operational outcomes and is a key input into the PSS. Any updates to the capability needs statement should trigger updates to the PSS.

(2) Integration and Life Cycle Cost Considerations.

The PM and the PSM will approach software development and delivery IAW the software acquisition pathway policy in DoDI 5000.87 and this issuance in order to assess life cycle costs and impacts to continuous, iterative software development and delivery.

(3) Product Support Requirements in the Acquisition Strategy.

The PSM will coordinate with the PM to ensure that the acquisition strategy includes those activities that facilitate the achievement of the product support performances outcomes. When the software acquisition pathway is the acquisition program's only pathway, the PSM will document the PSS within a tailored LCSP and update it over the software life cycle. When an acquisition program combines the software acquisition pathway with the MCA or the MTA pathway, the PSM will document the PSS for the software within the overarching LCSP (either as an annex to the LCSP or within the body of the LCSP).

(4) User Assessment Planning.

In support of the PM, the PSM will coordinate with the lead software developer to identify and pre-plan for user participation in product support-related user assessments of the software technical manual, source codes, training materials, and supportability.

(5) Requirements for Product Support Input into the IP Strategy.

The PM will ensure the PSM works with the lead software developer and organic software engineer to identify the relevant software contract data requirements, as well as appropriate data rights, source code, and licenses that will support effective product support, including maintaining competition and allowing potential transition to another software developer, if applicable, and ensure that these are reflected in the program's IP strategy.

(6) Software Development Cycle Impacts to Product Support Activities and Documents.

(a) The PM and PSM will work with the product owner to plan for software evolution impacts to logistics products throughout the program's life cycle.

(b) The PSM will work with the users, lead software developer, and organic software engineering organizations, beginning at program inception, to ensure the U.S. Government procures the appropriate technical data, computer software, and associated license rights required to support life cycle management.

c. Product Support Requirements in the Execution Phase.

The PSM will coordinate with the users and stakeholders to track PSPs' and PSIs' performance. The PSM will also ensure the product support solution plans for disposal costs at the software system's retirement.

(1) Software PSS and LCSP.

(a) Software standalone programs will utilize a tailored LCSP.

(b) When a software program is embedded with a MCA or MTA program, software requirements will be documented in the MCA program's or MTA program's LCSP.

(c) The PSS will document product support arrangements, recommended PSIs and PSPs, and detail the software disposal strategy.

(2) Software Development Team and PSM Team Alignment.

Advance and ongoing coordination throughout the product life cycle must occur between users, the product owner, and the PSM, to identify impacts to the PSS from evolving software.

d. Product Support Security Requirements.

The PSM must be aware of the impacts security has on product support. The PSM will coordinate with the information system security manager and the lead systems engineer to track program protection plan and cybersecurity risks based on product support implications and continuous delivery of capability and authority to operate.

e. IT Service Management.

The PSM will detail the IT service management process, tools, and performance measures related to software (e.g., Service Desk) within the PSS, IAW DoDI 8440.01 and the DoD Enterprise Service Management Framework as it applies to the nuances of their program.

SECTION 9. PRODUCT SUPPORT MANAGEMENT FOR THE DEFENSE BUSINESS SYSTEM (DBS) ACQUISITION PATHWAY

9.1. PURPOSE.

a. Product support management for a covered DBS, IAW DoDI 5000.75, is the joint responsibility of the PSM or the LCL, the functional lead, and the PM. The DoD or Component senior leader with business function responsibility (functional sponsor) will designate a functional lead to collaborate with the PM to manage the delivery of the DBS and DBS support activities.

b. The PSM will collaborate with the functional lead to develop the capability support plan IAW DoDI 5000.75, ensuring that the DBS's performance and cost goals are met throughout the DBS's life cycle.

9.2. PSM ACTIVITY WITHIN THE BUSINESS CAPABILITY ACQUISITION CYCLE (BCAC)

a. Capability Need Identification.

The PSM will work with the PM to ensure the capability need identification phase of the BCAC addresses requirements across the DBS's life cycle, including:

- (1) Describing the business problem(s).
- (2) Defining the DBS capability need.
- (3) DBS capability performance measures.
- (4) Desired end state for the DBS capability.
- (5) Future capabilities.
- (6) Life cycle costs.
- (7) Historical and operational data analysis to inform business capability requirements – business problem or opportunity.

b. Solution Analysis Phase.

(1) Business process reengineering will be conducted during the solution analysis phase. The PSM will support business process reengineering by keeping aware of business processes that are being reviewed and optimized that may impact logistics and sustainment operations. When a business process is optimized or before the optimized business process is finalized the PSM will assess any sustainment implications to the optimized business process, such as training, manpower, required key system attributes, etc.

(2) The PSM will conduct historical and operational data analysis to inform RAM costs, economic analysis, schedule, resource planning, initial acquisition strategy, capability implementation plan, and cybersecurity strategy.

c. Functional Requirements and Acquisition Planning.

(1) The PSM will incorporate product support considerations into market research and recommend inclusion into resulting contracts. In assessing market offerings, the PSM will consider sustainment costs and performance implications from the various alternatives identified.

(2) The PSM will conduct historical and operational data analysis to provide input into the initial capability support plan, market research analysis, and draft request for proposal. The PSM will also provide input into the acquisition strategy, cybersecurity strategy, and capability implementation plan.

d. Acquisition Testing and Deployment.

(1) The PSM will participate in the DBS contract award source selection. Due to the primarily commercial-off-the-shelf/non-developmental item nature of acquisitions accomplished using this pathway, the PSM will ensure that product support infrastructure is considered within the source selection to identify product support risk and technology maturity, and to determine the extent to which the existing product support infrastructure can be leveraged.

(2) During testing and deployment the PSM will assess the evolving design/integration effort for implications to the IPS elements.

(3) The PSM will ensure training packages are complete, help desk and other product support infrastructure is in place and accessible, appropriate technical data licenses have been procured and are active, and locations receiving the DBS are prepared to receive it (e.g., facilities impacts have been assessed).

e. Capability Support.

The PSM will manage DBS product support related metrics throughout the DBS's life cycle, related to the DBS's performance, to ensure performance requirements and cost goals are achieved and customer satisfaction is acceptable. The PSM will iteratively monitor performance metrics and implement corrective action(s) when needed to optimize the DBS's sustainability and/or reduce cost.

SECTION 10. PRODUCT SUPPORT MANAGEMENT FOR THE ACQUISITION OF SERVICES PATHWAY

10.1. PURPOSE.

This section describes the application of product support planning, policies, and procedures to provide supportability and sustainment in the acquisition of services, consistent with the Defense Acquisition of Services pathway, DoDI 5000.74, which emphasizes collaboration of stakeholders as early and often as possible across functional areas.

10.2. PRODUCT SUPPORT INPUT.

a. The PSM or LCL supports the PM in the planning, strategic sourcing, management, and oversight of product support equities in contracts for services. The PM and PSM (or the LCL, when a PSM is not assigned) use the services acquisition pathway to support enterprise solutions for logistics products in order to implement efficiency, reduce costs, and eliminate redundancy. The PSM will participate in acquisitions for services, IAW DoDI 5000.74 and this issuance.

b. The PSM will:

(1) Work with a cross-functional team that includes IP SMEs to review sustainment deliverables and IP strategy requirements IAW DoDI 5010.44.

(2) Review the initial acquisition strategy and PSS while identifying appropriate sustainment metrics, data quality standards, deliverables and deliverable schedules, and user assessments of delivered logistics products.

(3) Perform market research on relevant sustainment performance metrics and delivery of service alternatives and detail risk management of product support equities.

(4) Define sustainment requirements and ensure they are included in the performance work statement and quality assurance surveillance plan.

(5) Support the PM in developing the product support related areas of the acquisition strategy, ensuring proper timing and receipt of services, as well preserving the ability to transition to other service providers as needed.

(6) Support the acquisition strategy's execution and participate in the source selection (if possible) to ensure offerors address product support-related deliverables for quality and performance requirements as part of the proposed technical service solution.

(7) Support the contracting officer in conducting sustainment related performance management considerations including performance against sustainment requirements, quality assurance assessments, and identifying the root cause of failures.

GLOSSARY

G.1. ACRONYMS.

ACRONYM	MEANING
AAF	adaptive acquisition framework
ACAT	acquisition category
A _M	materiel availability
A _O	operational availability
ASD(S)	Assistant Secretary of Defense for Sustainment
BCA	business case analysis
BCAC	business capability acquisition cycle
CAE	Component Acquisition Executive
CAPE	cost assessment and program evaluation
CIO	chief information officer
CONOPS	concept of operations
DAS	Defense Acquisition System
DAE	Defense Acquisition Executive
DBS	defense business system
DLA	Defense Logistics Agency
DMSMS	diminishing manufacturing sources and material shortage
DoDD	DoD directive
DoDI	DoD instruction
IAW	in accordance with
ICE	independent cost estimate
ILA	independent logistics assessment
IP	intellectual property
IPS	integrated product support
IT	information technology
JCIDS	Joint Capabilities Integration and Development System
KPP	key performance parameter
LCL	life cycle logistician
LCSP	life cycle sustainment plan
MCA	major capability acquisition
MTA	middle tier of acquisition

ACRONYM	MEANING
O&S	operating and support
PM	program manager
POM	program objective memorandum
PoR	program of record
PS BCA	product support business case analysis
PSI	product support integrator
PSM	product support manager
PSP	product support provider
PSS	product support strategy
RAM	reliability, availability, and maintainability
RAM-C	reliability, availability, maintainability, and cost
SCRM	supply chain risk management
SME	subject matter expert
SR	sustainment review
TMDE	test, measurement, and diagnostics equipment
UCA	urgent capability acquisition
U.S.C.	United States Code
USD(A&S)	Under Secretary of Defense for Acquisition and Sustainment
USD(R&E)	Under Secretary of Defense for Research and Engineering

G.2. DEFINITIONS.

A complete Glossary of acquisition terms are maintained on the Defense Acquisition University website. The Defense Acquisition University Glossary can be found at <https://www.dau.edu/tools/t/DAU-Glossary>.

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¹ Available at <http://www.jcs.mil/>; requires authorized log-in

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