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**Washington, DC 20548**

September 12, 2017

The Honorable John McCain
Chairman
The Honorable Jack Reed
Ranking Member
Committee on Armed Services
United States Senate

The Honorable Mac Thornberry
Chairman
The Honorable Adam Smith
Ranking Member
Committee on Armed Services
House of Representatives

**Weapon Systems Management: Product Support Managers' Perspectives on Factors Critical to Influencing Sustainment-Related Decisions**

The Department of Defense (DOD) spends billions of dollars each year on operating and support costs for weapon systems, and these costs have historically accounted for approximately 70 percent of a weapon system's total life-cycle cost. While the majority of operating and support costs are incurred after a weapon system has been produced and fielded, they result in part from program decisions made earlier in the acquisition process—during system development—and are generally set before production begins. In 2009, as part of legislation aimed at improving the life-cycle management of major weapon systems, Congress required DOD to assign a product support manager (PSM) to each major weapon system program.[1] The principal responsibility of the PSM is to develop and implement support strategies for weapon systems that maintain readiness and control life-cycle costs.

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[1]National Defense Authorization Act for Fiscal Year 2010, Pub. L. No. 111-84, § 805 (2009), *repealed by* National Defense Authorization Act for Fiscal Year 2013, Pub. L. No. 112-239, § 823(b) (2013) (codifying life-cycle management and product support in 10 U.S.C. § 2337). Codified as amended in 10 U.S.C. § 2337, the statute mandates that the Secretary of Defense require that each major weapon system be supported by a PSM. To address this provision, DOD requires that a PSM be appointed for each Acquisition Category (ACAT) I and ACAT II system. ACAT I programs are Major Defense Acquisition Programs. A Major Defense Acquisition Program is a program that is not a highly sensitive classified program and that is designated by the Under Secretary of Defense for Acquisition, Technology and Logistics as a Major Defense Acquisition Program or that is estimated to require eventual total expenditure for research, development, test, and evaluation of more than $480 million (fiscal year 2014 constant dollars) or for procurement of more than $2.79 billion (fiscal year 2014 constant dollars). ACAT II programs are defined as those acquisition programs that do not meet the criteria for an ACAT I program but do meet the criteria for a major system. A major system is defined as a program estimated by the DOD component head to require eventual total expenditure for research, development, test, and evaluation of more than $185 million in fiscal year 2014 constant dollars or for procurement of more than $835 million in fiscal year 2014 constant dollars—or those designated by the DOD component head to be ACAT II.

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In 2014, we reported that DOD and the military services had taken steps to implement PSMs for major weapon system programs, but certain aspects of the implementation process remained incomplete.[2] We recommended that DOD and the military services (1) develop a plan to implement a comprehensive career path and associated guidance to develop, train, and support future PSMs; (2) issue clear, comprehensive, centralized guidance regarding the roles and responsibilities of PSMs and the officials that assign them; (3) clearly define Army-wide roles and responsibilities for the sustainment portion of the life cycle of major weapon systems—to include the reporting relationships of Army Materiel Command support personnel assigned to Army weapon system program offices—by issuing new, or revising existing, Army guidance; (4) systematically collect and evaluate information on the effects, if any, that PSMs are having on life-cycle sustainment decisions for their assigned weapon systems; and (5) review the current Army process for requesting and distributing sustainment funding for major weapon systems and take necessary actions to ensure that Army PSMs have greater visibility of the amount of sustainment funds their weapon systems will receive, including what they will receive prior to the year of execution of funds, to the extent possible. DOD generally concurred with all of these recommendations.

House Report 114-537, accompanying a bill for the National Defense Authorization Act for Fiscal Year 2017, included a provision for us to review DOD's progress in implementing PSMs and integrating them into the life-cycle management of major weapon systems. Our objective in this report was to describe factors that PSMs identify as critical to their ability to influence sustainment-related decisions during weapon system development, as well as any challenges to their ability to influence these decisions. We also tracked DOD's progress on implementing recommendations from our 2014 report in enclosure I.

To learn what factors PSMs have identified as critical to their ability to influence sustainment-related decisions, as well as any challenges, we identified all 62 PSMs who were assigned to acquisition category I and II weapon systems in the acquisition phases before milestone C as of December 2016, based on information provided by the military services.[3] We then worked with Army, Navy, Marine Corps, and Air Force officials at locations that had the highest concentration of these PSMs to invite them to participate in our focus group sessions. We held seven focus groups with a total of 34 PSMs from eight different locations.[4] These sessions involved structured small-group discussions with between three and nine participants. We conducted two of the seven focus groups via video teleconference and the remaining five via telephone. We followed a protocol for each discussion to ensure consistent coverage of key topics among all seven focus groups. We pilot tested the protocol to ensure that it covered relevant topics and asked clear questions. A GAO moderator led each discussion to keep participants focused on the specified issues within the discussion time frames. With participants' consent, we recorded all but two of the focus group discussions and documented the perspectives raised by PSMs in each focus group.

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[2]GAO, *Weapon Systems Management: DOD Has Taken Steps to Implement Product Support Managers but Needs to Evaluate Their Effects,* GAO-14-326 (Washington, D.C.: Apr. 29, 2014).

[3]Milestone C is the decision to enter the production and deployment phase of DOD's acquisition cycle or for limited deployment in support of operational testing.

[4]We held three Air Force focus groups, two Navy focus groups, and two Army focus groups. The only Marine Corps PSM that met our criteria attended a Navy focus group.

Focus groups are intended to generate in-depth information about the reasons for the focus group participants' attitudes on specific topics and to offer insight into their concerns. Because our questions were open-ended and designed to allow participants to discuss factors that help or hinder their ability to influence sustainment-related decisions, we cannot determine whether a focus group's not mentioning a particular challenge is an indication that the PSMs in the group did not experience that challenge or simply that that they did not raise it when asked broadly about challenges. Separate from our focus groups, we interviewed 12 PSMs—7 of the 28 who did not participate in our focus groups and 5 who were identified by military service officials as being effective in executing the PSM role and having a positive influence on their assigned weapon system programs.[5]

We used qualitative analysis software to help us categorize and assess the data we collected from interviews and focus groups. Through this analysis, we identified the most prevalent perspectives from among the focus group and interview participants. While the information we collected from the focus groups and interviews provided insight and context on the issues discussed, it is not generalizable to all PSMs and their programs. We discussed the challenges identified in the focus groups and interviews with DOD and service officials and obtained their views and information on actions that might be taken to mitigate some of the PSMs' concerns.

To track DOD's progress on implementing our prior recommendations, we interviewed officials from the Office of the Secretary of Defense (OSD) and the headquarters of the military departments. We also reviewed pertinent documents, including DOD instructions, military department policies, memorandums, and other guidance regarding DOD's actions to implement the recommendations.

We conducted this performance audit from May 2016 to September 2017 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings, based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings, based on our audit objectives.

**Background**

A provision in the National Defense Authorization Act for Fiscal Year 2010 required that PSMs be assigned to all major weapon systems and outlined the roles and responsibilities that PSMs must perform, including developing and implementing a comprehensive product support strategy for the system.[6] A provision in the National Defense Authorization Act for Fiscal Year 2013 subsequently codified the requirement and the roles and responsibilities of the PSM at section 2337 of title 10 of the U.S. Code, which was later amended by the National Defense Authorization Act for Fiscal Year 2014.[7] According to DOD's PSM Guidebook, product support considerations begin prior to the first acquisition milestone (milestone A), with early requirements determination, and PSM involvement early in design is a critical part of ensuring a supportable and affordable system.[8]

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[5]From the remaining 28 PSMs who were eligible to participate in our focus group discussions but did not, we selected 7 PSMs from the Air Force, Navy, and Army with whom to conduct one-on-one interviews.

[6]Pub. L. No. 111-84, § 805 (2009), *repealed by* Pub. L. No. 112-239, § 823(b) (2013).

[7]Pub. L. No. 112-239, § 823(a) (2013); Pub. L. No. 113-66, § 823 (2013).

[8]Department of Defense, *Product Support Manager Guidebook* (April 2016).

PSMs, along with other staff, work in weapon system program offices, which are led by program managers. According to the PSM guidebook, program managers are assigned life-cycle management responsibility and are accountable for the implementation, management, and oversight of all activities associated with the development, production, sustainment, and disposal of a weapon system. The PSM is to report to the program manager. The program manager's responsibilities for oversight and management of the product support function are typically delegated to a PSM, who leads the development, implementation, and top-level integration and management of all sources of support to meet warfighter sustainment and readiness requirements, with assistance from assigned staff. The program manager, however, retains decision-making authority on all aspects of the program, including those that affect product support.

## PSMs Identified a Number of Factors That Enhanced or Posed Challenges to Their Ability to Influence Sustainment-Related Decisions

PSMs who participated in our focus groups, and other PSMs we interviewed, identified several factors that helped them to influence sustainment-related decisions during the design and development of their assigned weapon systems. They also identified several challenges that hindered their ability to influence sustainment-related decisions during this period. DOD and service officials acknowledged some of the challenges cited by the PSMs in our focus groups and interviews but did not agree with PSM perspectives on other challenges.

PSMs Identified Skills and Institutional Support as Factors That Enhanced Their Ability to Influence Weapon System Acquisition Programs

PSMs from the focus groups and interviews we conducted told us that specific skills and institutional support on sustainment-related activities enhanced their ability to influence weapon system programs during acquisition and development. Participants stated that teamwork and collaboration, early implementation of the PSM position, and organizational support and emphasis on sustainment were important to their success as PSMs.

- *Teamwork and Collaboration*. PSMs from six of our seven focus groups said that establishing and maintaining good working relationships with the program manager and other personnel inside and outside the weapon system program office helped them to influence sustainment-related decisions on their assigned weapon system programs. For example, Army PSMs said that PSMs should have good relationship skills to collaborate with program management, finance, and engineering officials. These focus group participants added that PSMs need to be assertive to advocate for the long-term supportability of their assigned weapon system program. An Air Force PSM we interviewed told us that it is important to foster peer-to-peer relationships with the program manager and engineering functional lead; doing so can help to ensure that sustainment considerations have an influence on system design and can inform decisions in order to avoid surprises and increased operating and support costs. PSMs from our focus groups also stated that participating in discussion forums, such as integrated product teams, helped them to influence sustainment-related decisions for their assigned weapon system programs.[9] For

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[9]According to DOD, an integrated product team is a team composed of representatives from appropriate functional disciplines working together to build successful programs, identify and resolve issues, and make sound and timely recommendations to facilitate decision making. According to DOD, examples of integrated product teams for weapon system programs include those for contracting, cost estimating, testing, and engineering.

example, Army PSMs said that taking part in integrated product teams and working with the project engineers and other functional leads who normally run these teams enables them to incorporate logistics considerations into planning for maintainability, availability, and other areas where logistics typically does not receive enough visibility.[10] These PSMs also told us that, to ensure that sustainment considerations are not overlooked, they try to get involved in integrated product teams early enough to inform product development, including hardware solutions, plans, and budget formulations. They emphasized the importance of these integrated product teams and told us that membership on such teams is also critical for personnel who work for the PSMs.

- *Early Assignment of the PSM Position*. PSMs in five of our seven focus groups told us that it is important to assign the PSM position at the inception of a weapon system program in order to help influence sustainment considerations. For example, Navy PSMs stated that it is necessary to assign the PSM position early in a weapon system program's life cycle, because it is much harder for program management personnel to influence a program later in its life cycle. These Navy PSMs added that it is also critical to include the product support requirements that can be controlled or managed during design in specification and requirements documents, because they should be inherently part of the design, and it would be costly to add them later. Air Force PSMs in one focus group said that to influence their assigned program's sustainment-related decisions, PSMs should help to develop the long-term sustainment strategy before acquisition milestone B.[11] Once they have developed the strategy, PSMs should document it in the life-cycle sustainment plan and ensure that it is reflected in other documents, such as statements of work, to help the weapon system program prepare for sustainment.

- *Organizational Support and Emphasis on Sustainment*. PSMs in five of our seven focus groups stated that being part of an organization that is supportive of and places an emphasis on sustainment enhances their ability to influence sustainment-related decisions. For example, PSMs in one focus group told us that the Air Force has changed its organizational structure to support the PSM at higher command levels, including the Life Cycle Management Center, the Air Force Materiel Command, and the Office of the Secretary of the Air Force for Acquisition.[12]  Further, the Air Force Materiel Command increased the visibility of program sustainment costs at weapon system reviews conducted

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[10]According to DOD, product support encompasses a range of disciplines, including logistics, requirements, financial, contracts, legal, and engineering. During acquisition, logistics is defined as technical and management activities conducted to ensure that supportability implications are considered early and throughout the acquisition process to minimize support costs and to provide the user with the resources to sustain the system in the field. According to DOD, product support-related activities during the acquisition phase include the development of products that support the system during sustainment, such as training tools, technical manuals, maintenance requirements, and provisioning.

[11]Milestone B is the decision to enter the engineering and manufacturing development phase of DOD's acquisition cycle.

[12]In 2012, the Air Force Materiel Command restructured from 12 centers to just 5, including the Air Force Life Cycle Management Center. The restructure was intended to standardize business processes across all Centers and foster a more life-cycle management approach rather than managing acquisition and sustainment separately. In 2014, a subsequent reorganization established a logistician position at the senior executive service level within the Office of the Secretary of the Air Force for Acquisition to advocate for logistics and product support and subject matter experts to provide policy and oversight to PSMs. According to Air Force officials, this reorganization was also intended to establish a more balanced approach between acquisition and logistics roles and speaks to the importance the Air Force is placing on PSM roles and responsibilities.

at the highest levels of the organization. According to some of the Air Force PSMs who participated in our focus groups, these actions have increased support for Air Force PSMs. Navy PSMs told us that to enhance PSMs' ability to influence sustainment-related decisions for their assigned weapon system program, it is important that program leadership be supportive of sustainment efforts in order to set an example for other officials to accept that logistics is an integral part of the development or procurement of a weapon system. According to these Navy PSMs, organizations that support planning for sustainment early in a program's life cycle will typically develop a program or a component that will be more reliable and available and less costly to support.

To a lesser extent, PSMs identified other factors that are important for their success, such as training and guidance, information sharing forums for PSMs, and adequate resources and qualified personnel. In some instances PSMs cited specific examples where these factors have helped them succeed. For example, PSMs said that the information and training provided by the Defense Acquisition University were excellent and that DOD's annual PSM conference was a forum where they could network with other PSMs and share solutions to challenges they faced.

<u>PSMs Identified Several Challenges That Hindered their Ability to Influence Weapon System Acquisition Programs</u>

PSMs who participated in our focus groups and interviews stated that they were generally able to perform their duties but identified several challenges that hindered their ability to influence sustainment-related decisions during weapon system development. These PSMs stated that the challenges include resource constraints, competing priorities, and differing approaches to institutionalizing the PSM position.

- *Resource Constraints*. PSMs from six of our seven focus groups stated that resource constraints, such as shortages of funding or personnel, hindered their ability to influence sustainment-related decisions during weapon system development. For example, PSM participants from an Army focus group stated that the personnel shortage they are experiencing is one of their biggest challenges, because it is extremely difficult to perform all of the PSM functions without enough personnel to help. An Air Force PSM told us that, because DOD has been under a hiring freeze, his program office has only six team members, including program management, engineering, and logistics officials. Navy PSMs told us that PSMs whose programs are in development often do not receive an adequate number of staff, because program resources are being used to solve current acquisition issues. However, because PSMs attempt to influence future life-cycle sustainment decisions, when readiness problems arise later in the program's life cycle, the PSM may receive additional staff as a reactive measure. In one focus group, Air Force PSMs stated that operating under a continuing resolution has made programs less efficient because of fiscal uncertainty. These participants told us that fiscal uncertainty affected their morale, because it sometimes made the way forward seem unclear. Army PSMs told us that limitations on funding have hindered their ability to influence sustainment-related decisions. For example, one Army PSM said that he is unable to purchase a certain analytics tool that would help determine the effects of changes to a weapon system and better inform the decision-making process.

- *Competing Priorities*. PSMs in six of our seven focus groups told us that their program management did not place a strong emphasis on the sustainment portion of a program's life cycle, because it was focusing on performance in the near term. For example, Air Force PSMs in one focus group stated that their program offices placed more emphasis on cost,

schedule, and weapon system performance than they did on sustainment-related efforts, because a program's success is not measured by sustainment. Another Air Force PSM told us that programs also face statutory considerations when making program decisions. For example, the military services are subject to statutory limits on the funds that can be used to contract for depot-level maintenance and repair workloads and also on contracting for core depot maintenance capabilities.[13] According to this Air Force PSM, decisions on product support for individual weapon system programs are influenced by the services' need to satisfy these statutory requirements in the future, even if these product support decisions are not advantageous to a specific program. Army PSMs told us that program management often has a near-term focus when managing a program. Program managers are in the job for 3 or 4 years and then move on to a different role. As a result, decisions are made to meet short-term goals, and it is difficult for PSMs to advocate for long-term sustainment considerations and justify the value of this approach to program managers. This is consistent with our prior work that has found that DOD's acquisition culture historically provides incentives to over promise on a weapon's performance while under stating its likely cost and schedule demands, thus deemphasizing sustainment. Moreover, the lack of continuity in the tenure of key acquisition leaders, including program managers, across the time frames of individual programs, encourages a near-term perspective.[14] While DOD has taken some actions to improve these longstanding systemic issues, our discussions with PSMs indicate that these problems may persist.[15]

- *Differing Approaches to Institutionalizing the PSM Position*. PSMs in five of our seven focus groups told us that the ways in which DOD has implemented the PSM position resulted from differing understandings of PSMs' roles, responsibilities, and workload. For example, Army PSMs told us that when the PSM position was implemented, Army logisticians were moved into these positions and were not replaced. As a result, when logisticians became PSMs, they assumed all of the PSM responsibilities while continuing to perform their prior duties. These focus group participants added that program managers who do not understand the PSM's roles and responsibilities could benefit from additional training or education on the PSM role; educating them about the PSM role could help them better understand what to expect from PSMs who perform multiple roles. Navy and Army PSMs told us that the assignment of PSMs to multiple weapon system programs limited their ability to influence

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[13]10 U.S.C. §§ 2464, 2466. Generally, depot-level maintenance and repair means material maintenance or repair requiring the overhaul, upgrading, or rebuilding of parts, assemblies, or subassemblies, and the testing and reclamation of equipment as necessary. *Id.* at § 2460(a). Depot-level maintenance and repair is independent of any location or funding source and may be performed in the public or private sectors. *Id.* Under 10 U.S.C. § 2466, the military departments and defense agencies may use no more than 50 percent of annual depot-level maintenance and repair funding for work performed by private-sector contractors. Under 10 U.S.C § 2464, DOD is required to maintain a core logistics capability—including a maintenance and repair capability—that is government owned and operated, to provide a ready and controlled source of technical competence and resources to ensure effective and timely response to mobilizations, contingencies, or other emergencies.

[14]For more information on DOD's acquisition culture and program manager tenure, see GAO, *Defense Acquisitions: Joint Action Needed by DOD and Congress to Improve Outcomes*, GAO-16-187T (Washington, D.C.: Oct. 27, 2015); *Defense Acquisitions: Where Should Reform Aim Next?*, GAO-14-145T (Washington, D.C.: Oct. 29, 2013); *Defense Acquisitions: Department of Defense Actions on Program Manager Empowerment and Accountability*, GAO-08-62R (Washington, D.C.: Nov. 9, 2007); and *Best Practices: Better Support of Weapon System Program Managers Needed to Improve Outcomes*, GAO-06-110 (Washington, D.C.: Nov. 30, 2005).

[15]Weapon systems acquisition is one of the areas on our High-Risk List. For a discussion of DOD's actions to improve the systemic issues with weapon systems acquisition, see GAO, *High-Risk Series: Progress on Many High-Risk Areas, While Substantial Efforts Needed on Others*, GAO-17-317 (Washington, D.C.: Feb 15, 2017).

sustainment-related decisions. For instance, one PSM said he is assigned to more than five programs of various acquisition category levels and is, therefore, unable to provide as much logistics oversight on cost, schedule, and performance measures on each as he could if he was assigned to fewer programs.

To a lesser extent, PSMs identified other challenges they face: the geographic dispersion of program support staff, the difficulty of obtaining the necessary technical data rights, and the burdensome development and approval processes for acquisition documents. For example, in the Navy and Air Force focus groups, PSMs noted that separation of support staff by time zone and geographical location has hindered communication and coordination, and there have been inconsistencies in procedures when working with different major commands. These PSMs also said that obtaining technical data rights for weapon systems is a challenge because of the complex nature of intellectual property and the negotiations needed and costs incurred to acquire these rights.[16] With regard to acquisition documents, Army and Air Force PSMs stated that acquisition documents contain redundant information and it sometimes takes years to get all of the necessary approvals, which can lead to an increase in workload, especially in cases where PSMs are assigned to multiple weapon system programs.[17]

When we shared the challenges identified by the PSMs we spoke to with DOD and service officials, they acknowledged some of the challenges but did not agree with PSM perspectives on certain other challenges. Regarding resource constraints, for example, a DOD official told us that PSMs often lack dedicated staff, particularly PSMs assigned to smaller weapon system programs. Service officials noted that they are limited in their ability to address staffing and resource challenges, given ongoing workforce reduction efforts and other budget limitations. With regard to competing priorities, a DOD official explained that the reorganization of the Office of the Under Secretary of Defense for Acquisition, Technology and Logistics to include a new Under Secretary of Defense for Acquisition and Sustainment will likely provide additional emphasis on the importance of sustainment and related product support efforts.[18] In contrast, some service officials did not agree with the PSMs' perspectives that program managers did not fully understand PSM roles and responsibilities. These officials also noted that PSMs should take responsibility for educating program managers and other program officials as well. Some of the service officials also did not agree with PSMs' perspectives about the size of their workload. These officials acknowledged that implementation of the PSM role came with broader responsibilities but said that the concept of planning for product support did not change in their services.

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[16]Defense Federal Acquisition Regulation Supplement clause 252.227-7013 defines technical data as "recorded information, regardless of the form or method of the recording, of a scientific or technical nature (including computer software documentation)...[but not including] computer software or data incidental to contract administration, such as financial and/or management information." Technical data for weapon systems includes drawings, specifications, standards, and other details necessary to ensure the adequacy of item performance, as well as manuals that contain instructions for installation, operation, maintenance, and other actions needed to support weapon systems. For related prior work see GAO, *Defense Acquisitions: Further Action Needed to Improve DOD's Insight and Management of Long-term Maintenance Contracts*, GAO-12-558 (Washington, D.C.: May 31, 2012) and *Defense Acquisition: DOD Should Clarify Requirements for Assessing and Documenting Technical-Data Needs*, GAO-11-469 (Washington, D.C.: May 11, 2011).

[17]For related prior work see GAO, *Acquisition Reform: DOD Should Streamline Its Decision-Making Process for Weapon Systems to Reduce Inefficiencies*, GAO-15-192 (Washington, D.C.: Feb. 24, 2015).

[18]Effective February 1, 2018, section 901 of Public Law 114-328 repeals section 133 of title 10 of the U.S. Code, which established the Under Secretary of Defense for Acquisition, Technology, and Logistics. Section 901 also establishes an Under Secretary of Defense for Acquisition and Sustainment, to be codified at section 133b of title 10 of the U.S. Code.
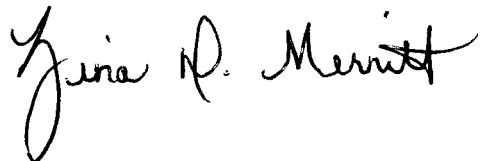
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In addition, actions taken by DOD and the Army to fully implement the recommendations we made in 2014, as discussed in enclosure I, could further institutionalize the role of the PSMs and thereby help to increase their influence in sustainment-related decisions.

Agency Comments

We are not making any recommendations in this report. We provided a draft of this report to DOD for review and comment, and DOD's written comments are reproduced in enclosure II. DOD stated that it did not have any significant issues with the report and provided a technical comment which we incorporated as appropriate. DOD also stated that it would continue to work to implement the remaining open recommendations from our 2014 report.

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We are sending copies of this report to the appropriate congressional committees; the Secretary of Defense; the Secretaries of the Army, Navy, and Air Force; the Commandant of the Marine Corps; and the Under Secretary of Defense for Logistics and Materiel Readiness. In addition, the report is available at no charge on the GAO website at http://www.gao.gov.

If you or your staff have any questions about this report, please contact me at (202) 512-5257 or merrittz@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made key contributions to this report include Thomas Gosling (Assistant Director), Yecenia Camarillo, Joanne Landesman, Shahrzad Nikoo, Alma Pronove, Janine Prybyla, Cynthia Saunders, and Michael Silver.

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Enclosures – 2

**Enclosure I: Status of DOD Actions on Prior GAO Recommendations**

In 2014, we found that the Department of Defense (DOD) and the military services had taken steps to implement Product Support Managers (PSMs) for major weapon system programs but that certain aspects of the implementation process remained incomplete.[1] We made five recommendations to improve the implementation of PSMs. The table in this enclosure describes the status of DOD's actions on our recommendations.

**Table 1: Status of 2014 GAO Recommendations on Product Support Manager (PSM) Implementation and Department of Defense (DOD) Responses and Subsequent Actions**

| GAO recommendations | DOD response and actions | Implementation status and our assessment |
|---|---|---|
| DOD should develop and implement a plan with objectives, milestones, and resources to implement and institutionalize a comprehensive career path and associated guidance to develop, train, and support future PSMs. | DOD concurred and on May 26, 2015, the Principal Deputy Assistant Secretary of Defense for Logistics and Materiel Readiness issued a memorandum that introduced a PSM career path framework and PSM position category description to assist with training and assignment of life-cycle logisticians. The career path framework and position category description were included in an appendix to *DOD's Product Support Manager Guidebook* in November 2015 and, more recently, in a re-issued version of this guidebook dated April 2016. | *Implemented:* <br><br> DOD's actions met the intent of the recommendation. |
| DOD should issue clear, comprehensive, centralized guidance regarding the roles and responsibilities of PSMs and the officials that assign them. | DOD concurred and has issued or updated various guidance documents regarding PSMs. For example, in November 2014, DOD issued a PSM position category description that included the PSM statutory responsibilities from section 2337 of title 10 of the U.S. Code. An update to DOD Instruction 5000.02 in January 2015 addressed program manager and PSM responsibilities with regard to the development and implementation of a product support strategy for a major weapon system. In February 2017, DOD updated a chapter of its Defense Acquisition Guidebook to provide additional guidance to PSMs for developing, documenting, and executing sustainment strategies. | *Partially Implemented:* <br><br> The additional guidance documents are positive steps in clarifying the roles and responsibilities of PSMs and in providing insight into how a PSM carries out product support functions in support of the program manager. However, because the guidance is dispersed among several documents, it does not constitute centralized guidance on PSM roles and responsibilities, as we had recommended. <br><br> In 2014, we reported that service officials believed there was value in having all of the PSM-related guidance in one document, so that current and future product support personnel would not have to refer to multiple documents. In addition, these officials told us that the institutional knowledge behind the evolving PSM-related guidance |

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[1]GAO, *Weapon Systems Management: DOD Has Taken Steps to Implement Product Support Managers but Needs to Evaluate Their Effects,* GAO-14-326 (Washington, D.C.: Apr. 29, 2014).

| GAO recommendations | DOD response and actions | Implementation status and our assessment |
|---|---|---|
| | | and policy would be lost without centralized guidance, and they questioned whether new personnel would know where to find all of the PSM-related guidance. We continue to believe that such guidance would help to institutionalize the implementation of PSMs across the department. |
| The Army should clearly define the roles and responsibilities for the sustainment portion of the life cycle of major weapon systems, to include the reporting relationships of Army Materiel Command support personnel assigned to Army weapon system program offices, by issuing new, or revising existing, Army guidance. | DOD partially concurred and revised Army Regulation 700-127 "Integrated Product Support" and the companion Army Pamphlet 700-127, "Integrated Product Support Procedures" in October 2014, and both the Army Regulation and Pamphlet were most recently revised in 2016. The regulation and the accompanying pamphlet clarify the Army-wide roles and responsibilities for the sustainment portion of the life cycle of major weapon systems, including the reporting relationships of Army Materiel Command support personnel assigned to Army weapon system program offices. For example, this guidance states that product support integrators, generally the Army Materiel Command support staff, will report and be accountable to PSMs. It also states that PSMs may designate these support staff to perform daily management of performance-based arrangements, for which they will provide a periodic status report to the PSM on the execution of and compliance with product support arrangement requirements. Moreover, according to officials, the Army is conducting a pilot study of weapon systems that transition from the acquisition to the sustainment phase, and this study may lead to revised policies and procedures, including those related to the reporting relationships of Army Materiel Command support personnel assigned to Army weapon system program offices. The study is estimated to be completed by the end of fiscal year 2018. | *Implemented:*<br><br>The Army's actions met the intent of the recommendation. |

| GAO recommendations | DOD response and actions | Implementation status and our assessment |
|---|---|---|
| DOD should systematically collect and evaluate information on the effects, if any, that PSMs are having on life-cycle sustainment decisions for their assigned major weapon systems. | DOD concurred and in April 2014 stated that it would develop a methodology and plan to address this recommendation.<br><br>In July 2017, DOD officials said that, in considering how to implement this recommendation, they had concluded that it was not feasible to systematically collect and evaluate information on the effects PSMs are having on life-cycle sustainment decisions. They cited the role of PSMs as advisors to the program managers, who have decision-making authority. In addition, they stated that it would be an administrative burden to collect information from PSMs.<br><br>Further, DOD officials have stated that existing oversight of weapon system acquisitions—including approval of Life-Cycle Sustainment Plans, assessments of weapon system programs' status in achieving sustainment Key Performance Parameters/Key System Attributes, and reviews of operating and support costs—provides confidence that product support is being properly planned and managed. Officials also stated that the department's analysis of a limited number of nominations submitted for DOD's annual PSM Award serves as a qualitative barometer of the effectiveness of PSM involvement in individual programs. | *Not Implemented:*<br><br>Effective oversight of weapon system acquisitions, such as the steps cited by DOD officials, can provide increased confidence that product support is being properly planned and managed.  In addition, we agree there are challenges associated with identifying outcome-oriented performance metrics and in systematically collecting and evaluating such information without creating an undue administrative burden. However, we continue to believe there is value in this type of information, because it could provide insight into the contributions PSMs are making to weapon system sustainment planning and execution. PSMs hold a key leadership position and, if they are effective, can help reduce long-term sustainment costs, which can account for approximately 70 percent of a weapon system's costs over its life cycle.<br><br>As noted in our April 2014 report, program evaluation guidance states that evaluations are helpful in assessing (1) the extent to which a program achieves its outcome-oriented objectives and (2) the net effect of a program, by comparing the program's outcomes with an estimate of what would have happened in the absence of the program. Such evaluations can also be useful for identifying various trends—such as good practices and challenges related to the effects PSMs are having on life-cycle sustainment decisions—to help enhance future product support efforts across the department.<br><br>While reviewing nominations for DOD's annual PSM Award provides some insight into a limited number of PSMs, it does not constitute a systematic evaluation. |

| GAO recommendations | DOD response and actions | Implementation status and our assessment |
|---|---|---|
| The Army should review the current process for requesting and distributing sustainment funding for major weapon systems and take necessary actions to ensure that PSMs have greater visibility of the amount of sustainment funds their weapon systems will receive, including what they will receive prior to the year of execution of funds, to the extent possible. | DOD concurred and in 2015, officials stated that the Army would conduct a pilot initiative to provide greater visibility to PSMs prior to the year of execution of funds for their assigned weapon systems. However, due to competing Army requirements for available resourcing, the Army subsequently discontinued its plan to conduct this pilot initiative. According to officials, the Army developed and in 2017 began using a funding transparency metric during the joint acquisition and sustainment weapon system reviews held by the Army Materiel Command and the Assistant Secretary of the Army for Acquisition, Logistics and Technology. The goal of the funding transparency metric is to improve the alignment of requirements and funding in the future by comparing the requirements—which were previously submitted by the Program Executive Offices for their weapon system program offices—to the sustainment funding provided by the Army Materiel Command. | *Partially Implemented:*<br><br>The Army has taken some actions to address this recommendation, but it is too early to evaluate the results of these actions because the funding transparency metric is intended to influence future funding decisions. We continue to believe that without greater visibility—specifically, knowledge prior to the year of execution of the funds, to the extent possible— into how much sustainment funding PSMs and their programs will receive, some PSMs in the Army may not be able to plan, proactively manage, or affect life-cycle sustainment decisions for their assigned systems. |

Source: GAO analysis of DOD information. I GAO-17-744R

**Enclosure II: Comments from the Department of Defense**

**OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE**
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LOGISTICS AND
MATERIEL READINESS

AUG 2 5 2017

Ms. Zina Merritt
Director, Defense Capabilities Management
U.S. Government Accountability Office
441 G Street, NW
Washington, DC 20548

Dear Ms. Merritt:

This is the Department of Defense (DoD) response to the GAO Draft Report, GAO-17-744R, "WEAPON SYSTEMS MANAGEMENT: Product Support Managers' Perspectives on Factors Critical to Influencing Sustainment-Related Decisions," dated August 7, 2017 (GAO Code 100884).

The DoD finds no significant issues in the report, but for completeness would like to enhance the definition of logistics provided in footnote 10. In addition to technical and management activities to ensure supportability of the system is considered early in the acquisition process, product support-related activities during the acquisition phase include the development of products that support the system during sustainment, such as training tools, technical manuals, maintenance requirements, and provisioning.

The DoD understands the GAO's assessment of DoD's implementation of the recommendations made in GAO-14-326, "WEAPONS SYSTEM MANAGEMENT: DoD Has Taken Steps to Implement Product Support Managers but Needs to Evaluate Their Effects," dated April 2014. The DoD will continue its work to implement the unresolved recommendations.

Although there are still challenges associated with the implementation of the PSM role throughout the Department, the establishment of this leadership position and its responsibilities within the program offices has strengthened the planning for and consideration of sustainment in defense acquisition programs.

Kristin K. French
Principal Deputy
Performing the Duties of the ASD(L&MR)

(100884)