



About the workshop

The Aerospace Industries Association's (AIA) Product Support Committee has long advocated for expanding the use of performance-based logistics (PBL) within the Department of Defense (DoD) for weapons system sustainment. Effective PBL strategies require clearly defined and well executed management roles between Product Support Managers (PSM) and Product Support Integrators (PSI). The government, by statute, performs the lead role of PSM. There are no similar distinctions for who can perform the critical role of a PSI: PSMs may select government or industry. The PSI function not only entails managing contracts with multiple product support providers (PSPs); the successful PSI makes trade-offs across all applicable product support elements to optimize outcomes. This raises a question: *Who is generally better suited to perform the function of PSI, the government or industry?*

To help answer this question AIA engaged with the Center for Public Policy and Private Enterprise at the University of Maryland's (UMD) School of Public Policy to host a day-long workshop on August 3, 2016. Bringing together 14 senior aerospace and defense industry business executives and academics, the workshop identified the advantages of both industry and government PSIs. The UMD paper *Performance-Based Logistics: Addressing Challenges to Expanded Use* was put forth as a reference and as a point of departure.

What we found

Workshop participants considered and assessed the relative advantages and disadvantages of both industry and government executing the fundamental PSI attributes identified by DoD:

- > A track record of **experience** with the technology to be supported;
- > **Expertise** and experience providing integrated logistics support; and
- > **Willingness** and **capability** to be responsible for integration of support within the scope of their negotiated responsibility for achievement of the PBL outcomes.

The resulting data allowed the participants to reach a consensus opinion that **industry is typically better suited to perform the role of PSI.**

As DoD policy is not prescriptive regarding the assignment of PSIs, policy and practice should recognize the relative merits of having industry serve as PSIs. To that end, AIA recommends that through either legislative or regulatory change, the DoD should adopt a new policy in favor of industry serving as PSIs.

AIA/UMD Product Support Integrator Workshop – Final Report

Achieving Effective and Affordable Product Support Integration

Given current and anticipated budgetary constraints, the Department of Defense (DoD) must heighten its focus on affordability, especially with respect to operations and maintenance costs, which account for almost two-thirds of the defense budget. At the same time, new and evolving threats demand superior and highly reliable technology. Studies conducted by the Assistant Secretary of Defense (Logistics and Materiel Readiness)ⁱ have clearly shown these twin objectives—reduced costs and improved performance—can be achieved through the implementation of performance-based logistics (PBL). PBL is a product support arrangement that entails the purchase of a predetermined range, or level, of support that efficiently and affordably achieves warfighter objectives. Since the 2001 Quadrennial Defense Review “it has been both DoD policy and a strategic priority” to designate PBL the preferred sustainment strategy in its approach to life cycle support of weapon systemsⁱⁱ.

Critical to the successful execution of PBL strategies is the role of product support integrator (PSI). The PSI function not only involves managing contracts with multiple product support providers (PSPs); the successful PSI also makes trade-offs across all applicable product support elements to optimize outcomes. PSIs work under the product support manager (PSM), a role that is defined as inherently governmental. The PSI is designated as an entity, within or without the Federal Government, charged with integrating all sources of product support, both private and public, defined within the scope of a product support arrangement. This formulation raises a fundamental question that remains unanswered: *who is generally better suited to perform the function of PSI, the government or industry?*

To help answer this question, the Aerospace Industries Association (AIA) partnered with the Center for Public Policy and Private Enterprise at the University of Maryland’s (UMD) School of Public Policy. Together, they hosted a day-long workshop on August 3, 2016. The workshop, was organized by AIA, and was facilitated by, and held on the UMD campus in College Park, Maryland. The workshop brought together 14 senior business executives and academics from AIA, Boeing, Lockheed Martin, Northrop Grumman, Pratt & Whitney, Raytheon, Rolls Royce North America, UMD, and the University of Tennessee who discussed the advantages of both industry and government PSIs. The UMD paper *Performance-Based Logistics: Addressing Challenges to Expanded Use* was put forth as a reference and as a point of departure.

UMD researchers facilitated small group discussions to examine the issue in detail. Following these five-hour sessions, the small groups reassembled to develop a consensus list of PSI attributes. In the pages that follow, we present the advantages as they relate to the fundamental PSI attributes identified by DoDⁱⁱⁱ. These attributes include:

- > A track record of **experience** with the technology to be supported;
- > **Expertise** and experience providing integrated logistics support; and
- > **Willingness** and **capability** to be responsible for integration of support within the scope of their negotiated responsibility for achievement of the PBL outcomes.

The DoD elaborates on the role of the PSI^{iv}, stating that the PSI should be: **knowledgeable** about the system; **accountable** for meeting performance metrics; **responsible** for integrating product support sources; **incentivized** to continuously improve reliability, maintainability, and technology; and **involved** early in the program life.

Based on this guidance, the workshop focused on the following categories: **Knowledge and Experience**, **Capability and Capacity**, and **Incentives and Penalties**. Summarized below are the advantages of contractor and government PSIs for each category.

Knowledge and Experience

Industry is the source of most research, development, and innovation for national defense. Leading firms have near-unrestricted access to world-class capabilities. In most cases industry has a clear advantage in providing product support integration because it possesses the necessary technical knowledge and experience.

DoD has expressed the need for PSIs that have “a track record of experience” with the system and that are “involved early in the program life.” The workshop identified *product intimacy* as a key enabler of superior product support. Often, the firm that is providing the support developed the system/subsystem or its components or has access to the industry teams responsible for the design or development. As a result, industry does not just “own” the technical baseline, industry is the “master” of the technical baseline. This value is not easily imparted to, or maintained, by a government or any other customer entity.

A related term, *reach-back* capability, emerged during workshop discussions. DoD uses this term to describe the process of obtaining products, services, or equipment from organizations that are not forward deployed. Industry uses the term in similar fashion to describe the firm's ability to quickly and effectively leverage its internal and external resources to access the knowledge required to perform the PSI function.

In short, industry has the required specialized knowledge and/or the ability to obtain it. Therefore, industry is generally better positioned to tailor and integrate the product support to the system/subsystem and suggest changes to designs and processes to improve reliability, maintainability, and availability. In addition, industry possesses the sustaining engineering ability to mitigate obsolescence and modernize for the future, along with the necessary systems engineering talent (often not available within DoD organizations) necessary to make cost/performance trades, while ensuring that changes are appropriately integrated throughout the system.

Industry also exhibits unparalleled *business acumen*, with a demonstrated capability to effectively manage PSPs and extended supply chains. Industry is able to leverage strategic supplier relationships and tends to have more experience partnering with organizations in both sectors. Industry also has a proven ability to anticipate business outcomes by performing risk assessment and risk mitigation and complex demand forecasting.

Capability and Capacity

Much of the "capability to be responsible for integration and support," cited by the DoD relies on the PSI's flexibility and agility. As a former Secretary of the Navy observed, since the early days of PBL, successful product support strategies have depended on the ability "to maintain the appropriate level of flexibility and agility to evolve with technological advances and warfighter requirements."^v Adapting new technologies may necessitate altering a contract with industry, which can be more difficult than modifying a service level agreement (SLA) between government entities (although the latter is not as enforceable as a contract); accordingly, the government PSI may exhibit greater flexibility in this important regard.

A properly-structured PBL arrangement gives the provider incentives to invest in product and process improvements. In most instances, investments require flexibility in the type of financial investments made (e.g. research and development, procurement, additional personnel, etc.) and the relevant time period (e.g. investing in the current year for future year benefits), if there is a long-term support contract with the customer. The industry PSI has an advantage in that its investments aimed at reducing costs are not bound by statutory limitations. Nor is industry, which is funded by capital markets, constrained by the source of investment funds. A government PSI, on the other hand, is constrained by Federal Appropriations Law, most notably by the "purpose statute" (31 U.S.C. 1301(a)), which prohibits federal officials from using appropriated funds for purposes other than those for which the funds were appropriated, and the "anti-deficiency statute" (31 U.S.C. 1341), which prohibits government agencies (and their officers or employees) from obligating the government in excess of, or in advance of, appropriations. Moreover, when government acts as PSI, funding often flows directly to the PSPs, thereby limiting PSI flexibility and control over program integration functions. The industry PSI also enables *continuity of operations*. In the event of interruptions to government funding, the industry PSI is able to continue in its role.

The workshop noted that highly-integrated Information Technology systems were key enablers of PBL success. These systems not only reflect accurate information, but serve as a means to monitor all product support processes and activities in order to promptly identify and correct performance issues that may impact achievement of contract metrics. The DoD continues in some cases to rely on aging, functionally stove-piped IT systems with lesser ability to integrate and aggregate information.

Regarding human resources, industry typically finds it easier to scale its workforce to accommodate mission changes, in part because contractors do not have the same bureaucratic processes or political considerations as government organizations. Moreover, unlike government, the industry PSI is not limited by manpower ceilings. With respect to decision making, a relatively simplified command structure enables speedy decision making that is generally not possible within government.

Finally, firms show a *continuity of leadership* that is often difficult to achieve within government; turnover among political appointees, along with routine rotations of civilian and military personnel within DoD is high, often leading to a lack of continuity within programs. The average tenure of Senate-confirmed appointees at executive departments is only 3.3 years, and only 2.8 years for political appointees^{vi} serving at executive departments. Moreover, since the preponderance of program managers are military officers, their tenure tends to be short, often less than three years^{vii}. On the industry side, the turnover of personnel is typically much less frequent. However, there is the potential risk, though rare, that firms may leave business sectors for strategic reasons, which can lead to interruptions in product support capabilities.

Incentives and Penalties

This implicit risk of suffering tangible, financial consequences (loss of profit, a net loss, or loss of follow-on option or contract) gives industry the incentive to consistently strive to meet performance requirements. Moreover, competitive pressure from within the organization, from industry, and from government drives improvements in all aspects of product support—from the capability of the system/subsystem, to its reliability and affordability.

In fact, workshop participants agreed that even with longer-term contracts, *internal competition* continued to result in increases in affordability, beyond that which could be achieved through traditional, more frequent, competition. It was recognized that fewer competitions can contribute to “vendor lock-in” with the PSI being the only qualified support provider for the system; however, this outcome could be precluded with a properly-structured contract. Participants also noted that in the event the industry PSI fails to meet performance metrics, it can be held legally accountable through the contract vehicle. No such contract remedies are in place should the government PSI fail to meet performance requirements.

Participants noted that the industry PSI’s *value proposition* depends on its ability to maximize performance and efficiency not only within the organization but at the level of the PSP. Similarly, the workshop identified the industry firm’s desire to preserve its *brand value* as a critical incentive that drives customer-centric and supplier-management behavior.

Finally, participants noted that although the use of a government PSI allows the DoD to retain control over all product support integration decisions, including expenditures, the government has better visibility into the overall cost of a program when it relies on an industry PSI by way of a fixed-price contract. DoD does not have a comprehensive costing methodology, making it difficult to track all costs associated with reliance on a government PSI.

It is recognized that further study is needed to consider the scope or responsibility of the PSI in the event of system failure or loss. An OEM has a critical role throughout an investigation and root cause analysis. The range of liabilities and authority will differ depending on the entity that serves as the PSI.

Conclusion

PBL has demonstrated track record of improving product support while reducing costs. The PSI role is critical to ensuring the PBL performs successfully. The workshop participants **unanimously** agreed that **industry is typically better suited to perform the role of PSI**. Partnering with the private sector enables government to give proper incentives to industry and leverage its strengths, particularly in technical expertise, integration, and business management. Many successful PBL programs have clearly demonstrated the capability of the private sector to effectively perform the PSI function. Although a government entity can be designated as a program PSI, government expertise generally aligns more closely with PSM responsibilities. In most cases the government does not have the required technical expertise, is more difficult to provide proper incentives, and faces statutory and policy challenges that work to inhibit its ability to effectively perform the PSI function. Workshop participants concluded that as the DoD works to improve its use of PBL contracting to reduce weapons sustainment costs, it should rely more heavily on industry PSIs with proven track records.

ⁱ Deputy Assistant Secretary of Defense (Materiel Readiness), “Proof Point Project: A Study to Determine the Impact of Performance Based Logistics (PBL) on Life Cycle Costs” (series), November 2011.

ⁱⁱ Deputy Assistant Secretary of Defense (Materiel Readiness), *PBL Guidebook: A Guide to Developing Performance-Based Arrangements*, April 2016.

ⁱⁱⁱ Defense Acquisition University, “Candidates for the PSI Role”

^{iv} Defense Acquisition University, “Role of the PSI”

^v Secretary of the Navy, “Product Support for the 21st Century: A Program Manager’s Guide to Buying Performance” November, 2001.

^{vi} National Academy of Public Administration, “Agencies in Transition: A Report on the Views of the Members of the Federal Senior Executive Service” by Johnathan Breul, Frank Chollino, Nancy Kingsbury, and Kristine Marcy; February, 2009.

^{vii} Naval Postgraduate School, “An Analysis of the Relationship between the Professionalism of Defense Acquisition Program Managers and Program Outcomes” by Keith Snyder; November, 2011.