

The Future of Product Support

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The military, political, and economic stars are aligned for fundamental reform of product support as part of acquisition reform, providing a window of opportunity in which fundamental reforms are not only possible but required. In that context, in 2008, the Office of the Secretary of Defense for Logistics and Materiel Readiness established a group of senior government and industry personnel—the Product Support Assessment Team (PSAT)—to assess and offer an action plan for improving product life cycle support.

In November 2009, Under Secretary of Defense for Acquisition, Technology and Logistics Ashton Carter endorsed the report issued by the PSAT. In the foreword of the report, the USD(AT&L) asserts, “If the department is going to truly reform the business of delivering weapons system capabilities to the warfighter, it must also reform the stewardship of the \$132 billion dollars spent each year in product support. Reformed stewardship—

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driven by improving product support and achieving more cost-effective weapons system readiness outcomes—requires a life cycle management focus, committed leadership, and cooperative efforts from the operational, acquisition, and logistics communities.”

The report makes eight distinct but inter-related recommendations:

- Adopt a product support business model that drives cost-effective performance and capability for the warfighter across the weapons system life cycle and enables the most advantageous use of an integrated defense industrial base.
- Align and expand the collaboration between government and industry that produces best-value partnering practices, both within and beyond the depots.
- Connect platform product support strategies to enterprise supply chain approaches that produce best value across the DoD components.
- Improve weapons system governance so sustainment factors are better considered early and consistently across a weapons system life cycle.
- Develop an overarching DoD sustainment metrics and management strategy for life cycle product support that strengthens formal data collection and analysis capabilities while providing insight and learning to support life cycle planning and operational management.

- Make life cycle affordability a core business process for all communities and stakeholders involved in system acquisition and sustainment.
- Clarify and codify policies and procedures pertaining to the use of analytical tools in the life cycle product support decision-making process.
- Integrate product support competencies across the logistics and acquisition workforce domains to institutionalize successful traits of an outcome-based culture.

As DoD moves forward with acquisition reform and improved life cycle management practices, product support improvement is a key enabler of those critical efforts. The report’s recommendations will yield a higher level of effectiveness in overall acquisition and logistics processes and, in turn, will significantly improve the sustained capability and affordability of our weapons systems.

And while the continuing vigorous efforts in acquisition reform are to be applauded and supported, the recommendations of the product support assessment fill the gap generally missed in the current acquisition reform initiatives. Acquisition reform is not enough; reform needs to be an umbrella extending over the complete set of processes that deliver and sustain warfighter capability. The PSAT action plan, endorsed by the USD(AT&L), is a powerful complement to ongoing ac-

quisition reform initiatives, fostering a life cycle management perspective for the future.

Opportunity Spanning Acquisition and Logistics

Weapons system product support operates at the intersection of defense acquisition and logistics. Product support, also referred to as system sustainment, is the package of support functions required to maintain the readiness and operational capability of weapons systems, subsystems, software, and support systems. It encompasses materiel management, distribution, technical data management, maintenance, training, cataloging, configuration management, engineering support, repair parts management, failure reporting and analysis, and reliability growth. Product support considerations, germane to both acquisition and logistics, are necessary throughout the DoD life cycle framework, beginning with early requirements determination and continuing through system design, development, operational use, retirement, and disposal.

Spurred by perceived and documented shortcomings in the cost-effective procurement and affordable operation of DoD systems, acquisition and logistics processes have been the recurring focus of defense studies, reform efforts, and transformation initiatives. Despite more than 130 studies and commissions on defense acquisition since World War II, acquisition core problems persist according to the secretary and deputy secretary of defense. Despite more than 90 logistics reform, re-engineering, modernization, and similar strategic studies and plans in the past 20 years, no broad consensus has emerged on DoD logistics transformation. Both areas have been on the Government Accountability Office High-Risk List for the past 19 years—the only defense business areas with this unenviable track record.

Since the publication of the 1999 report, Product Support for the 21st Century, the DoD strategy for product support has been evolving from traditional transactional logistics concepts—in which the components of readiness are acquired as discrete unit transactions—to a stronger emphasis on acquiring the operational readiness outcomes themselves. The poster child of this latter approach (and by policy, DoD's preferred sustainment concept) is called performance-based logistics, or PBL. Developed in response to the death spiral

of decreasing readiness and increasing costs in the 1990s, PBL strategies were an attempt to reverse this trend. Today, about 20 percent of DoD weapons systems use a PBL strategy, in whole or part. The strategy shows continuing signs of institutionalization in the military services

The review conducted by the PSAT was not restricted to PBL. It undertook a broad review of product support strategies. Few argue with an outcome-based performance approach's ability to improve system performance. Recent empirical research from The Wharton School unambiguously demonstrates the impact of 10 to 25 percent in reliability improvements under performance-based approaches, but questions remain on its cost effectiveness. However, because of the lack of definitive proof of an outcome-based strategy's ability to reduce costs, in the current budget environment, critics are quick to urge abandonment or movement away from the approach.

PBL is a label that was applied a decade ago, and while the label has remained unchanged, product support sophistication has grown and approaches to outcome-based strategies have evolved.

While there are critics, there remains a strong consensus that an outcome-based, performance-oriented product support strategy is a worthy objective. Unfortunately, those labels are inextricably linked to the legacy of PBL. In that context, what to do about PBL or where to go after PBL has become the major product support strategy debate. That issue, and that view, is too narrow. PBL is a label that was applied a decade ago, and while the label has remained unchanged, product support sophistication has grown and approaches to outcome-based strategies have evolved.

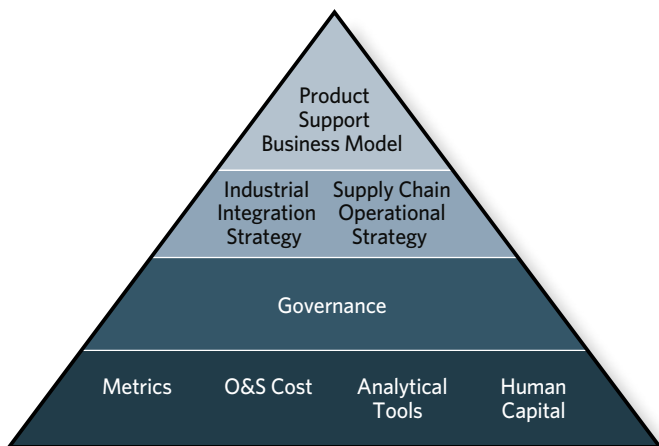
Today, there is a rich target set that can yield to an outcome-based, performance-oriented approach. While military operations have become increasingly joint, sustainment processes remain overwhelmingly Service-centric. Product support, despite significant policy and guidance on increased governance and the need to transition to performance-based strategies, reflects only marginal progress on both fronts. Determination of best-value support strategies is based on a business case analysis process that has been consistently criticized by internal and external reports, citing reliance on immature data; inconsistent application; and overreliance on a one-size-fits-all analytic approach that fails to acknowledge differences in criteria such as

Table 1: Summary of Study Findings

<p>Maturity Assessments of Product Support Processes</p>	<ul style="list-style-type: none"> ▪ Maturity assessments reflected consistent weaknesses in virtually all key product support processes ▪ None of the areas studied achieved a maturity rating above average ▪ The most mature process areas were <i>customer-facing metrics</i> and <i>performance outcomes</i> ▪ The weakest areas were <i>business case analysis process</i> and <i>cross-service alignment</i>
<p>Root Cause Analysis of Major Product Support Issue Areas</p>	<ul style="list-style-type: none"> ▪ Continued reliance on transactional-based systems and processes ▪ Inadequate human capital ▪ Need for smart managers and smart buyers ▪ Organizational challenges ▪ Lack of shared goals
<p>Weapons System Data Analysis</p>	<ul style="list-style-type: none"> ▪ Performance-based (outcome-based) product support strategies, particularly when coupled with government-industry partnering approaches, have consistently delivered improved materiel readiness across numerous weapons system applications over the past decade ▪ Cost benefits are more difficult to assess; as cited in several GAO reports, many outcome-based support strategies have claimed cost reductions and cost avoidance, but DoD financial systems lack the visibility and fidelity to validate these benefits consistent with audit standards

life cycle phase, level of planned product support, and availability of credible data. The logistics information technology infrastructure has been slow to modernize and is challenged to optimize the integration of vertical weapons system supply chains with traditional horizontal commodity-based supply chain processes. Acquisition and logistics workforce assessments have reported weaknesses in both communities, citing shortcomings in competencies and culture needed to translate warfighter performance requirements into cost-effective product support spanning the weapons system life cycle. The PSAT recommendations identify ways to strengthen those weaknesses.

Figure 1: PSAT Recommendation Areas



Findings, Recommendations, and Implementation Approach

The PSAT conducted root-cause analysis on major product support issue areas and found consistent themes throughout, as detailed in the table. Specifically, product support suffers largely from continued reliance on

transactionally based systems and processes, inadequate human capital, need for smart managers and smart buyers, organizational challenges, and a lack of shared goals.

While there are a range of indicators resulting from the maturity assessments and root cause analysis, the weapons system data analysis clearly shows that performance-based (outcome-based) product support strategies, particularly when coupled with government-industry partnering approaches, have consistently delivered improved materiel readiness across numerous weapons system applications over the past decade.

Cost benefits are more difficult to assess, as documented in several GAO reports. Many outcome-based support strategies have claimed cost reductions and cost avoidance, but DoD financial systems lack the visibility and fidelity to validate those benefits consistent with audit standards. In summary, performance-based product support strategies consistently deliver improved materiel readiness, but assessing the true cost of both traditional (transactional) and performance-based strategies is difficult, if not impossible, given current financial systems.

The eight principal recommendations that resulted from the collection and analysis of the study data (and are mentioned earlier in this article) can be categorized into three groups. Figure 1 summarizes the recommendation areas, reflecting the symbiotic relationship among the recommendation categories. Within the pyramid model, the top two bands are recommendations that reflect strategic priority initiatives, the third band reflects the critical governance processes necessary to provide product support accountability across the life cycle, and the pyramid base reflects the foundational elements that are necessary to exploit the higher-level reforms. Three integrated process

teams will be formed to pursue the specific recommendations in each of three areas.

Management oversight for the three teams will be provided by a reorganized PSAT Senior Steering Group, rechartered into a standing Product Support Executive Council. The executive group's efforts will be aligned with other related senior-level groups, such as the Maintenance Executive Steering Committee, the Joint Logistics Board, the Weapon Systems Lifecycle Management Group, and the DoD Logistics Human Capital Executive Steering Group.

Transforming Product Support

Acquisition processes pay too little attention to supportability and consistently trade downstream sustainability for required capability or program survival. Some program managers assert that logistics is their only discretionary account, making it a frequent target for inevitable resource reductions. In acquisition decision reviews, sustainment is often relegated to the back-up charts. Hampered by functionally stovepiped organizational structures and lacking life cycle management qualifications in their diverse workforce, the logistics community fails to achieve effectively integrated and affordable warfighter operational readiness. Instead, it remains focused on managing commodities, parts, and services.

Transforming product support will require not only strong leadership in DoD, but also an open-minded, reform-driven DoD-congressional partnership and a collaborative DoD-industry relationship to realize the report objectives. The national security and economic environments dictate tough-minded acquisition reform and logistics transformation. The challenges of affordability constraints; the need to upgrade equipment and infrastructure; and a continuing, persistent operations tempo prescribe a clear need for DoD implementation of an integrated plan to address product support across the defense enterprise. Successful change in weapons system product support will be demonstrable by reducing costs while maintaining equal or greater equipment readiness support for key warfighting capabilities.

It is crucial to our national interest to ensure that product support achieves a level of performance equal to its importance. The PSAT effort, inspired by a warfighter-driven operational perspective, offers clearly defined, implementable recommendations to drive the next generation of product support strategies toward that objective, with a clear vision to achieve aligned and synchronized operational, acquisition, and sustainment communities working together to deliver required and affordable warfighter outcomes.

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