

Performance-Based Logistics

A Readiness Strategy
Tailor Made for Austere Times

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In November 2012, the Department of Defense (DoD) identified “increas[ing] the use of performance-based logistics [PBL]” as a key initiative in support of DoD’s goal to incentivize productivity in industry and government, saying, “There is sufficient data on the effectiveness of PBL at reducing cost and improving support performance to conclude that if it is effectively implemented and managed, PBL yields significant benefits. Key activities include increasing the knowledge base of PBL through standard processes, tools, and training.”

Why Is This Important?

Before we answer this question, it’s important to remind ourselves exactly what we mean when we use the term PBL. The DoD defines PBL as being “synonymous with performance-based life cycle product support, where outcomes are acquired through performance-based arrangements that deliver warfighter requirements and incentivize product support providers to reduce costs through innovation. These arrangements are contracts with industry or intra-governmental agreements.”

So why does this matter? Why did senior leadership specifically identify “increase effective use of PBL” as a priority DoD policy, training and execution initiative? In a nutshell, when properly implemented, PBL works. In fact, when PBL is properly structured and executed, weapon system operating and support costs actually can be reduced, while performance concurrently increases.

How Is This Possible?

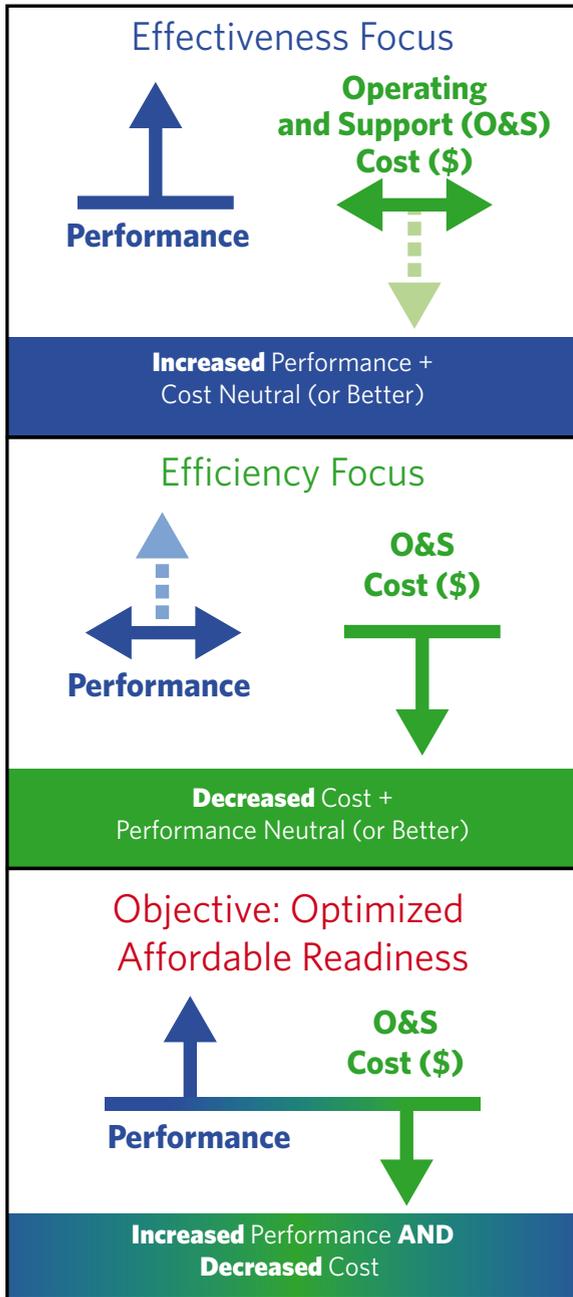
Simply put, successfully implementing PBL Product Support Arrangements (PSAs) requires equal parts leadership, expertise, persistence and good old-fashioned “elbow grease.” It entails incentivizing both the right behaviors and the clearly stated outcomes by using the right, carefully chosen balance of warfighter-focused metrics. These include outcomes that facilitate both product and process improvements to drive out cost and drive up readiness as well as outcomes that encourage supply chain and maintenance process efficiency, technology insertion, investment in reliability, maintainability and supportability improvements, and proactive obsolescence and the mitigation of Diminishing Manufacturing Sources and Material Shortages (DMSMS). In short, we are looking for outcomes that encourage rather than stifle creativity and innovation of product support managers (PSMs), product support integrators (PSIs) and product support providers (PSPs). These areas can be stifled by specifying too much prescriptive “how-to” instead of focusing on both the “what” the warfighter requires and the “how much” the Service or program can afford.

As the new January 2015 DoD Instruction 5000.02 clearly articulates, “PBL is performance-based product support, where outcomes are acquired through performance-based arrangements that deliver warfighter requirements and incentivize product support providers to reduce costs through innovation.”

Generally these requirements tie directly back to the department’s “big four” key life cycle sustainment outcome metrics (the Operational and Materiel

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Figure 1. Product Support Arrangements Need Not Be an Either/Or Proposition



Availability components of the Sustainment Key Performance Parameter [KPP], Reliability Key System Attribute [KSA], Operating and Support [O&S] Cost KSA, and a separate Mean Down Time [MDT] metric), either directly to these top-level metrics themselves, or more frequently, to other supporting reliability, availability, maintainability, supportability, cost or other logistics metrics. Details are spelled out in both Appendix D (Enclosure D) of the February 2015 *Manual for the Operation of the Joint Capabilities Integration and Development System (JCIDS)* and Appendix F of the May 2014 *DoD PBL Guidebook: A Guide to Developing Performance-Based Arrangements*. Indeed, as the latter clearly states,

“Identifying Warfighter requirements, expressed as a system-level outcome metric, is the first step toward establishing a PBL arrangement. ... Most PBLs are executed at the subsystem or component level, however, so the system-level metric typically must be decomposed to lower-level metrics appropriate for the level of delegated responsibility and risk assigned to the PSI [product support integrator] and PSP [product support provider]. These are the metrics that will be included in the PBL arrangement, and the outcomes of these arrangements must be linked to the overall system-level metric.

“Metrics are used to track, measure, and assess the implementation and effectiveness of the performance-based logistics arrangement as executed by the PSI or PSP. Metrics are the means by which the PM and PSM gain understanding of the product support solution and identify any gaps between required and actual performance. Understanding enables adjustments to the support solution to optimize product support operations and Warfighter outcome.

“Metrics should be selected or constructed to encourage performance improvement, effectiveness, efficiency, and innovation. There is no perfect metric, but selecting an appropriate complementary set of metrics will promote the desired behavior and outcome while minimizing unintended consequences. Effective metrics ensure PSI and PSP activities are aligned with the Warfighter mission, contribute to meeting Warfighter requirements, deliver an on-time, quality product, and reduce (or avoid) cost.”

But I Thought I Heard ...

Before we proceed any further, however, let’s dispel a few potential misperceptions about PBL:

Misperception No. 1—PBL is a new concept, a “flash in the pan” or another “flavor of the month.” Not so. PBL has been used in DoD since 1998, and as such, has successfully delivered improved product support outcomes for more than 15 years. In addition to being widely used in the commercial aviation engine world, PBL product support arrangements also are being implemented internationally, including in the United Kingdom and Australia, and are being considered in a number of other countries. Additionally, according to the *DoD PBL Guidebook*, “PBL has been the preferred sustainment strategy since the 2001 Quadrennial Defense Review (QDR) [stated], “DoD will implement PBL to compress the supply chain and improve readiness for major weapons systems and commodities.” Since then, it has been both DoD policy and a strategic priority to increase the use of performance-based arrangements to deliver product support solutions that satisfy Warfighter requirements.” The very fact that increasing the effective use of these strategies has been a Better Buying Power initiative since 2012 testifies to DoD’s commitment to PBL product support arrangements over the long haul.

Misperception No. 2—PBL is synonymous with contractor logistics support (CLS) or outsourcing. To the contrary,

Simply put, successfully implementing PBL Product Support Arrangements (PSAs) requires equal parts leadership, expertise, persistence and good old-fashioned "elbow grease."

PBL is a product support strategy. While successful PBL arrangements can—and often do—leverage industry PSIs and/or PSPs, the key is the right long-term product support arrangement with the right metrics and incentives adhering to the right tenets, not who serves in those capacities. As emphasized in the March-April 2012 *Defense AT&L* magazine article, "Performance Based Logistics and Project Proof Point—A Study of PBL Effectiveness": "PBL strategies are not synonymous with, nor should they be confused with Contractor Logistics Support (CLS). Successful PBL strategies leverage a best value mix of both public and private sector capabilities." Or as the DoD Instruction 5000.02 simply puts it, "product support integrators and product support may be organic, commercial, or a combination."

Misperception No. 3—PBL primarily is an industry initiative.

Again, not the case. While industry recognizes the potential opportunities afforded by PBL product support arrangements, it also understands the potential challenges and inherent risks associated with implementation, particularly under a fixed price contract. PBL is actually and indeed has long been an integral part of DoD policy. DoD Directive 5000.01, paragraph E1.1.17, for example, directs that "PMs shall develop and implement performance-based logistics strategies that optimize total system availability while minimizing cost and logistics footprint." Moreover, as DoD Instruction 5000.02 goes on to state, "the Program Manager, with the support of the Product Support Manager (PSM), will ... develop and implement an affordable and effective performance-based product support strategy. The product support strategy will be the basis for all sustainment efforts and lead to a product support package to achieve and sustain warfighter requirements."

Misperception No. 4—PBL costs the government more than traditional transactional support.

In reality, properly structured, properly implemented, and properly managed PBL arrangements actually can cost less. For example,

criteria for award of a PBL at the Naval Supply Systems Command (NAVSUP) Weapons Systems Support (WSS) includes an analysis that documents a proposed PBL arrangement is "break-even" or better in comparison to the cost of traditional support. Aggregate analyses since fiscal year 2000 document a total 4 percent savings associated with the NAVSUP WSS PBL program. As the above-referenced 2012 Proof Point article actually stated, "The [21] PBL arrangements that were analyzed clearly reduced DoD's costs per unit of performance while simultaneously driving up the absolute levels of system, sub-system and component readiness/availability." Where results fail to manifest themselves, more often than not the issue is likely either a traditional transactional support strategy that does not incentivize product and process improvements or approaches that call themselves a PBL but fail to adhere to the 10 basic tenets of what constitutes a PBL product support arrangement. The reality, as borne out in detail in the 2011

Table 1. Tenets of PBL

Tenets Tied to Arrangements	Tenets Tied to Organization
<p>1. Acquire clearly defined warfighter-relevant outcomes, not just sustainment services or replacement equipment.</p> <p>2. Use measurable and manageable metrics that accurately assess the product support provider's performance against delivery of targeted warfighter outcomes.</p> <p>3. Provide significant incentives to the support provider that are tied to the achievement of the outcomes (for aspects of performance that are within their control).</p> <p>4. Firm Fixed Price (FFP) contracts are generally the preferred contract type (Fixed Price Incentive Firm (FPIF) and Cost Plus Incentive Fee (CPIF) may be effective).</p> <p>5. Provide sufficient contract length for the product support provider to recoup investments on improved product (e.g., Mean Time Between Failure (MTBF) and sustainment processes (e.g., manufacturing capabilities).</p>	<p>6. PBL knowledge and resources are maintained for the Government team and product support providers.</p> <p>7. Leadership champions the effort throughout their organization(s) .</p> <p>8. Everyone with a vested interest in the outcome is involved.</p> <p>9. Supply chain activities are aligned to the desired PBL outcome versus disparate internal goals.</p> <p>10. Risk management is shared between the Government, customer, and support provider.</p>

Source: Table 1: Tenets of PBL (May 2014 DoD *PBL Guidebook: A Guide to Developing Performance-Based Arrangements*).

When properly structured, implemented, and executed, something seemingly counterintuitive happens—weapon system operating and support costs can actually be reduced, while performance concurrently increases.

Project Proof Point study, in short is that “PBLs do work (when there is substantive program adherence to PBL tenets).”

Misperception No. 5—PBL arrangements stifle competition. The reality is that, like PBL itself, competition serves as a powerful and effective mechanism for incentivizing PSIs and PSPs to reduce costs, invest in product improvements, and/or drive process and efficiency enhancements. Akin to PBL, as stated by the new December 2014 “Guidelines for Creating and Maintaining a Competitive Environment for Supplies and Services in the Department of Defense:”

...competition, direct or indirect, is the most effective motivator for industry to reduce costs and improve performance. Competition creates an incentive for contractors to provide goods and services at a lower price (economic efficiency). Competition spurs innovation of transformational technology,

which allows the DoD to field the best weapon systems for our warfighters quickly. Competition yields better quality products and services. Firms that produce low quality are driven out of the market and are unable to effectively compete effectively. Competition affords the DoD the opportunity to acquire performance improvements (e.g., faster, lighter, more sustainable) by using “best value” source selection criteria.

Even in instances where multiple product support integrator or provider competitors are not available to choose from, the Proof Point study concludes that “well-crafted PBL arrangements ‘manufacture competition’ by incentivizing companies to compete against internal waste and quality challenges in order to drive up quality (thereby reducing demand) while simultaneously driving down process, labor and material costs.” In essence, a well-constructed PBL arrangement can serve as a powerful tool to create internal competition that incentivizes improved performance and efficiencies designed to drive out cost.

Key actions the DoD has undertaken to date to facilitate implementation of this BBP initiative are spelled out in an article titled “Performance-Based Logistics for Achieving Affordable Readiness” in the January–February 2015 edition of this magazine, including the issuance by the Acting Assistant Secretary of Defense for Logistics and Materiel Readiness of performance-based logistics comprehensive guidance in November 2013 and the *PBL Guidebook* in May 2014. DAU continues to inculcate PBL training into a range of new and updated interdisciplinary learning assets targeted at both the life-cycle logistics and broader defense acquisition workforce.

“Putting Some Shoe Leather” to This

Some would contend that policy, guidance, and training will only take you so far. Actually putting this into practice—and consistently delivering the desired results—must be the next step. Fortunately, the DoD is not new at this—in many cases,

Table 2. Performance-Based Life-Cycle Product Support Resources

Resource	Web Link
PBL Guidance Memorandum	https://acc.dau.mil/CommunityBrowser.aspx?id=686632
DoD <i>PBL Guidebook</i>	https://acc.dau.mil/pbl-guidebook
PBL Community of Practice (CoP)	https://acc.dau.mil/pbl
PBL ACQuipedia Articles	https://dap.dau.mil/acquipedia/Pages/Default.aspx
PSM Toolkit	https://acc.dau.mil/psmtoolkit
<i>PSM Guidebook</i>	https://acc.dau.mil/psm-guidebook
Secretary of Defense PBL Awards	https://acc.dau.mil/CommunityBrowser.aspx?id=527436
Product Support Key References	https://acc.dau.mil/productsupport
CLL 011 Performance-Based Life Cycle Product Support (PBL)	http://icatalog.dau.mil/onlinecatalog/courses.aspx?crs_id=269
CLL 031 PBL Contracting Strategies	http://icatalog.dau.mil/onlinecatalog/courses.aspx?crs_id=1982
LOG 235 Performance-Based Logistics	http://icatalog.dau.mil/onlinecatalog/courses.aspx?crs_id=98
LOG 340 Life Cycle Product Support	http://icatalog.dau.mil/onlinecatalog/courses.aspx?crs_id=1792

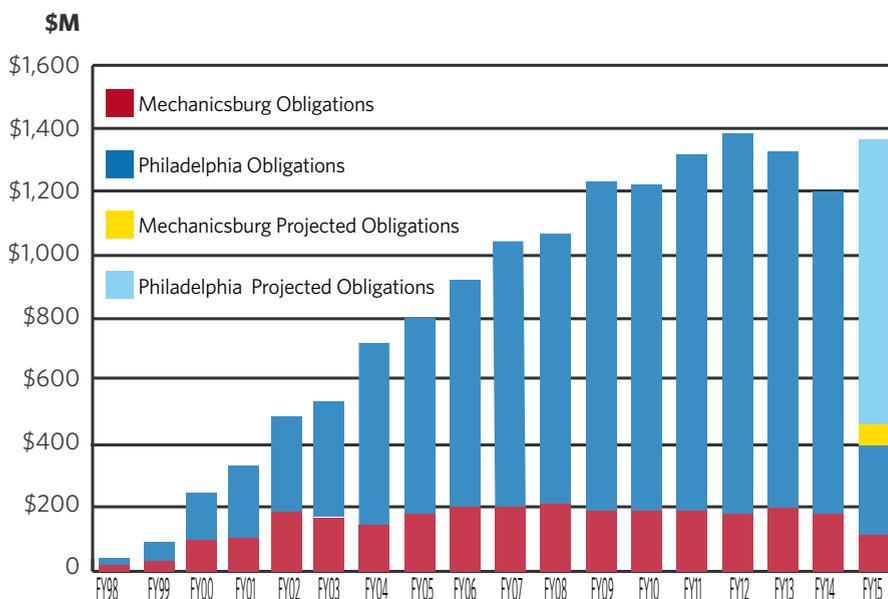
having leveraged, learned from and fine-tuned PBL arrangements for many years. A few lessons are available from our colleagues at the NAVSUP WSS in Philadelphia, whose efforts in this arena have resulted in major improvements in system readiness and warfighter support. According to NAVSUP PBL subject-matter experts, in fiscal year 2014, PBL product support arrangements accounted for nearly 27 percent of NAVSUP WSS obligations; and in fiscal year 2015, accounted for more than 25 percent of total demand. In the process, the NAVSUP, working in tandem with the Naval Air System Command (NAVAIR), has captured an unparalleled 15 of the 34 Secretary of Defense Performance-Based Logistics Awards over the last decade, including most recently, the H-53E helicopter program PBL arrangement winning the 2014 component-level DoD award.

How have they achieved such significant results? Both in principle and in practice, according to NAVSUP WSS, the Navy's approach to these PBL arrangements is that they:

- are not "one size fits all"; each arrangement is tailored to the specific requirements of each program;
- are long-term arrangements;
- address availability, obsolescence/DMSMS, reliability, and cost;
- provide specified, measured performance outcomes;
- are supply contracts focused on a comprehensive performance package rather than individual parts;
- are enabled by the Navy Working Capital Fund (NWCF);
- are focused on a "win-win" strategy for the Navy and industry partners;
- incorporate surge capability;
- mitigate risk;
- contain exit strategies to maximize flexibility;
- incentivize industry product and process investment and innovation;
- are designed to be transparent to Fleet customers;
- seek to seamlessly integrate the product support strategy and the supply system.

The Navy's approach is designed to incentivize the right vendor behaviors and facilitate desired outcomes. When industry serves as a PSI or a PSP for a PBL arrangement, the use of fixed price "pay for performance" contracts motivates vendors to reduce both failures and consumption, while the long-term nature of the arrangement enables the vendor to

Figure 2. Naval Supply Systems Command PBL Profile Through Fiscal Year 2014



Source: Naval Supply Systems Command.

balance risks and investment decisions that lead to the desired outcomes. As a result, PSIs and PSPs are incentivized to improve parts support, optimize depot efficiency, invest in reliability and maintainability, and shortstop failures before they occur.

Not to say this is necessarily easy or simple. According to the Director of the NAVSUP WSS Supply Chain Solutions Division:

...affordability is often the greatest challenge associated with successfully implementing a PBL product support arrangement with an industry PSI. Crafting such an arrangement takes time. This challenge is not surprising as industry is taking on additional responsibilities under PBL, coupled with associated risks and costs which often do not exist in traditional support. In successful, affordable PBL arrangements, industry understands the risk/benefit proposition; costs associated with risk or additional efforts needed to meet performance requirements are offset by cost reductions possible through improvements and opportunities enabled by the PBL arrangement.

One might ask, "What about potential adverse impacts on public sector organizations?" In practice, Public-Private Partnerships serve as a fundamental element of the Navy's PBL strategies—with nearly 80 percent of NAVSUP WSS aviation fiscal year 2014 PBL obligations involving public-private partnerships. Navy PBL arrangements actually are designed to incorporate organic depot capabilities in to ensure compliance with 10 United States Code §2464 Core requirements. In addition, public-private partnering arrangements leverage organic fleet readiness center capabilities, infrastructure, and workforce expertise in tandem with industry.

The Performance-Based Logistics Awards Corridor in the Pentagon.

Photo by Alfredo Barraza, U.S. Army



Sharing of best business practices, investments in reliability improvements and technology insertion is encouraged, all with an eye toward improving readiness while concurrently reducing costs. As implemented by the Navy in support of PBL product support arrangements, these Public-Private Partnerships are structured to:

- align industry and government along common goals;
- strategically combine the unparalleled depot artisan “touch labor” expertise and resident organic infrastructure with the engineering and supply chain efficiency of industry;
- strengthen the industrial base through collaboration with industry;
- facilitate improved organic depot efficiency, reduce support costs and optimize readiness.

Resulting performance outcomes, according to the Navy, over the last decade-plus speak for themselves. Examples include:

- Increased material availability
 - F/A-18 (Hornet fighter jet) Displays: 47 percent to 99 percent
 - AN/USC-38 Extremely High Frequency (EHF) Satellite Communications Program (SATCOM): 78 percent to 93 percent
- Decreased logistics response times
 - Aircraft Tires: 4 days worldwide
- Decreased repair turn-around times
 - F404 Engine: 25 percent reduction and 75 percent decrease in work-in-process

- Near-elimination of awaiting parts (AWP) problems
 - Auxiliary Power Unit (APU): 232 units AWP to 0
- Major reductions in back orders
 - F/A-18 Stores Management System: 489 to 0
 - NATO SEASPARROW Missile: 180 to 3
 - Close-In Weapon System (CIWS): 200 to 41
- Reduced logistics footprint
 - Retail allowance reductions: Tires decreased by two-thirds
 - \$7 million savings on ALR-67(v)3 Radar Warning Receiver initial outfittings

Why is all of this important? Simply put, as the Project Proof Point study cited earlier concluded, “PBL arrangements which substantially adhere to generally recognized PBL tenets reduce DoD cost per unit of performance while simultaneously driving up the absolute levels of system, sub-system, and major component readiness/availability when compared to non-PBL arrangements.” It is no wonder this important product support arrangement has been an integral DoD Better Buying Power initiative, and will continue to be in the coming years.

In an era of reduced budgets, sequestration, and fiscal uncertainty, cost saving, readiness-enhancing initiatives such as PBL should at the very least be compelling—and more appropriately, serve as a important tool for incentivizing desired weapon system outcomes in the toolkit of DoD program managers, product support managers, and life cycle logistics and other acquisition professionals throughout the DoD. 

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