Performance-Based Logistics

Considerations for Commercial Participants

by

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We are in an era of competing global priorities, reduced acquisition budgets, and thinly stretched support resources affecting both commercial businesses and government agencies. In response, the U.S. government continues to pursue ways to optimize costs for the procurement of goods and services. One area of focus has been a shift from traditional transaction-based support to Performance-Based Logistics support (PBL).

The government has traditionally purchased contractor logistics support by the transaction—parts and/or repair actions. Now, as part of their product-support plan, the government is using PBL contracts to purchase agreed-upon support levels based on needs, using contract incentives to improve readiness support at optimal cost. PBL can offer the government predictable costs for support and can transfer some of the sustainment management risk to the commercial contractor. The value of PBL to commercial participants is increased share of the aftermarket work requirements. This presents opportunity for increased revenue and profit. In order to participate in PBL contracts, the commercial contractor needs a high level of operational, technological, and infrastructure competencies.

Implementing PBL in accordance with the original vision has proven to be difficult. A myriad of problems hinder effective implementation and execution, and most of these problems stem from a number of common pitfalls.

The primary pitfalls that impede PBL implementation include:

- Lack of defined roles and responsibilities for both the customer and the support provider;
- Misalignment of support-provider competencies with customer needs;
- Lack of relevant metrics or unenforceable metrics; and
- Inadequate data collection and interpretation processes for logistics management and performance monitoring.

Although some of these can be mitigated with a well-negotiated contract, a common understanding and a disciplined process are essential for realizing an effective support solution (see Exhibit 1, page 2).

Need for a Common Language between Government Customers and Support Providers
One of the most widespread hazards to successful PBL implementation is the lack of clear expectations concerning supporting roles and responsibilities on the part of both government and support-provider participants. There appears to be a widespread understanding and acceptance regarding PBL goals, as well as the belief that the purchase of support as an integrated, affordable performance package will optimize system readiness. However, clarifying performance goals and addressing the allocation of specific management and support-structure functions is less clearly understood.

Many current PBL programs include very general, top-level measurement criteria only. Some simply include platform-level Operational Availability without sustaining equipment and system-level performance data. Many also don’t delve into the facilitating management organization, nor do they specify tasks and lines and levels of authority. This combination leaves participants operating in a vacuum of assumptions, and it creates a language barrier that impedes success. In other words, both government and support providers often sign a contract with great fanfare and hope and then, lacking guidance to the contrary, adopt one of two courses: They return to business as usual and adopt traditional methods, roles, and responsibilities in hopes of an improved outcome; or both parties adopt new methods they believe will bring them the hoped-for PBL advantage—but without coordinating
course corrections in order to develop realistic, enduring, flexibility is critical in the initial period. One must allow baseline data. Most PBLs are long-term agreements, and moving to the system or platform level only after collecting may need to start a PBL agreement at an equipment level, metrics must be clear. Lacking clear system measures, one can be treated as a system. This is important because the addition, equipment integration and interrelationships need to be addressed and understood in such a way that they to be treated as a system. This is important because the metrics must be clear. Lacking clear system measures, one may need to start a PBL agreement at an equipment level, moving to the system or platform level only after collecting baseline data. Most PBLs are long-term agreements, and flexibility is critical in the initial period. One must allow course corrections in order to develop realistic, enduring, and—most important—enforceable metrics.

The second portion of the work is creating a link between the engineering results and the selected organizational model. This is where Business-Case Analyses (BCAs) are important. Given that the equipment-maintenance requirements are understood to a degree, BCAs are then needed to determine who is best suited to perform what portions of the support effort, with overarching guidance to develop and sustain supplier alignment. BCAs typically break work into common functional areas such as organizational, intermediate, or depot-level maintenance, warehousing, engineering oversight, and technical data management. Determinations need to be based on established criteria, such as resident technical expertise, existing facilities, core competencies, legal and regulatory issues, and inherent government roles and responsibilities (such as enforcement of laws and treaties and fiscal oversight).

During the BCA effort, it is important to perform a realistic cost analysis to ensure best value for performance. Because government and industry capture costs differently, it is important to verify that all pertinent cost elements are captured, in order to make true “apples to apples” comparisons. Government organizations do not generally include internal personnel or facilities’ costs in estimates, as they are usually funded out of other-than-program funds. However, industry typically captures all direct and indirect costs in order to gauge their true economic health.

Exhibit 1
Performance Management

<table>
<thead>
<tr>
<th>End-user Needs</th>
<th>Program Manager</th>
<th>Product Support Integrator</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Establish project requirements</td>
<td>• Develop cost/performance analysis</td>
<td>• Improve internal processes to maximize integration competency</td>
</tr>
<tr>
<td>– Establish key performance metric drivers</td>
<td>• Establish PBA with end-user</td>
<td>• Manage and improve partnerships</td>
</tr>
<tr>
<td>– Establish required performance</td>
<td>• Develop alternative support constructs</td>
<td>• Maintain strong communication to PM and end-user regarding performance-impacting issues</td>
</tr>
</tbody>
</table>

Source: Booz Allen Hamilton

or clarifying with their partner first. Either approach is a recipe for disaster. If one hopes to attain optimal system readiness via PBL, both parties need to be prepared to meet specific performance requirements via tailored functional roles and responsibilities—roles and responsibilities that most likely will be quite different from their conventional ones (see Exhibit 2).

Metrics and Competency Considerations: How, then, should PBL partners proceed? Unfortunately, there is no silver bullet—no one easy action that will perfectly align expectations and communications: It comes down to doing homework before signing on the dotted line. The first portion of the work is engineering-based, and is needed to develop measurable equipment, system, or platform performance metrics. Reliability-centered maintenance (RCM) analysis is one approach, as it helps to understand the art of the possible: How reliable is the equipment? How often does it break down? Given the operational performance requirements, at what levels will repairs be required? In addition, equipment integration and interrelationships need to be addressed and understood in such a way that they can be treated as a system. This is important because the metrics must be clear. Lacking clear system measures, one may need to start a PBL agreement at an equipment level, moving to the system or platform level only after collecting baseline data. Most PBLs are long-term agreements, and flexibility is critical in the initial period. One must allow course corrections in order to develop realistic, enduring, and—most important—enforceable metrics.

Exhibit 2
Incentives to Integrate Under Traditional or PBL Approach

<table>
<thead>
<tr>
<th>Incentives to Integrate Under Traditional Approach</th>
<th>Incentives to Integrate Under PBL Approach</th>
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</thead>
<tbody>
<tr>
<td>• Government manages design change and overall engineering support</td>
<td>• Support provider manages design change and overall engineering support</td>
</tr>
<tr>
<td>• Technical management priorities</td>
<td>• Support provider invests in changes that improve system readiness or reduce cost</td>
</tr>
<tr>
<td>• Implement technical changes</td>
<td>• Support provider is only required to meet Statement of Work (SOW)</td>
</tr>
<tr>
<td>• Manage processes across all functional support areas</td>
<td>• Support provider profitability is tied to meeting requirements specified in the Statement of Objectives</td>
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</tbody>
</table>

Source: Booz Allen Hamilton
and profitability. They capture technical and management personnel, full facilities, and infrastructure costs. Commensurate government costs must be captured as well.

The BCA portion of the effort can be very difficult, as it is often packed with emotionally charged discussions and bureaucratic wrangling. An independent third party can be invaluable to help navigate through this thorny part of the endeavor.

**Data Collection and Interpretation Considerations:**

Once overarching roles have been determined, specific responsibilities and ways of doing business need to be discussed. This is where face-to-face communication becomes most critical. All parties must fully understand each other’s strengths, weaknesses, and organizational cultures. A means of working together on a day-to-day basis needs to be determined, a method that would include facilitating information technology (IT) tools. Establishing tools that help the tracking and interpretation of logistics data is at the core of proactive performance management. Agreements concerning the IT tool suite need to go down to the data element level, and—when done correctly—will help ensure consistent team data management, and will be crucial for capturing, monitoring, planning and forecasting, proactive sourcing, manufacturing, and distribution. Sometimes existing in-house software is sufficient for these tasks; sometimes software and/or hardware will need to be procured and/or modified to provide the tailored functionality required. The importance of IT systems cannot be underestimated. If there is not an in-house or an off-the-shelf tool available to perform the functions desired, this could be a significant funding consideration.

**Supplier Competency Considerations:** Contract parameters also need to be addressed so there is alignment between supplier competencies and government needs. It does no good if the government requests items or services that the vendor cannot provide. For example, the government may specify that parts need to be provided on a quick turnaround basis via a transactional costing basis, while keeping the price reasonable. However, the contractor may not have processes or support tools to facilitate this continual response and tracking mode in an efficient manner. In this case, it would probably be better to procure spares via a performance contract. This would allow the contractor a level of autonomy in maintaining optimum parts support while eliminating the requirement to respond and track on an item-by-item basis.

Once performance requirements are agreed upon and organizational roles determined, ongoing communication will put the PBL execution to the test. Relationships between individual participants are key to PBL success and longevity, and developing a solid foundation for these relationships is de rigueur.

The topic of developing a common language between the government and support providers is critical and complex, and it deserves a more in-depth discussion. This brief examination serves only as an overarching perspective on the issue, and hopefully underscores the importance of focusing on the details. PBL is often presented in vague pictorial form, as if support nirvana will appear at contract signing. In actuality, PBL takes work, and can be successful only with the requisite effort.

**PBL Value Proposition**

PBL is a strategy that optimizes the supply network and encourages best practices. These best practices develop and sustain competitive advantage versus other support alternatives. Competitive advantage must be focused and rooted in the following areas:

- Optimal supply-chain management (SCM) processes;
- Effective prioritization and application of technical management; and
- Robust collection and interpretation of logistics data.

Competitive advantage is achieved and maintained through coordinating and leveraging product-support planning (PSP), logistics engineering (data collection and analysis), and processes control. This coordination is incentivized by the PBL agreement/contract. The result is a structured, performance-based support solution that can provide optimal logistics support at optimal cost.

**Exhibit 3**

*Optimal Logistics Support Model*
The takeaway from Exhibit 3 is the interdependency of PSP, logistics engineering, and PBL. PSP provides structure to a proactive support approach, enabling logisticians to improve support performance throughout the system’s life cycle. In particular, good PSP lays the foundation for an effective logistics engineering effort. Logistics engineering focuses on robust data collection and interpretation practices that remove much of the guesswork from management initiatives and investment decisions. This is key to the PBL process.

**PBL Provides a Profitable Business Opportunity Through Integration**

Performance-based support is not business as usual. In a PBL, the government becomes the performance manager, focusing on the alignment between end-user needs and support-provider metrics. As part of the alignment, the support provider is empowered to meet—and is held accountable to—performance objectives. Empowerment means that the responsibility and risk for how to support operations shifts from the government to the support provider. The government is no longer a manager of processes but becomes a manager of performance (see Exhibit 4).

These responsibilities and risks focus the support provider on integrating the supply chain to improve performance and develop process efficiencies. Specifically, the focus is on managing the interrelationships between maintenance, technical, and parts management and the associated network of support providers. The product-support integrator (PSI) must find business partners that help build an effective and efficient support system. Integration at every level of the support structure gives partners vested interest in the end result, thus optimizing performance (see Exhibit 5, page 5).

PBL is not a one-size-fits-all approach to product support. However, every effective PBL solution does use performance metrics to drive customer alignment and support-provider integration. The PBL maturity model in Exhibit 5 outlines the stages and associated complexity of PBL solutions. Stage 1 is focused simply on improving delivery performance of a functional support area (e.g., inventory management). The PSI under a Stage 4 PBL is responsible for mission success. The complexity of integration increases at high levels of maturity. When most people think of PBL, they envision Stage 3 (guaranteeing availability). In reality, most PBLs are developed and applied to operate at Stage 1 or 2, with the government acting as the overall platform integrator. Stated in a different way, the program office supports a Stage 3 or 4 PBL if they have a performance-based agreement (PBA) with the end-user. The providers supporting the program office are at Stage 1 or 2 since they sign up for metrics tied to delivery or availability of components or subsystems. Supporting the availability of a component or subsystem requires integrating the support elements of the component or subsystem. Stage 3 or 4 requires managing the much greater integration complexity of the entire platform.

**Exhibit 4**

**Optimal Logistics Support**

![Optimal Logistics Support Diagram](image)

- **Optimal Logistics Support**
  - Maintenance (Repair/build capacity planning, process planning)
  - Technical Management (How to repair and build. Priorities for technical improvement/refresh)
  - Inventory Management (New and repairable parts management)

**Note:** A functional support provider cannot be held accountable to metrics that are not under its control.

**Example:** Priorities of technical management impact the what, when, and how to buy for inventory requirements. These technical priorities also affect capacity, cost, and “repair versus buy” decision making.
**Commercial Opportunities**

PBL offers commercial participants an expanded role in DoD product-support solutions. This leads to greater revenue and profit opportunity. The commercial firm must think proactively while guiding the customer to effective and enduring solutions through a well-formulated product-support strategy.

Because performance-based logistics is not business as usual, the commercial firm must embrace increased business risk in order to realize greater financial rewards and growth opportunities.

Booz Allen Hamilton recognizes the challenges to successful PBL implementation. We can assist in navigating the uncertain waters and complex integration issues that PBL presents. In addition, our experience overcoming the common pitfalls that hinder PBL success will ensure a more effective PBL solution.

### Exhibit 5

**PBL Maturity Model**

<table>
<thead>
<tr>
<th>Complexity of Integration Increases</th>
<th>Customer Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meeting Performance Measures</td>
<td>Stage 1: Delivery Agreement</td>
</tr>
<tr>
<td>Process Efficiencies</td>
<td>Stage 2: Parts Availability Focus</td>
</tr>
<tr>
<td>Competency Advantage</td>
<td>Stage 3: System/Platform Life Cycle Process</td>
</tr>
<tr>
<td></td>
<td>Stage 4: Mission Assured Support</td>
</tr>
</tbody>
</table>

Source: Booz Allen Hamilton

### Exhibit 6

**PBL Value Proposition**

- **Improved integration through:**
  - Aligning incentives
  - Ensuring competency advantage
  - Managing performance

- **Performance management**
  - Government manages design change and overall engineering support

- **PBL**
  - Optimizing logistics support through improved integration

- **Win-win**
  - Tie supplier profits with improving end-user readiness at reduced cost

- **Result**
  - Improved readiness
  - Reduced logistic footprint
  - Reduced cost

- **Competency advantage**
  - Ensure an inherently efficient support construct
  - Ensure support provider(s) have technical and management competency advantages

Source: Booz Allen Hamilton
Booz Allen has a unique understanding of government and commercial sectors and possesses the experience in delivering performance-based product support solutions. We can help your efforts developing the major aspects of a PBL (see Exhibit 6, page 5):

- Facilitating the completion of a credible PBL-BCA;
- Developing and maintaining the competency advantage of performance-based product support;
- Establishing robust logistics-engineering practices;
- Implementing and sustaining realistic roles and responsibilities between providers and customers; and
- Developing effective and applicable metrics and a performance-monitoring capability.

Booz Allen is a leader in developing “win-win” logistic support solutions. We employ proven approaches and methodologies for assessing and developing support strategies and implementation plans. We understand the importance of integration. Booz Allen has a rich and diverse experience base (with both functional and domain expertise) that can be leveraged for building your support solutions.

**What Booz Allen Brings**

Booz Allen Hamilton has been at the forefront of management consulting for businesses and governments for more than 90 years. Providing consulting services in strategy, operations, organization and change, and information technology, Booz Allen is the one firm that helps clients solve their toughest problems, working by their side to help them achieve their missions. Booz Allen is committed to delivering results that endure.

With 19,000 employees on six continents, the firm generates annual sales of $4 billion. Booz Allen has been recognized as a consultant and an employer of choice. In 2007, for the third consecutive year, *Fortune* magazine named Booz Allen one of “The 100 Best Companies to Work For,” and for the past eight years, *Working Mother* has ranked the firm among its “100 Best Companies for Working Mothers.”

To learn more about the firm, visit the Booz Allen Web site at www.boozallen.com. To learn more about the best ideas in business, visit www.strategy-business.com, the Web site for *strategy+business*, a quarterly journal sponsored by Booz Allen.

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