

# The Tenets of PBL Second Edition

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## A Guidebook to the Best Practices Elements in Performance-Based Life Cycle Product Support Management

Revised June 2012



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THE UNDER SECRETARY OF DEFENSE  
3010 DEFENSE PENTAGON  
WASHINGTON, DC 20301-3010

MAY 14 2012

MEMORANDUM FOR SERVICE ACQUISITION EXECUTIVES

SUBJECT: Endorsement of Next-Generation Performance-Based Logistics Strategies

Operations and Support (O&S) costs comprise 60 to 70 percent of total ownership costs. We must find ways to lower our O&S expenditures while maintaining the right readiness for our Warfighters. A key method to lowering O&S costs is the implementation of sustainment strategies that optimize readiness at best value. Appropriate use of Performance-Based Logistics (PBLs) will help to achieve affordable sustainment strategies and is a method for achieving our Better Buying Power (BBP) goals.

PBLs can be an effective method of achieving notable cost savings while improving readiness and should be broadly applied across the Department. A recently completed study by the Office of the Assistant Secretary of Defense for Logistics and Materiel Readiness (ASD(L&MR)) provided compelling evidence that properly constructed and executed performance-based product support strategies (commonly referred to as PBLs) deliver best-value weapon system support.

ASD(L&MR) is spearheading an effort focused on enabling broader, more effective implementation of PBLs across the inventory of DoD platforms, sub-systems, and components as appropriate based on business case analysis results. The Next-Generation PBL Integrated Product Team will provide effective policies, processes, tools, and training across all functional communities engaged in structuring and executing PBLs.

Developing correctly structured, priced, and executed PBLs is often a more complex task than initiating a standard transactional arrangement. It requires a combined and focused effort by the Program Manager, the Product Support Manager, and the Contracting Community, among others. However, the ability to more affordably support the Warfighter at a greater level of readiness is worth the effort.

I will closely track our progress toward the goal of aggressively implementing PBLs and solicit your endorsement, commitment of resources, and active support.



Frank Kendall  
Acting

## Foreword

Air Force program offices managing a weapons system have to make tradeoffs in the face of finite resources. On one hand, weapons systems should be designed, maintained, and modified intending to continuously reduce the demand for logistics; this requires investment. On the other hand, logistics support itself consumes budget; this often drives for postponement of expenditure, no matter how compelling the payback.

To succeed at PBL, a program office must balance and integrate these perspectives, investing in the future while concurrently providing current support, all the while staying within statutory and budgetary guidelines.

Performance-based logistics (PBL) is the Department of Defense's preferred product support strategy to deliver improved weapons systems readiness at the same or lower total cost. The Acting Assistant Secretary of Defense (Acquisition, Technology, and Logistics) states, "properly constructed and executed performance-based product support strategies (commonly referred to as PBLs) deliver best-value weapon system support."<sup>1</sup> The memo continues, "Developing correctly structured, priced, and executed PBLs is often a more complex task than initiating a standard transactional arrangement. It requires a combined and focused effort by the Program Manager, the Product Support Manager, and the Contracting Community, among others."

OSD also says, "PMs shall develop and implement performance-based logistics strategies that optimize total system availability while minimizing cost and logistics footprint."<sup>2</sup> Air Force Policy Directive 63-1, Acquisition and Sustainment Life Cycle Management, mandates, "programs shall begin development of an integrated acquisition and sustainment life cycle strategy that shall be initially documented and available by the program initiation milestone review and be kept current throughout the program life cycle. The Air Force says, "A performance based logistics (PBL) strategy shall be used in accordance with the PBL guidance section in this AFI".<sup>3</sup>

The cornerstone of PBL is the planning and delivery of weapons system sustainment as an affordable, integrated package based on output measures, such as weapons systems availability, rather than input measures, such as parts and technical services. Simply put, performance-based strategies buy results, not products or services.

Using PBL creates a life cycle cost management opportunity for Air Force program managers, because properly designed and executed PBL strategies facilitate investments in affordability, reliability, and availability. Support Providers with system knowledge and investment-oriented business models innovate to convert cost avoidance into investment opportunities to support cost reduction and performance gains. The program office must adopt an investment oriented viewpoint of a life cycle

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<sup>1</sup> Memo to Acquisition Executives, "Endorsement of Next-Generation Performance-Based Logistics Strategies," Acting Assistant Secretary of Defense (Acquisition, Technology, and Logistics), May 14, 2012

<sup>2</sup> Department of Defense Directive 5000.01, The Defense Acquisition System

<sup>3</sup> Air Force Instruction 63-101, "Acquisition and Sustainment Life Cycle Management"

strategy, in particular providing to the maximum extent possible a stable funding environment, from program inception through retirement.

The Under Secretary of Defense, on the topic of “Restoring Affordability and Productivity in Defense Spending,” described key focus areas for affordability. In the September 14, 2010 memo, he states, “I am seeking to restore affordability and productivity through initiatives in the following five areas: (1) Targeting Affordability and Controlling Cost Growth; (2) Incentivizing Productivity and Innovation in Industry; (3) Promoting Real Competition; (4) Improving Tradecraft in Services Acquisition, and; (5) Reducing Non-Productive Processes and Bureaucracy.”

PBL relates to all of these areas. Creating a PBL combined effort across a diverse constituency – and achieving unity of effort without unity of command – is not easy. That is the intent of this guidebook: to assist the Product Manager, the Product Support Manager, the IPT, and the entire stakeholder community in creating an environment for success.

Merely defining the outcomes is not sufficient to guarantee success. Research sponsored by the Air Force has identified three factors that contribute to the success of PBL programs: Alignment, Contract Structure, and Performance Management. Within each of these areas, there are specific tenets that describe a supportive environment for success.

The tenets presented in this guide are designed to be touchstones, operating principles that may be used at the program level to create an environment that maximizes the potential for success and realize benefits in the areas described as targets by USD(ATL). That is the purpose of this guide. It helps those at the operational and tactical level develop a supportive environment for success in product support to deliver affordable weapons system support to the warfighter.

That is the power of the tenets.

## Best Practice Elements: Introduction

Too often, the practical aspects of PBL implementation become lost in the proliferation of documents and program reviews. This guide is an attempt to cut through much of the murkiness that can surround the PBL journey, and endeavor to provide practical guidance on how to implement effective and affordable PBL. Properly constructed and executed performance-based product support strategies deliver best-value weapon system support.”<sup>4</sup>

While leaders who track PBL would all agree that the philosophical and intellectual foundation of the approach is solid—developing a win-win business model where both the government and the customer share common objectives and the support provider is incentivized to deliver the right things—almost all would agree that getting there can be a challenge.

Research sponsored by the Air Force has identified three success factors that determine the success of PBL programs:

- Alignment: establish the foundation, aligning the business environment to deliver the desired outcomes
- Contract Structure: cementing the relationship and executing the necessary agreements
- Performance Management: on-going management of the outcome-based relationship

These three areas are depicted in Figure 1 below.

## Performance Management

### Contract Structure

### Alignment

*(A foundation that solidifies both internal and external relationships and frames the Foundation for the Project)*

Figure 1 Source: Supply Chain Visions

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<sup>4</sup> Memo to Acquisition Executives, “Endorsement of Next-Generation Performance-Based Logistics Strategies,” Acting Assistant Secretary of Defense (Acquisition, Technology, and Logistics), May 14, 2012

The more thoroughly a PBL program incorporates these three success factors into its implementation strategy, the higher the expectation for better program outcomes. The three success factors deconstruct into 10 key tenets<sup>5</sup>, or principles, of a successful PBL program. In this document, we describe the tenets that facilitate the success factors in a framework (Figure 2) that provides examples of PBL deployment ranging from “Non-PBL: Traditional Approach” to “Best Practice: Robust PBL”.

FRAMEWORK

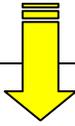
Tenets of Successful PBL Programs	
Non-PBL: Traditional Approach	
Better: Elements of PBL	
Best Practice: Robust PBL	

Figure 2 Source: Supply Chain Visions

This framework is an implementation tool to help assess PBL programs and to determine areas that need improvement. Applying the “best practices” will help a program drive PBL efforts to the next level.

<sup>5</sup> In the first edition of the Tenets of PBL, there were four factors and twenty tenets. To understand the nature of the consolidation, please see Appendix 1.

## Best Practice Elements: The Tenets of PBL

### ***Success Factor #1: Alignment***

Before starting down the PBL path, it is important to ensure that both the government and the support provider have synchronized around the idea that PBL is truly a business model shift. The goal of PBL is achieving desired outcomes—not simply negotiating Product Support Arrangements (PSA) or squeezing the support provider for the lowest cost per transaction. While it is possible to have a PBL business arrangement without a respectful and trusting relationship, this is similar to building a house with no foundation: during the first major storm, the entire structure is likely to collapse.

## Alignment

- ***PBL Knowledge and Resources***
- ***Organizational Support for PBL***
- ***Cross-Cutting Integration***
- ***Workload Allocation and Scope***
- ***Supply Chain Integration***

Figure 3 Source: UT Courseware

There are five tenets for the foundational “Alignment” element of PBL to guide the program aligning both upstream and downstream constituents with the program outcomes. These include:

- Developing and Maintaining PBL Knowledge and Resources
- Acquiring Organizational Support for PBL both internal and external
- Designing for Cross-Cutting Integration
- Appropriate Workload Allocation and Scope
- Maximizing Supply Chain Integration

Each is discussed below.

### ***PBL Knowledge and Resources***

The most successful PBL programs we observed were those where both the government organization and the support provider had a comprehensive knowledge of and experience in performance-based concepts, tenets, business models, and implementation strategies at the beginning of their program efforts. The very best programs tend to assemble a team from both the government and the support provider with at least 1-2 people on the PBL IPT who have successfully managed a PBL program before. The best practices are captured in Figure 4.

Having a team with representatives from both sides with PBL experience enables these leaders to guide the rest of the team through challenges more easily than teams without PBL experience. The teams that did not include PBL-experienced staff at the onset often struggled with issues that seemed to have the team “take two steps forward and one step back” every time they moved forward.

Further, our research uncovered a secret weapon for some organizations—having a PBL Knowledge Base. A knowledge base of PBL resources and information can be an effective tool in helping the organization and the PBL IPTs ramp up on PBLs in an effective and rapid manner. And, unlike in the past, there is now a broad set of reference materials available from DoD.<sup>6</sup>

PBL Knowledge and Resources	
Non-PBL: Traditional Approach	<ul style="list-style-type: none"> <li>• PBL not used—knowledge level not applicable</li> </ul>
Better: Elements of PBL	<ul style="list-style-type: none"> <li>• Limited understanding of the PBL business model</li> <li>• Knowledge of basic PBL concepts and tenets, with minimal experience in PBL implementation</li> <li>• PBL used—but no centralized knowledge base to leverage learning and improve implementation and effectiveness</li> <li>• No internal benchmarking of PBL programs</li> <li>• No improvement from one effort to the next</li> </ul>
Best Practice: Robust PBL	<ul style="list-style-type: none"> <li>• Comprehensive knowledge and experience in PBL concepts, tenets, business model, and strategy implementation</li> <li>• Organization has a PBL Center of Excellence where a formal process exists where knowledge is collected and leveraged across all PBL programs</li> <li>• Formal PBL benchmarking of programs exists</li> <li>• PBL readiness assessment has been completed with an action plan to close gaps in capabilities/competencies associated with PBL</li> <li>• Repeatable processes enable cost and time to implement, along with results to improve over time</li> </ul>

Figure 4: Source: University of Tennessee

We advocate care in the construction of a program culture that taps into the most skilled in PBL to help lead and teach those on the team that are new to PBL programs. Unfortunately, it is not unusual for PBL teams to be assembled with little practical experience, foundation and/or resources (reference documentation, guidebooks, lessons learned, etc.) in PBL. Program offices and support providers alike have the

<sup>6</sup> In April 2011, DoD published a the Product Support Manager Guidebook. OSD has also published a BCA guidebook. The Product Support Business Case Analysis (BCA) Guidebook was signed and released by the Principal Deputy Assistant Secretary of Defense for Logistics and Materiel Readiness (L&MR) in April 2011. There are other new guides as well, including the Integrated Product Support Elements Guide, as well an Independent Logistics Assessment Guide.

ability to leverage the experience they have garnered with previous programs and should actively seek to use it.

The most successful programs make a concerted effort to get the team smart on the fundamentals of PBL. In fact, most of the largest support providers invest heavily in educating their employees about the basics of PBL by encouraging their employees to complete the online DAU module and attend the University of Tennessee's PBL course. DAU also offers classroom instruction in PBL. Few of the PBL programs we researched that involved "next tier" contactors were actively pursuing how they would build their internal PBL knowledge base. In conjunction with this guide, the Air Force is developing a comprehensive set of training materials and courseware.

To be successful, PBL education must be approached from a cross-functional perspective. The teams that achieve the highest degree of ramp up on PBL are those that approach training from a team perspective and have their entire program team go through training at the same time in a more hands-on "workshop" environment.

The very best organization had what we will call a "PBL Center of Excellence" where a formal process exists to collect and leverage knowledge and resources across all PBL programs. Often the companies with PBL programs have more than one—and the best practice organizations have a formal PBL benchmarking program that exists to facilitate speedy ramp up of new PBL teams. Repeatable and measurable processes enable companies to have a more efficient approach in terms of cost and time to implement their PBL programs.

Unfortunately, many organizations reinvent the wheel for every new PBL excursion. There is a need to tailor every PBL strategy to fit the circumstance, but that does not mean starting at the beginning with each new start. This problem compounds for many large organizations both - private and public – because the organization is "program siloed" and there is less proactive sharing of PBL knowledge across programs than there should be. Both the Navy and the Army have de facto centers of excellence, at NAVICP and AAMCOM, respectively. The USAF maintains a PBL Center of Excellence, providing support to all of the Air Force, at Wright Patterson Air Force Base.

### ***Organizational Support for PBL***

After deciding to move forward with the adoption of a PBL oriented business model, it is important that the cross-function IPT involved do a thorough stakeholder analysis and identify organizations and leaders who are PBL Champions. The goal of the IPT should be to drive strong consensus and participation across all stakeholders toward common support strategy objectives. Our research found that not having the appropriate stakeholders and champions on board was one of the biggest challenges to an efficient PBL implementation. In fact, teams regularly cited delays as they uncovered new stakeholders in the process that were not brought on board early enough in the process.

The University of Tennessee research sponsored by the Air Force finds that most programs moving to a PBL do not do an adequate job of developing a comprehensive stakeholder analysis and plan to address primary stakeholders and leverage known champions. The very best programs do address this—and typically follow the

approach that is taught by both the University of Tennessee and DAU in their respective PBL courses.<sup>7</sup> These programs achieved a robust PBL status using the best practices described in Figure 5.

Organizational Support for PBL	
Non-PBL: Traditional Approach	<ul style="list-style-type: none"> <li>• PBL not used— no effort to recognize or reconcile stakeholders beyond traditional relationships and no PBL champions</li> </ul>
Better: Elements of PBL	<ul style="list-style-type: none"> <li>• Recognition and accommodation of stakeholder interests, short of strong integrated consensus</li> <li>• Little top level support to align stakeholders</li> <li>• Focused advocacy with limited influence</li> <li>• Advocacy in one organization—but not both</li> </ul>
Best Practice: Robust PBL	<ul style="list-style-type: none"> <li>• Strong consensus and participation across all stakeholders toward common support strategy objectives</li> <li>• Strong top-down support to align stakeholders for optimal solutions</li> <li>• Senior leadership from both customer and supplier fully engaged with respective organizations to drive towards a true win-win PBL business model</li> <li>• Champions in both organizations are strong advocates for the need to change from the existing course of action and provide a clear uplink for problem resolution</li> </ul>

Figure 5 Source: University of Tennessee

The first step in a rigorous stakeholder analysis is to identify the relative “power” of each of the stakeholders. After the team identifies all possible stakeholders, the team should determine the power of the stakeholders using the two defined variables below:

***Influence***

The first variable the team should consider is the relative amount of influence a stakeholder has. Influence is defined as “the extent to which a stakeholder is able to act on project operations and therefore affect project outcomes.” Each stakeholder is given an influence rating, a measure of the power of the stakeholder. Factors include:

- extent of control over the project funding
- extent to which the stakeholder informs decision-making around investments in technology and workplace productivity.

***Importance***

The second variable, importance, is the extent to which a stakeholder’s problems, needs, expectations and interests are affected by project operations or desired outcomes. As with influence, the stakeholder is given a rating on their potential importance.

<sup>7</sup> Risk Management Guide for DoD Acquisition, August 2006

Using these two factors, the IPT can determine the 'Power Score' of each stakeholder by simply multiplying the importance and influence scores. The goal is to determine the importance and influence of certain individuals or stakeholders in order to understand whether or not they will be "key or primary stakeholders" for the project as a whole.

The second step is to identify a comprehensive plan to address each stakeholder's needs to the fullest extent possible and to get stakeholders on board with the team as early as possible. Without the explicit support or involvement of the stakeholder community, it is unlikely that a successful and comprehensive PBL program will result. For each of the "primary stakeholders" the team then identifies a plan to ensure the stakeholder is on board with the team's approach and strategies.

Successful PBL programs rely on champions to support the PBL efforts. To succeed in PBL, senior leadership from both the customer and the supplier (whether organic or support provider) should be fully engaged with their respective organizations to drive towards a true win-win PBL business model. In addition, the champions from both organizations should be strong advocates for the need to change from legacy thought patterns and transactional logistics. It is important to remember that the PBL business model is different; often the change management is the biggest obstacle organizations face.

### ***Champions***

While the many senior officers and executives across all services support PBL approaches to weapons systems support, we find that there are fewer champions at the next level down and within the programs. Champions are often program-specific, with some programs having a great deal of support and others more or less marching forward in an effort to "comply" with PBL without really having a strong leadership commitment guiding their teams.

One of our findings is that Champions need to come from the various disciplines that PBL may impact. Specifically, many PBLs push the envelope regarding contracting, supply management and financial statutes and policy and optimal PBL implementation may require changes in process and current procedures in these areas. Accordingly, Champions in these areas need to support the Program Teams effort in working through the issues encountered.

### ***Cross Cutting Integration***

Organizational alignment is a strategic focused approach that looks to synchronize from the shop floor to the top leadership across both customer and supplier organizations the agreed upon PBL strategy. Figure 6 depicts the best practices for Cross Cutting Integration. Our research uncovered organizations hamstrung by conflicting interpretations of how to execute the strategy.

PBL can be an emotionally charged topic and seen by some as "Trojan Horse" infiltration of depot workload. A concerted effort to align all parties involved in the execution of the strategy pays big dividends in execution results in a win-win proposition for the entire team.

Cross Cutting Integration	
Non-PBL: Traditional Approach	<ul style="list-style-type: none"> <li>• Customer and supplier organizations not fully engaged with driving alignment between organizations</li> <li>• Transaction-based business model (i.e., payments for support based on resources consumed or activities performed by supplier)</li> </ul>
Better: Elements of PBL	<ul style="list-style-type: none"> <li>• Focused advocacy, but limited ability and influence to drive the organization toward a strategic approach for PBL</li> <li>• Some tenets of the PBL business model applied—but business model is still primarily based on transactions</li> <li>• Focus is on reducing transaction costs—but not eliminating transactions to drive overall costs down</li> </ul>
Best Practice: Robust PBL	<ul style="list-style-type: none"> <li>• Senior leadership from both customer and supplier organizations have a common vision to drive towards a true win-win PBL business model and to drive alignment between both organizations</li> <li>• Business model is based on achievement of desired outcomes—not based on performing transactions</li> <li>• True “partnership” mentality with a desire to develop a “win-win” business model based on mutual self-interest</li> <li>• Focused on total system value proposition and total ownership costs</li> <li>• Conscientious approach to reducing transactions to drive costs down</li> <li>• PBL rewards supplier for innovation...customer shares in benefits and savings</li> </ul>

Figure 6 Source: University of Tennessee

An example of how a lack of organizational alignment impedes the strategic PBL vision can be found when a program looks to implement a public-private partnership. In many cases, there is “focused advocacy” where a small number of leaders within an organization are actively driving their organization toward a strategic approach for PBL. In some cases, we saw is that at the highest level of the depot a champion on board promoting PBL. However, support for PBL at the lower levels was less than enthusiastic, and some actively resisted implementation.

Neither side is “right” in situations like this. There are public policy goals that must be respected and core capabilities protected in the organic structure. At the same time, work needs to go where it can be best performed and misaligned organizational structures ultimately degrade support for the warfighter.

OSD provides very specific guidance, directing, “Sustainment strategies shall include the best use of public and private sector capabilities through government/industry partnering initiatives, in accordance with statutory requirements.”<sup>8</sup> There is no default decision: the support infrastructure should be in integrated across all sources of

<sup>8</sup> Department of Defense Directive 5000.01, The Defense Acquisition System

support and work structured to deliver best use in support of the warfighter, subject to statutory constraints.

The most successful PBL programs are those with a common vision from both organizations and were thus able to jointly drive towards a true win-win PBL business model at all levels of both organizations. Aligning incentives between customers (weapons system users) and support suppliers (OEMs, third party, organic) can lead to a higher level of performance at a lower cost of ownership. As mentioned previously, a PBL business model is based on achievement of desired outcomes, not based on performing transactions. The best practice PBL programs establish a true partnership mentality with a desire to develop a “win-win” business model based on mutual self-interest that focused on total system value proposition anchored in total ownership costs.

While many PBL programs (especially the early ones) emphasized performance, the better programs do not lose sight of affordability and have a conscientious approach to reducing transactions and improving reliability to drive costs down. This is especially relevant in the current budget environment.

The PBL effort is not focused on reducing the price of the transactions, but on physically eliminating non-value added transactions, reducing support requirements, and implementing new business models. In essence the PBL business model should be deployed to reward suppliers, whether contractor or organic support, for their innovation in improving both reliability and affordability; with the government sharing in the benefits and savings through lower total ownership costs.

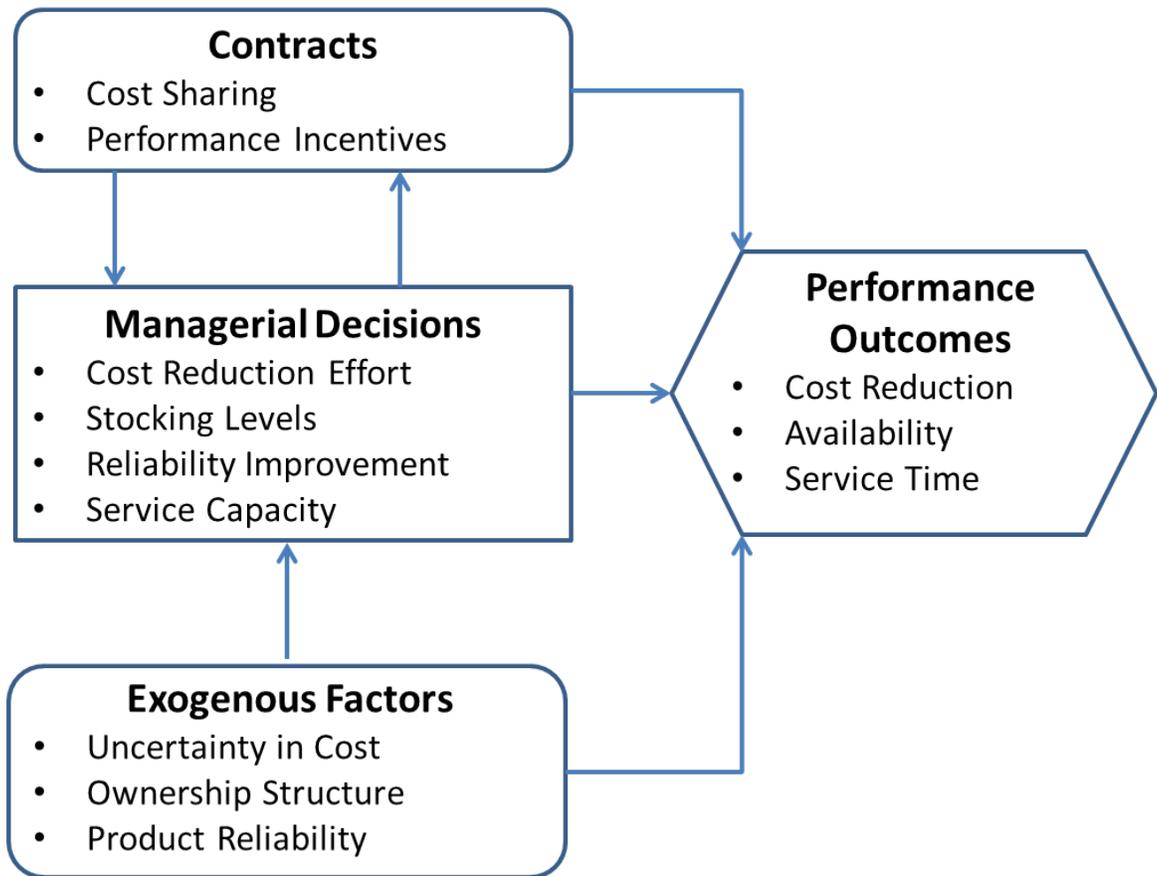


Figure 7 Source: Morris A. Cohen, Panasonic Professor, Wharton, & Chair, MCA Solutions Inc.

High performing programs using PBL develop a win-win PBL business model. In a win-win business model, the government and suppliers need to agree on price, risk premium, contract terms, and re-allocation of asset ownership/control. Figure 7 illustrates how the PBL business model is based on performance outcomes agreed to by the support provider and the government, and supported by the organic support structure. The business model needs to take into consideration three key drivers—contractual drivers, managerial decisions and exogenous factors. With internal and external alignment from top to bottom in the organization, helps form a strong PBL foundation from which a successful program implements an outcome based strategy.

***Workload Allocation and Scope***

PBL programs that describe the intended strategy and outcomes in a manner that looks to leverage the entire industrial capability have had the greatest success. Workloads are distributed to the most effective providers consistent with statutory guidelines, with a conscientious effort to focus on best competencies, best value, and effective use of public-private partnering solutions. Figure 8 is the Workload Allocation and Scope best practices framework.

Workload Allocation and Scope	
Non-PBL: Traditional	• Minimal emphasis on best value and best competencies

Approach	<p>in placement of workloads</p> <ul style="list-style-type: none"> <li>• Supplier is viewed as competition by organic customer providers</li> <li>• No teaming relationships visible</li> <li>• Customer develops a Statement of Work (SOW) which defines “how” the supplier should perform the work; detailed work scope restrictively defined in SOW</li> </ul>
Better: Elements of PBL	<ul style="list-style-type: none"> <li>• Some integration of customer organic and supplier workload distribution based on best competencies; minimal or sub-optimal use of public-private partnering</li> <li>• Customer emphasizes and defines top-level desired outcomes, but prescribes excessive boundary conditions that limit supplier flexibility in achieving outcomes</li> </ul>
Best Practice: Robust PBL	<ul style="list-style-type: none"> <li>• Workloads are distributed to the most effective providers consistent with statutory guidelines; best competencies, best value, effective use of public-private partnering</li> <li>• Customer develops a Statement of Objectives (SOO)</li> <li>• SOO specifies desired outcomes in terms of high-level objective metrics with minimal prescriptive direction; supplier has flexibility regarding “how” to achieve the designated outcomes</li> <li>• Scope of supplier work encompasses a broad range of logistics elements and is fully aligned with assigned performance and support logistics</li> <li>• SOO allows the supplier the flexibility to significantly change current traditional process; high-performing PBL programs result where processes are changed</li> </ul>

Figure 8 Source: University of Tennessee

Many times programs get caught up in the oversight process and opt to tell the suppliers how they are looking for support to be done rather than describing what is expected for outcomes. In a traditional approach, the government provides a Statement of Work (SOW) that outlines in detail the various activities that the support provider should perform. Typically, many of these activities are priced per transaction and may not have Product Support Arrangements (PSA's) that define performance targets.

“Never tell people how to do things. Tell them what to do and they will surprise you with their ingenuity.”

- Gen. George S. Patton

In a PBL approach, the work is much more loosely defined through a Statement of Objectives (SOO). The effort and activities needed to produce the results are not only minimally specified, but should be of little concern to the government—they agree on the “what” without worrying about the “how.” This gives the support provider the authority and flexibility to bring innovative solutions to the table in order to achieve the customer’s desired outcomes. The Statement of Objectives (SOO) is in essence a summary of key goals, outcomes, or both that are incorporated into the PBL agreement.

Let's look at an example from the DoD for vehicle operations. The SOO outlines one primary task and only three supporting tasks that are required. The support provider determines the details of *how* to accomplish these tasks and achieve the desired outcomes. It is important to point out that a SOO can have objectives that are binding on the government. The support provider can also be the government Depot.

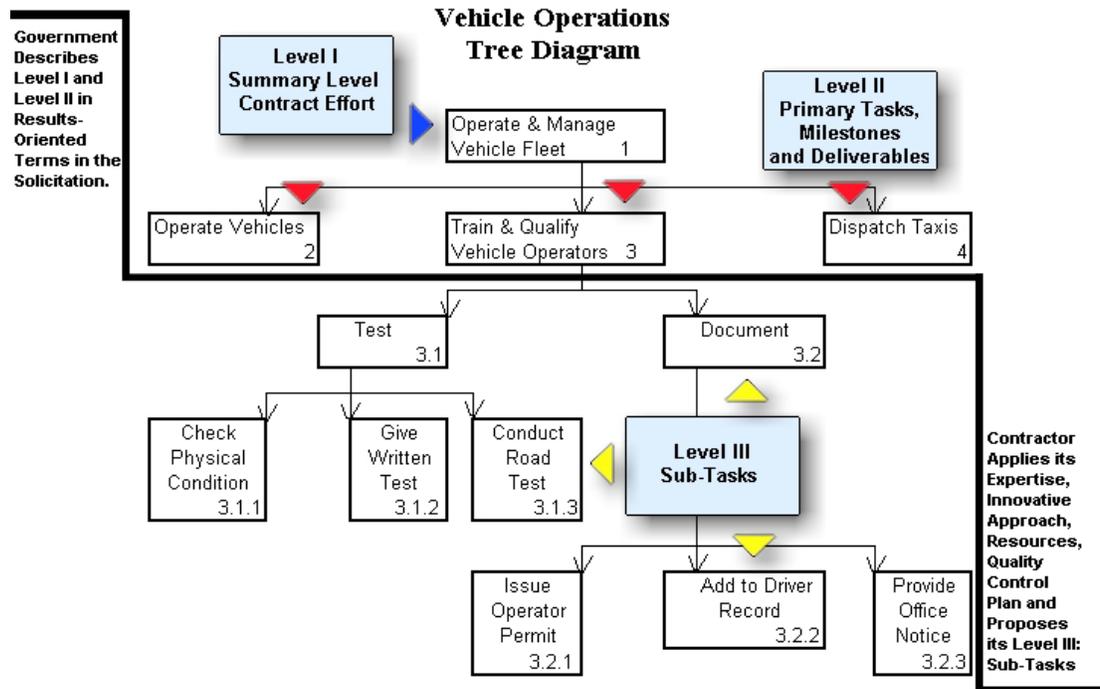


Figure 9 Source: Program Managers Guidebook (2005)

Unfortunately, PBL programs are often misunderstood as “outsource” efforts or “contract logistics support” with minimal emphasis on best value and best competencies in placement of workloads. When a depot is performing organic workload for sustainment, a common misunderstanding is that PBL will automatically result in the redistribution of work from the depot to the contractor. In fact, PBL can result in additional work at the depots. Teaming relationships are central to PBL—and Title 10 clearly emphasizes the importance of Public Private Partnerships.

Public private partnerships are an effective tool for balancing workload allocation around best value solutions. PBL does not pre-ordain CLS or organic support structures. Rather, PBL gives all stakeholders the opportunity to compete for and earn business in line with their core competencies and value proposition.

### Supply Chain Integration

The traditional approach for a contract has been to manage the supply chain by commodities or services and not necessarily to optimize for the achievement of end-to-end process effectiveness. Best practice PBL programs demonstrate development of a formal supply chain management strategy that focuses on maximum integration (management and visibility) of end-to-end supply chain effectiveness where supply

chain components align to optimizing for the end-to-end process, instead of internally stove-piped processes. For some programs, this has even led to co-location of the program team, so the support provider and the government (especially depot) work side by side under the same roof, ensuring transparency of customer and supplier involvement and reinforcing public-private partnerships. Supply Chain Integration best practices are identified in Figure 10.

Supply Chain Integration	
Non-PBL: Traditional Approach	<ul style="list-style-type: none"> <li>• Traditional management of supply chain—by commodities or services; not oriented to achievement of end to end process effectiveness</li> <li>• No value in PBL recognized by the customer or supplier</li> </ul>
Better: Elements of PBL	<ul style="list-style-type: none"> <li>• Supply chain component aligns internal processes; lack of full alignment towards optimization of the end to end process effectiveness with supply chain partners</li> </ul>
Best Practice: Robust PBL	<ul style="list-style-type: none"> <li>• Development of a formal supply chain management strategy that focuses on maximum integration (management and visibility) of end to end supply chain effectiveness.</li> <li>• Supply chain components align to optimizing for the end to end process, vice internal process effectiveness</li> <li>• Established &amp; well defined processes that guarantee alignment, coordination, and horizontal integration. Alignment can be achieved through a virtual arrangement or a physical co-location of all support organizations (weapon system program management, engineering, item management, customer representative, etc.)</li> <li>• Transparency of customer and supplier involvement</li> <li>• Customer is willing to allow the supplier to make significant changes to improve supply chain processes/flow</li> </ul>

Figure 10 Source: University of Tennessee

## **Success Factor #2: Contract Structure**

# **Contract Structure**

- **Appropriate Risk and Asset Management**
- **Funding**
- **Contracting Environment**

Figure 11 Source: University of Tennessee

The PM is assigned Life Cycle Management responsibility and is accountable for the implementation, management, and oversight of all activities associated with development, production, sustainment, and disposal of a system across its life cycle. As part of this, the PM has the responsibility to develop an appropriate sustainment strategy to achieve effective and affordable operational readiness consistent with the Warfighter resources allocated to that objective. The PM's responsibilities for oversight and management of the product support function are typically delegated to a PSM who leads the development, implementation, top-level integration, and management of all sources of support to meet Warfighter sustainment and readiness requirements.

Contract structure is a visible manifestation of the PSM's implementation responsibility, and contract structure is a critical step when developing a PBL program. Nothing is more important than formalizing the strategy through the appropriate contract structure and the resulting contract, or the product support agreements for arrangements within the government. A PBL solution is not wed to any particular contract type or incentive plan. An outcome-based approach can use a number of contracting types and incentive options based on the unique business need. However, good to robust best practices typically includes a form of incentive for achieving performance and cost savings targets. When a service provider meets expectations, they can be rewarded with financial incentives, such as performance bonuses, gain-sharing bonuses, or extended contract lengths. In the case of a Firm Fixed Price contract, the contractor could harvest improved profit margins as improvements take hold during the period of performance.

Striking the right balance of contract type and incentives are discussed in the below tenets:

- Appropriate Risk and Asset Management
- Contracting Environment
- Funding

While this discussion centers on driving outcomes from a government perspective that considers the relationship specified in a contract, the concepts are applicable to all organizations. The tenets are applicable and adaptable to public-private partnerships and agreements between government entities serving as the Project Support Manager (PSM), Product Support Integrator (PSI), or the Product Support Providers (PSP). Each is discussed below.

### ***Appropriate Risk and Asset Management***

Robust best practice PBL programs develop thoughtful plans that introduce improvements to reduce total program risk where appropriate and consideration for exiting the relationship if the intended outcomes are not attainable. These programs also balance risk with a comprehensive mitigation strategy focusing on all parties and paying specific attention to harmonizing supplier accountability and authority. Further, PBL contracts should spend time developing adequate exit criteria at the onset of the contract execution as part of this mitigation. By intelligently moving some risk to the support provider side, and aligning incentives to stimulate appropriate decisions, the PBL business model can remove risk from the total system. It isn't just about moving risk to the supplier. It's about realigning the incentives to reduce total program risk.

Figure 12 identifies the best practices framework for appropriate risk and asset management.

The importance of exit criteria that leave both sides whole cannot be overstated. Best practice PBL programs actively address off-ramps that balance the needs of the contractor, the customer, and the organic support structure. Traditional outsource arrangements often have termination for convenience clauses. The contract should include adequate exit criteria to cover probable off-ramp requirements, as well as any limitations on off-ramp options. Some common off ramp criteria address the following considerations:

- The acquisition, transfer, or use of necessary technical data and support/tooling equipment should the relationship cease to exist.
- Providing for appropriate conversion training required to reconstitute or recompute the support workload.
- Managing asset liability—typically addressed in terms of how long the support provider will be given notice and how the assets will be transferred or disposed.
- Using H clauses as a form of off ramps in the contract. H clauses allow for tailoring of a PBL contract to provide for certain exclusions.

Managing risk associated with asset ownership in a PBL arrangement is an area that we found requires attention during the risk mitigation strategy development and memorialized in the contract. Under traditional sustainment models, the government customer often owns and manages the resources associated with the program, including spares, repair facilities, etc. Contract Logistics Support arrangements will often shift responsibility for managing most aspects of resources to the supplier, but associated risk remains with the customer because ownership of the asset remains with the customer. This is less than ideal, as the support provider does not have “skin” in the game. For example, our research team will often ask a support provider “What are your inventory turns?” and, unfortunately, we often get the answer “I don't know—it's not my inventory.”

While there is much debate about whether a supplier should own the assets or the government should own the assets, we have found that programs are more apt to achieve desired performance when the supplier owns the assets. Research at the Wharton School (described in more detail below) strongly suggests that best practice is to have full asset management control, including ownership, shifted to the supplier and the associated risks for asset performance accepted by the supplier

Appropriate Risk and Asset Management	
Non-PBL: Traditional Approach	<ul style="list-style-type: none"> <li>• Risk management is treated as a zero sum game with incomplete understanding of pricing risk</li> <li>• Customer owns and manages resources (spares, repair depots, etc.)</li> <li>• Off-ramps limited to Termination for Convenience</li> </ul>
Better: Elements of PBL	<ul style="list-style-type: none"> <li>• Re-balancing of risk to share across customer and supplier, but little attempt to leverage shared capabilities to reduce total risk</li> <li>• Focus of the discussion is around pricing risk, not optimizing risk</li> <li>• Responsibility for managing most aspects of resources is shifted to supplier, but associated risk remains with the customer</li> <li>• Many off-ramps to bound all risks (complex)</li> </ul>
Best Practice: Robust PBL	<ul style="list-style-type: none"> <li>• Balancing of risk with a comprehensive mitigation strategy focused on all parties</li> <li>• Specific attention paid to balancing supplier accountability and authority</li> <li>• Development of a thoughtful plan to introduce improvements to reduce total program risk where appropriate</li> <li>• Responsibility for managing most aspects of resources is shifted to supplier, along with associated risk</li> <li>• Asset ownership investment by the supplier is considered as an option if relevant to the business</li> <li>• In general, full inventory management control and risk should be shifted toward the supplier; associated risks for asset performance is accepted by the supplier</li> <li>• Contract includes adequate exit criteria and off-ramps to cover probable contract off-ramp requirements</li> <li>• Off ramps maintained to ensure flexibility in courses of action available as the program evolves and matures.</li> <li>• Limitations on off-ramp options identified early in process (i.e., data rights, customer rights to asset ownership, etc.)</li> </ul>

Figure 12 Source: University of Tennessee

The use of supplier-owned assets in PBL programs has been studied at the Wharton School. Their findings, published in Management Science, were that the optimal business arrangement was when the contractor owned the assets. Under a PBL program, the supplier is accountable to meet service levels at a fixed price. When a supplier owns the assets, they have an inherent incentive to reduce the cost of asset ownership and keep the level of inventory at the lowest level that will still allow them to meet performance metrics targets.<sup>9</sup> The chart below shows the results of their research.

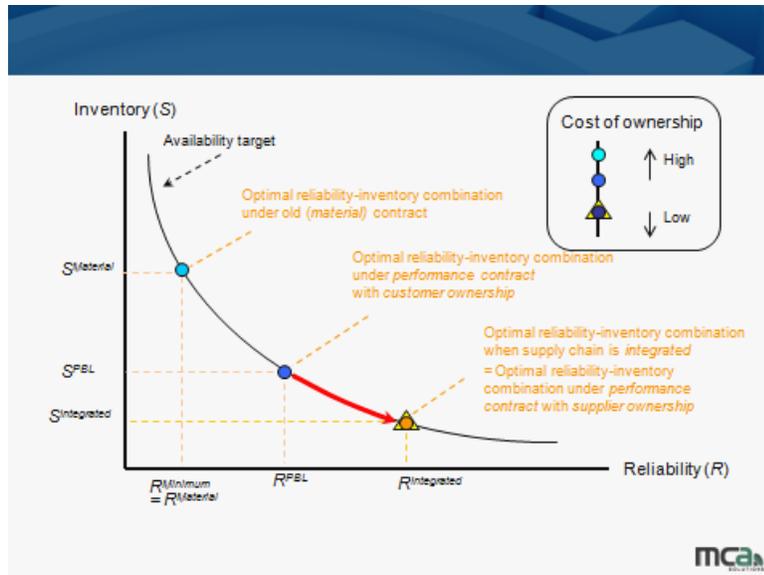


Figure 13 Source: Morris A. Cohen, Panasonic Professor, Wharton, & Chair, MCA Solutions Inc

### Contracting Environment

The thought and effort to set a sound PBL foundation and distribute the mitigation of risks appropriately can all go for naught if the contract environment restricts creativity and shared success. The contracting environment includes the pricing model, incentives, and contract length that enacts the risk mitigation strategy and establishes the way forward to meet or exceed the desired outcomes.

Contracting Environment	
<b>Non-PBL: Traditional Approach</b>	<ul style="list-style-type: none"> <li>• Pricing model is based on charging for transactions</li> <li>• Often pricing models are cost reimbursement-focused (e.g., cost plus fixed fee or cost plus variable fee); if a supplier decreases transactions, they are inherently penalized with reduced revenue and as such reduced margin</li> <li>• Contracts are for a short-term horizon (i.e., one year at a time) with little commitment to out-year contract</li> </ul>

<sup>9</sup> Cost sharing and PBL Kim, Cohen, Netessine (2007a) Mgmt Science 53(12), 1843-58

	<p>award which focuses on price versus potentially overall lowest total ownership cost and best value</p> <ul style="list-style-type: none"> <li>• Incentives—if any—are linked to activities, not outcomes</li> <li>• Incentives do not synchronize behavior between the supplier and customer (win-lose)</li> <li>• No incentives to perform over and above contract requirements</li> </ul>
<p><b>Better: Elements of PBL</b></p>	<ul style="list-style-type: none"> <li>• Pricing model is typically still based on charging for transactions—but incentives such as gain-sharing help drive a focus for desired performance such as cost reduction</li> <li>• Multiple year contract terms with minimal base period (i.e., one year) and maximum option years with some confidence in exercising option years; allows supplier to make rational commitment to performance-improving investments with expectation of earning back investment.</li> <li>• Incentives promote achieving certain performance targets; however, incentives don't promote optimal behavior and are often focused on achieving performance against activity or transaction level performance and not achievement of overall desired outcomes</li> <li>• Some incentives to perform over and above contract requirements are specifically included</li> </ul>
<p><b>Best Practice: Robust PBL</b></p>	<ul style="list-style-type: none"> <li>• Pricing model is based on mutual self-interest</li> <li>• Focus is on reducing non-value added transactions—not on simply reducing transaction price; pricing model fixes revenue and encourages activities to reduce cost</li> <li>• Typical pricing model does not provide the supplier with a “given” profit margin; supplier has the potential to earn increased profit through incentive structures based on their ability to reduce overall costs and/or achieve performance target</li> <li>• Optimal pricing models are typically:             <ul style="list-style-type: none"> <li>○ Fixed price where supplier is inherently incentivized to reduce costs to drive profit margin while attaining set performance levels</li> <li>○ Cost plus where profit margin is earned by achieving desired targets for cost and performance; supplier “earns” margin for achievement of desired outcomes, and risk is shared by incorporating “cost plus”</li> </ul> </li> <li>• Incentives (aka performance payments) are specifically connected to the vital few top-level outcomes, and balanced so that rational economic behavior will drive goal alignment between the supplier and the customer.</li> </ul>

	<ul style="list-style-type: none"><li>• Contract price adjustments are made at pre-defined timeframes to review costs and re-price the work; customer has a strategy of “harvesting the savings” created by cost reductions and process improvements</li><li>• Pricing models should reflect the balance of risk/reward tradeoff; the pricing model may change over time as risk levels change (e.g. shift from a cost plus to a fixed price contract once a firm baseline is known)</li><li>• Incentives tightly aligned, promoting behaviors and outcomes that benefit both the customer and supplier</li><li>• Explicit reflection of factors like program maturity, scope of agreement, complexity of the system, context of use, etc., in the incentive set</li><li>• Incentives are often award term extensions meeting or exceeding pre-specified outcomes whereby the contract will not be re-bid if specified outcomes/goals are being achieved.</li><li>• Cost cutting targets are inherent if a fixed price model is used; the more the supplier cuts costs the more margin they make; contract price adjustments made at pre-defined times to review costs, re-price work</li><li>• Contract length is commensurate with payback period for supplier’s investments</li><li>• Longer term contracts encourage long-term investment to improve product or process efficiencies</li><li>• Contracts are typically multi-year or multiple year (i.e., 5 years with additional option or award term years). Award Terms are achieved through achievement of pre-specified outcomes, which may be set at a level that correlates to superior performance.</li><li>• Provisions provided to recognize supplier investment and provide opportunity for recoupment</li><li>• Contract Management recognized as key function over Life Cycle.</li></ul>
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Figure 14 Source: University of Tennessee

### **Pricing Model**

One of the most challenging elements of a contracting strategy is developing the pricing and incentives structure: the “pricing model.” The pricing model is made up of two key elements: contract type and incentive type. Incentives are optional, but structures that provide incentives for “good behavior” are desired in all contracts.

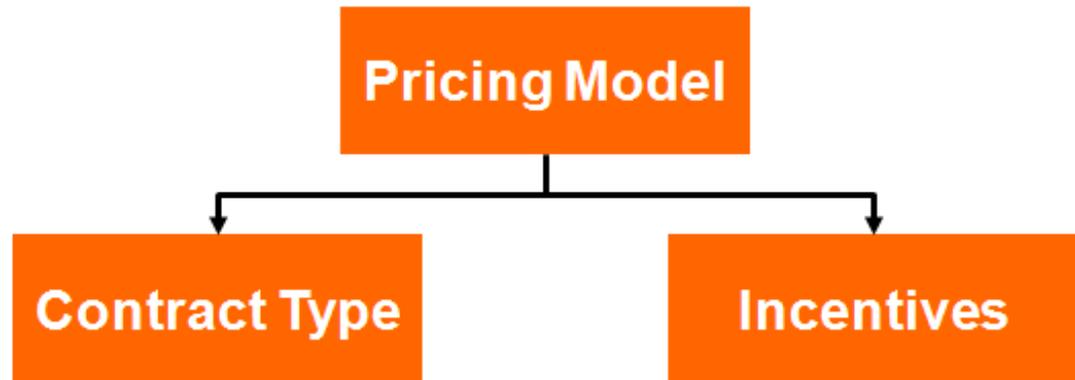


Figure 15: Source Supply Chain Visions

There are two basic types of contracts: fixed price and cost plus. Generally, the end objective of a PBL acquisition strategy is to achieve a fixed price contract, using a per unit or per unit throughput basis. In fact, direction from the Office of the Secretary of Defense states that the desired PBL pricing approach is a fixed price model. “When robust competition already exists, or there is recent competitive pricing history, I [USD ATL] expect components to be predisposed toward Firm-Fixed-Price (FFP) type contract arrangements. FFP should also be used to the maximum extent reasonable when ongoing competition is utilized in multiple award contract scenarios.”<sup>10</sup>

Fixed price contracts are a natural fit for buying designated performance outcomes as they build in an inherent incentive for the service provider to be efficient and meet profitability levels at the firm fixed price rate. In essence, the support provider increases their profit as they get more efficient. Having a fixed price agreement on a per unit or throughput basis allows for fluctuating volumes. In addition, pricing models also may have “volume bands” to allow for different pricing at different levels of volume.

While a fixed price model provides inherent incentives, it is usually necessary to begin with cost reimbursement (or cost plus) contracts in the early phases of PBL implementation while the appropriate cost and resource baselines are maturing to the point where incentivized metrics can be specified and pricing risk has been minimized. Dr. Morris Cohen of the Wharton School of Business depicts this concept in Figure 16 below. The greater the maturity level and stability of the program, the more the uncertainty in costs is driven down. As a result, programs can then transition to a PBL pricing model with more of a fixed price emphasis.

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<sup>10</sup> Under Secretary of Defense, “Restoring Affordability and Productivity in Defense Spending,” September 14, 2010

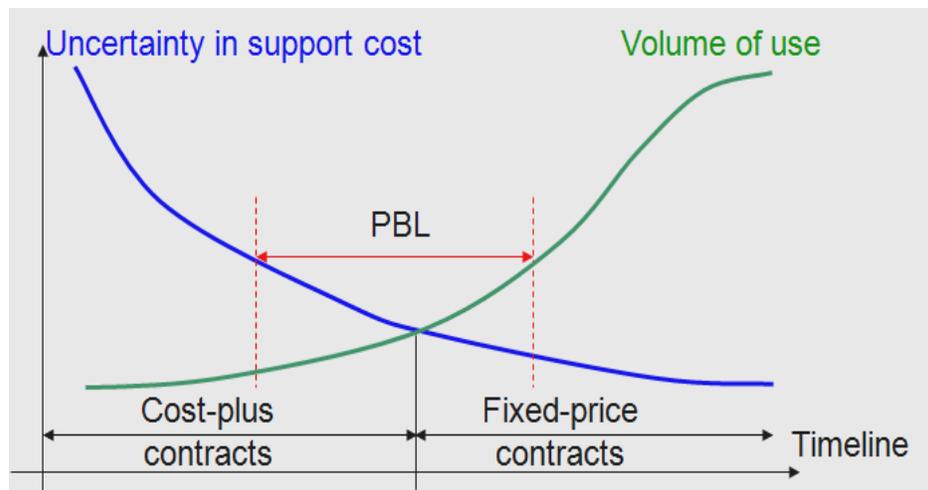


Figure 16 Source: Morris A. Cohen, Panasonic Professor, Wharton, & Chair, MCA Solutions, Inc.

University of Tennessee research validates this philosophy of transitioning the pricing model to adjust for risk over the life of the PBL arrangement. It is rare that a program matures to the point where all elements appropriate for cost plus elements are eliminated, and it is risky to implement fixed price agreements without first understanding the baseline performance and cost of the existing business model. A good “transition plan” approach is suggested in Figure 17 below.

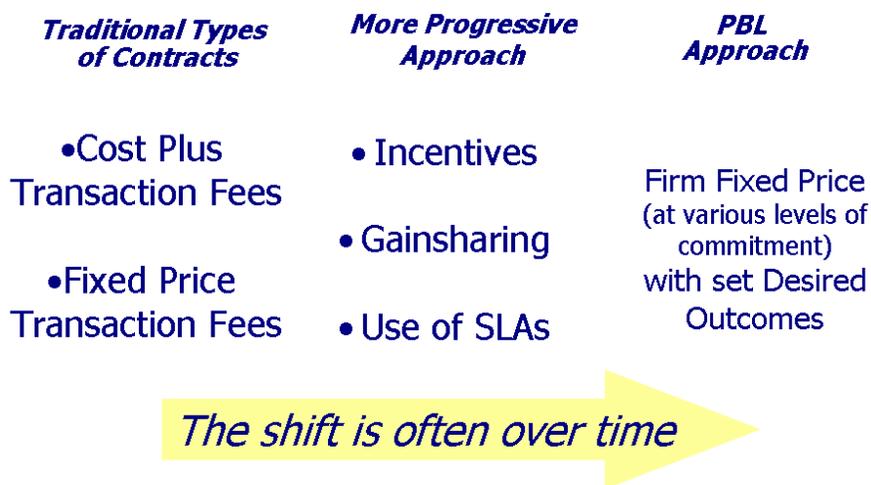


Figure 17 Source: UT Courseware adapted from DAU courseware

A key to any pricing strategy is to provide enough incentive to the Product Support Integrator (PSI) and, by implication, the Product Support Providers (PSP) to change the status quo behavior and to make the necessary changes or investments to improve processes and/or reliability of the system. The pricing strategy needs to recognize that these changes and/or investments need to be adequately rewarded or the support providers will not be inclined to assume the investment or risk. However, the Government should also benefit from the relationship. Accordingly, articulating a clearly understood plan on how and when the Government will harvest the savings created under the PBL is vital.

In the Firm Fixed Priced example with an OEM, at the end of a pre-determined period of performance, which coincides with the contract term, the Government can get cost transparency through the submission of Certified Cost and Pricing Data. By statute, this data would represent the actual costs to perform the effort under the PBL. The new contract term pricing for the subsequent period of performance, based on this new actual cost data, would create a new and lower cost baseline. The lower costs negotiated represent the savings to be harvested, and the benefit to be received by the government.

### ***Incentives***

All PBLs implicitly use incentives. In fact, FAR actually provides guidance that incentives should be a necessary part of the contract.

- to the maximum extent practicable, performance incentives, either positive or negative or both, shall be incorporated into the contract to encourage support providers to increase efficiency and maximize performance
- incentives shall correspond to the specific performance standards <sup>11</sup>

Best practice PBL programs use incentive strategies that are tightly aligned, promoting behaviors and outcomes that benefit both the customer and supplier. The incentives should include an explicit reflection of factors like program maturity, scope of agreement, complexity of the system, context of use, etc.

Incentives are often tied to award term extensions of the contract whereby the contract will not be re-bid if desired outcomes are being achieved. Cost-cutting targets are inherent if a fixed price model is used; the more the supplier cuts costs the more margin they make<sup>12</sup>; contract price adjustments are made at pre-defined timeframes to review costs and re-price the work. However, not all PBL programs are fixed price and as such, any cost plus type contract should include some form of cost savings incentive.

A PBL agreement also can leverage various types of incentives. Contracts can be incentivized based on award fees (cash payments/bonuses) or extended contract terms. Several incentive types are highlighted in the below table.

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<sup>11</sup> FAR Part 37 37.602-4

<sup>12</sup> Contractual nuances need to be addressed to remain in compliance with the Federal Acquisition Regulation. While there are no restrictions on profit levels on a FAR Part 12 contract, there may be a need to include specific gain-sharing provisions for FAR Part 15 contracts if the profit levels in the FAR guidance are exceeded (i.e., 10-13%).

Incentive Types
<p><b>Positive Past Performance Ratings:</b> these increase the chances of being awarded competitive contracts or follow-on efforts.</p>
<p><b>Incentivized Performance Targets:</b> awarded based on achieving certain service level achievements. For example, minimum service levels might be 95% availability and additional performance bonus is available for achieving 98%</p>
<p><b>Award Term Incentives:</b> awarded as an extension to the contract. For example, under a 5-year base contract, a service provider that achieves certain performance levels throughout the base period will automatically receive additional award term contract extensions as a bonus. The goal of award term incentives is to continually keep a long-term view of the contract to continue to drive investments over the life of the contract. The thinking is that when the remaining contract term is insufficient to allow service providers to have confidence in making adequate Return On Investment (ROI), they will naturally lose the incentive to make long-term investments (such as product reliability upgrades).</p>
<p><b>Investment in Resources:</b> including technical infrastructure, training, education, or industry certifications (e.g., Lean or Six Sigma) can lead to additional business being awarded and contract extensions.</p>
<p><b>Shared Savings:</b> based on cost savings. The total savings or “gains” are usually shared across the service provider and the government.</p>

Figure 18: Source: UT Courseware

It is important to keep in mind that the government has wide discretion in assembling and blending contract types and incentive types, tailored to fit the circumstances of the program. There is no perfect, universally applicable template.

### Contract Length

The third element of a contracting strategy is the contract length. PBL contract lengths are typically “longer term,” but what that means in practice varies. In guidance issued in September of 2010, the Under Secretary of Defense for Acquisition, Technology, and Logistics said, “Single-award contract actions should be limited to three years (including options) unless, by exception, it is fully justified for longer periods by the senior manager for services. Contract length should be appropriate for the activity performed. Knowledge-based services readily meet the three-year limit.”<sup>13</sup>

Often, individuals cite that policy statement as a rationale for contracts necessary to implement a PBL Strategy at 3 years. However, the sentences that follow in that policy memo are extremely important. “Other services such as Performance-Based

<sup>13</sup> Under Secretary of Defense, “Restoring Affordability and Productivity in Defense Spending,” September 14, 2010

Logistics (PBL), LOGCAP, and environmental remediation, as examples, may not. The intent is that each service requirement will be reviewed by the appropriate official and only those with a sound business rationale will contain longer contract performance provisions.”<sup>14</sup>

In addition, PBL emphasizes long-term support arrangements as a fundamental part of the strategy: “Performance-Based Logistics (also commonly referred to as Performance-Based Life Cycle Product Support and PBL) is a performance-based product support strategy for the development and implementation of an integrated, affordable, product support package designed to optimize system readiness and meet the Warfighter’s requirements in terms of performance outcomes for a weapon system through long-term product support arrangements with clear lines of authority and responsibility.”<sup>15</sup>

Longer-term contracts encourage long-term investments to improve product or process efficiencies—a key desired outcome of a PBL.

While there is no real guidance or “right answer” for the appropriate length of a contract, the general rule of thumb is that the contract length should be commensurate with the payback period for the supplier’s investments. We have seen contracts up to 10 years for the US government, and up to 20 years with foreign governments.

The government gives guidance on this in Section 2304 of 10 USC, which reads that contract length may be “any period up to five years and may extend the contract period for one or more successive periods pursuant to an option provided in the contract or a modification of the contract. The total contract period as extended may not exceed 10 years unless such head of an agency determines in writing that exceptional circumstances necessitate a longer contract period.”

DoD guidance recognizes that effective PBL contracts are multi-year contracts (i.e., 3 to 5 years with additional option or award term years), with high confidence level for exercising options/award term years. They also typically feature provisions to recognize supplier investment and opportunities to recoup investments.

Inherently, longer-term contracts are more conducive to effective PBL implementation because of simple economics. Up-front investment drives performance improvement. The annual “payback” for a PBL investment, as reflected in financial returns in the “out years,” is what justifies the up-front investment. Longer planning horizons justify higher up-front investments because of the higher total return opportunity. This higher up-front investment therefore drives larger impacts in performance. One-year contracts do little to encourage support provider investment, and therefore are less effective in generating significant performance improvement.

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<sup>14</sup> MEMORANDUM FOR ACQUISITION PROFESSIONALS, “Better Buying Power: Guidance for Obtaining Greater Efficiency and Productivity in Defense Spending,” September 14, 2010, Under Secretary of Defense for Acquisition, Technology, and Logistics.”

<sup>15</sup> ACQuipedia definition, the online encyclopedia of common defense acquisition topics. <https://acquipedia.dau.mil>

It is important to note the differences between a multi-year and multiple year contract, which are terms that are easily confused.

- Multi-Year:
  - Buys more than one year's requirement without having to exercise options
  - Beyond one-year investments can be recovered if contract terminated
  
- Multiple Year:
  - Contract written for multiple years
  - Only first year is 'guaranteed'
  - No recovery of investments if contract terminated

It is also important to note that the Program PM generally does not have the authority to implement multi-year contracts, but exceptions do exist, for example the utilization of working capital fund authorities.

There is much confusion and misperception surrounding the whole concept of contract length and term. Including Legal Counsel in discussions on this subject early in the process is a key to success. Although statutory limitations – particularly in colors of money - may exist that prevent the execution of what is viewed to be the optimum solution, we have found there are compromise contract structures that can lead to the behavioral changes desired.

### ***Funding***

One of the biggest challenges to PBL is funding stability and budget instability. Contract provisions should reflect fact-of-life funding variability and provide both the customer and supplier mechanisms for fairly adjusting performance and risk to accommodate funding variability.

At the same time, good faith and diligent efforts to reduce the risk of funding variability should be undertaken. Increasing levels of “out year” funding uncertainty leads to lowered levels of up-front investment in performance improvement initiatives, which in turn drives higher life cycle costs, leading to more budget pressure in the out years, creating even higher levels of funding uncertainty. Funding variability undercuts the effectiveness of PBL, and creates a death spiral. Best practices are detailed in Figure 19.

While many would agree that PBL programs are most impactful when funding is stable and treated as a priority, it is important to realize that sometimes budgets are cut. Further, in today's budget environment there is no such thing as certainty in appropriated funds. All parties to a PBL agreement should ensure that if possible there is some sort of a “funding baseline” that will protect the program over the long term of their contract, with flexible structures made available above the baseline.

Funding	
Non-PBL: Traditional Approach	<ul style="list-style-type: none"> <li>• Funding tied to level of effort in the transactional support</li> <li>• Short-term funding provides little stability from period to period and limits the supplier's ability to make investments in long-term product and process improvements</li> </ul>
Better: Elements of PBL	<ul style="list-style-type: none"> <li>• Contract recognizes the requirement to accommodate funding variability</li> <li>• Good visibility (consolidation) of support funding</li> <li>• PBL support is part of overall major systems program funding plan. Every effort should be made to ensure that sufficient funds have been included in the overall funding profile. Impact of funding shortfalls discovered after contract award resulting in contract modification are addressed in accordance with change management clause in the contract</li> </ul>
Best Practice: Robust PBL	<ul style="list-style-type: none"> <li>• PBL funding is prioritized to maintain significant confidence of funding availability over total contract term. Stable funding incentivizes support provider to invest in process improvement; however, fact-of-life funding variability can occur and both customer and supplier need to be prepared to fairly adjust performance and risk to accommodate funding variability</li> <li>• Complete visibility of funding; all necessary "colors of money" aligned in program as needed</li> </ul>

Figure 29 Source: University of Tennessee

### ***Success Factor #3: Performance Management***

At the heart of a PBL program are the desired outcomes and the associated metrics that the support provider must meet or exceed. Performance management is not only an essential component of the contract management process—it is fundamental to the success of a PBL program. The evidence is compelling that performance management and a focus on metrics can directly improve an organization's bottom line.

According to Lisa Higgins, chief operating officer for APQC, "Top performing companies spend 56 percent less on total supply chain management than median performers. Top performing companies' cash to cash cycle is 39 percent more efficient than the median performers and top performing companies' perfect order performance is 5 percent better than the median performers."

## **Performance Management**

- ***Establish and Align Top Level Desired Outcomes***
- ***Metrics Reporting and Continuous Improvement***

Figure 20 Source: UT Courseware

Having a strong performance management process aids in the analysis of business problems and opportunities, and offers a basis for rewarding desirable behaviors and outcomes.<sup>16</sup> An aligned performance measurement and rewards program supports management in steering the organization in the right direction.<sup>17</sup> Measurement transcends perception, creating the reality that solves problems and drives improvement. Smart companies know that information is the foundation for understanding and effective problem solving.<sup>18</sup> The tenets of Performance management are:

- Establish and Align Top Level Desired Outcomes
- Metrics Reporting and Continuous Improvement

Our academic research identifies several benefits of measuring performance:<sup>19</sup>

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<sup>16</sup> Gregory Reilly and Raymond Reilly, Using a Measure Network to Understand and Deliver Value, Journal of Cost Management, Nov/Dec 2000

<sup>17</sup> Steven Epner "If You Cannot Measure It, You Cannot Manage It," Brown, Smith and Wallace LLC

<sup>18</sup> William Schiemann and John Lingle, Seven greatest myths of measurement, white paper from website

<sup>19</sup> Gregory Reilly and Raymond Reilly, Using a Measure Network to Understand and Deliver Value, Journal of Cost Management, Nov/Dec 2000

- Measures help managers to understand current performance relative to plans, to their own past, and to others who may use best practice, be competitors, or do both
- Measures offer a basis for judging whether current performance is good or bad
- Measures help managers deal with large, complex activities by focusing attention on the program aspects that are critical to success
- Measures help managers understand the root causes of performance and offer guidance as to how future performance might be improved
- Measures offer a basis for the evaluation and reward of the performance of people in the organization
- Measures provide objectivity in the world of subjectivity

One of the key findings in PBL is that best practice teams view performance management as much more than just metrics—it is the fundamental building block for a good performance based program. Measurements and metrics are the ruler by which we gauge success. However, metrics only form part of the picture of continuous improvement. If the building blocks necessary are not in place, the best metrics in the world will be of little consequence.

Most of the PBLs we have explored tend to focus more on the metrics themselves, rather than creating a true performance management process that would enable the program to institutionalize continuous improvement philosophies. Below we address the four key tenets associated with performance management in more detail in order to help program managers and product support managers understand how to improve their performance management efforts to enable a solid PBL.

### ***Establishing and Align Top Level Desired Outcomes***

At the heart of PBL is the desired outcome. “The PM shall work with the users to document performance and support requirements in performance agreements specifying objectives, outcomes, measures, resource commitments, and stakeholder responsibilities.”<sup>20</sup>

During the acquisition phases of a program, metric use is spelled out in the 17 Aug 06 Joint Requirements Oversight Council (JROC) Memorandum 161-06. DoD established a requirement for four materiel readiness outcomes (also called Life Cycle Sustainment Outcome Metrics) in a Deputy Undersecretary of Defense (Logistics & Materiel Readiness) (LMR) policy memorandum dated 10 Mar 07 entitled “Life Cycle Sustainment Outcome Metrics.” Sustainment data reporting requirements were established in a policy memorandum dated 31 Jul 08 Undersecretary of Defense (Acquisition, Technology and Logistics) “Implementing a Life Cycle Management Framework”. Implementation guidance was provided in a subsequent 11 Dec 08 OSD 1316 policy memorandum entitled “Reporting” jointly signed by the Deputy Undersecretary of Defense (Logistics & Materiel Readiness) and the Director, Acquisition Resources and Analysis.

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<sup>20</sup> Department of Defense Directive 5000.01, The Defense Acquisition System

Clearly, there is ample policy direction for the key life cycle support metrics. These metrics are:

- Materiel Availability
- Materiel Reliability
- Ownership Cost
- Mean Down Time

As monitored programs progress from acquisition and fielding to sustainment, these four basic metrics will continue to be used. In addition to these metrics, the PSM has a wide variety of metrics available to provide insight into specific areas.

While the government and the support provider should work as a team to determine the required performance outcomes, the DoD is very specific about what these performance outcomes should include. These desired outcomes are in the form of concrete definable performance requirements with quantifiable targets. Product Support Arrangements describe the what—not the how.

Figure 21 below outlines the various levels of maturity in an organization’s ability to establish top level desired outcomes. A robust PBL will demonstrate the best practices listed in the last row.

Establish and Align Top Level Desired Outcomes	
Non-PBL: Traditional Approach	<ul style="list-style-type: none"> <li>• Metrics are based on transactions; Not on measuring desired outcomes</li> <li>• Calculations for metrics are not defined – or definitions and calculations are vague or unclear</li> <li>• If metrics exist they are typically measuring functional silo activities and not the end to end desired outcomes</li> <li>• Data sources unreliable</li> <li>• Achievement of metrics mostly reported by the Supplier</li> <li>• Incentives – if any – are linked to activities, not outcomes</li> <li>• Supplier is not contractually responsible for achieving metrics</li> <li>• No attempt to flow down top level outcomes to sub Supplier base</li> <li>• Sub Supplier contracts are transaction based business models (i.e. payments for support based on resources consumed or activities performed by Supplier)</li> </ul>
Better: Elements of PBL	<ul style="list-style-type: none"> <li>• Narrow performance focus; some SLAs (service level agreement) metrics used but metrics are generally transactional and functional focused</li> <li>• Clearly defined metrics with formal written definitions and calculations</li> <li>• Often a proliferation of metrics – contract or Service Level Agreements often have more than 5 top level metrics</li> <li>• Metrics may or may not be aligned to the scope of the</li> </ul>

	<p>Suppliers work; however metrics are not tracked at the entire process level to best understand the performance across the end to end process</p> <ul style="list-style-type: none"> <li>• Data sources incomplete, inaccurate or untimely</li> <li>• Unclear linkages among expectations of performance, actual performance, incentives, and top-level outcomes.</li> <li>• Metrics accountability is aligned with the scope of Suppliers authority; Program Manager accountable for achievement of overall metrics not aligned with the scope of Suppliers authority.</li> <li>• Some attempt to align and flow down sub Supplier incentives to top level outcomes</li> </ul>
<p>Best Practice: Robust PBL</p>	<ul style="list-style-type: none"> <li>• Performance focused on a few (generally 5 or less) top level desired outcomes versus transaction or activity focused metrics</li> <li>• Metrics are clearly aligned to desired outcomes (ideally focused on achieving end Customer requirements)</li> <li>• Metrics are identified and tracked for the entire process to best understand the performance across the entire process (PBLs rely on both parties acting toward to the common desired outcomes and metrics should not be limited to supplier metrics)</li> <li>• Metrics accountability is aligned with the scope of Suppliers authority; Program manager remains accountable for the achievement of the overall metrics, but there is a lead supplier with a scope of authority sufficient to be held responsible for performance. No key metrics fall outside of the scope of the lead supplier.</li> <li>• Data sources are accurate and timely</li> <li>• Achievement of metrics validated by a mutually agreed Quality Assurance Surveillance Plan (QASP)</li> <li>• Clear understanding of financial impact of metrics across all levels; profits of the Supplier linked directly to achieving success in delivering performance outcomes.</li> <li>• Explicit linkage and flow down of Sub Supplier to top level outcomes</li> </ul>

Figure 21 Source: University of Tennessee

**What Should You Measure?**

With literally hundreds of different things that can be measured, how do you know which ones you should use for your PBL program? The Supply Chain Council lists over 100 metrics on their website that may help in getting started. DoD’s Product Support Manager Guidebook also provides some commonly used measures. But smart managers don’t just measure things because they can—they pick the factors that will have the biggest impact on improving a program’s performance.

When deciding what PBL metrics to focus on, the DoD Product Support Manager's Guidebook states that PBL metrics should support the top-level war fighter performance outcomes, be consistent with the support provider scope of responsibility, and have a direct linkage between performance and sustainment. Metrics are important to the DoD

**Rule of 5**

When determining top-level desired outcomes, we recommend what we call “the rule of 5,” a general guideline to keep the number of top-level metrics to 5 or fewer. The reason? Focus. Having too many metrics makes it hard for the support provider to focus on what is truly important.

Unfortunately, our research has discovered that many programs neither support the OSD recommended metrics nor the rule of 5. Our research has also revealed that programs that have had multiple “phases” or contracts have learned this lesson. A classic example is the C-17 program that reduced the number of metrics in their contract during each of the three contract renewal periods. Other programs, like the F22, had a strategy to baseline their program's performance with several metrics—but then migrated to fewer than 5 key performance metrics.

**Metrics are clearly aligned to desired outcomes**

It's not simply enough to have a few critical metrics. These metrics need to be focused on achieving the right things. It is tough to run a business without clear objectives. According to a Michigan State University study, three of the top four drivers of supply chain excellence are related to alignment of organization and to performance measurement.<sup>21</sup> As such, the second best practice in selecting PBL metrics is to ensure that the metrics are clearly aligned to the desired outcomes. As Yogi Berra puts it, “If you don't have a goal, any road will get you there.” Picking metrics that are not aligned to your desired outcomes will take you down the wrong road and you are likely to never meet your goal.

Ideally, the metrics that the government program office and the support provider select should be focused on achieving end customer requirements—and in the case of the government that typically means the warfighter.

We support the suggested metrics as recommended by the OSD. Our experience shows that in most PBL business arrangements, these metrics can be consistently applied to provide the right types of focus and ensure some of the key things that almost all warfighters need: weapons systems that are both available and reliable. However, in the case of subsystem PBL approaches, it is impossible to define the top-level outcomes as the specified metrics, because the scope does not include the weapons system. In these situations, care must be taken to align the selected metrics to the top-level outcomes.

One of the most critical elements of a PBL strategy is the tailoring of metrics to the operational role of the system, and ensuring the synchronization of the metrics with the scope of responsibility of the support provider. This is an important concept when

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<sup>21</sup> Miles Cook and Rob Tyndall, Lessons from the Leaders, Supply Chain Mgmt review. Nov/Dec 2001.

selecting metrics because it is important to understand that a support provider should not be held contractually liable for achieving performance against a metric over which they have no control. For example, an overall platform level metric of materiel availability (e.g., Operational Availability) is not appropriate when the support provider only controls the airframe and not the engine or other key subsystems. Nor should a support provider be held accountable for materiel availability for an entire subsystem when there is a workshare agreement with a depot for part of the work and the contractor does not have an enforceable contractual relationship with the depot for the work they perform.

While metrics need to align with the scope of responsibility of the support provider, we highly encourage tracking them at the entire process level to best understand overall performance—not just the processes that the supplier is performing. Only measuring performance that is in the scope of control of the support provider is analogous to only having some of the pieces of a puzzle.

***Data sources are accurate and timely***

Another best practice when selecting metrics is ensuring that data sources are accurate and timely. However, if a metric is the right metric but lacks accurate or timely data, the team might still want to use it. What is important is that contractual elements be put in place to allow the support provider and the government to develop accurate and timely data collection processes. For example, in early versions C17 cost-plus contracts, a phase was included where the team would ramp up processes and tools to allow them to get the data they needed to support their selected metrics.

***Achievement of metrics validated by a mutually agreed QASP***

It is also important to make sure that if a team selects specific metrics, they will be able to validate those metrics with a Quality Assurance Surveillance Plan (QASP). A QASP is a plan for assessing service provider performance. This plan must be mutually agreed to and often includes sampling or audits. The support provider is responsible for ensuring the quality of all work performed and the government is responsible for surveillance and monitoring. A typical QASP addresses:

- What gets measured, when, and by whom
- The processes in place to identify and address quality issues
- The responsible QA monitor

Quality Assurance (QA) is a continuous, background activity to determine if the quality of work performed meets or exceeds the performance standards. The goal is to *prevent* substandard work, rather than catch it after the fact. The rigor of the QA process should match the needs of the program; it should be a major element in program management and control, focusing on insight rather than oversight; and the Quality Assurance monitor should be someone who is independent of the work being measured.

Five QA approaches can be used to validate achievement of desired outcomes. These are:

- Random Sampling
- Periodic Sampling

- Trend Analysis
- Customer Feedback
- Third Party Audits

If the program does not have the resources to invest in the reporting management process, then it is better to select fewer metrics that can be validated.

***Clear understanding of financial impact of metrics***

The best practice approach is to tie the supplier's profits directly to delivering the desired performance. This can be done with various types of pricing models or incentives, described in detail in our full-length manual, *Performance-Based Logistics: A Contractor's Guide to Life Cycle Product Support*.

***Performance Reporting and Continuous Improvement Focus***

While most organizations agree performance measurement is important, performance reporting is vital to the success of a PBL agreement. Support providers need to understand their performance so they can proactively manage performance to make cost/profit tradeoffs; the government needs to understand the program's performance to determine if they are fulfilling their mission. One important area to measure is supply chain performance associated with key performance indicators such as material availability and costs. A Bain Consulting study found that many companies were flying blind when it came to supply chain performance, with only 25 percent of managers having what they would describe as full information about their supply chains. Further, 44 percent of respondents admit to having little or basic data.<sup>22</sup> A PBL program cannot be run well by gut feel. It is imperative that management adopt solid performance management practices.

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<sup>22</sup> Miles Cook and Rob Tyndall, Lessons from the Leaders, Supply Chain Mgmt review. Nov/Dec 2001.

A good PBL program will incorporate the best practices outlined in the table below.

Performance Reporting Continuous Improvement Focus	
Non-PBL: Traditional Approach	<ul style="list-style-type: none"> <li>• Little emphasis on a business model that drives continuous improvement</li> <li>• No formal continuous improvement program in place (e.g. Six Sigma, Lean, etc)</li> <li>• Metrics reports are reported on a regular basis – but not frequently; typical formal metrics reports reviews are monthly to quarterly with working level reviews monthly</li> <li>• Metrics reports are often used only by a few individuals</li> <li>• Metrics reporting is a mix of manually tracked information and data that is pulled from reports (e.g. Crystal Reports, Cognos, etc.)</li> <li>• Metrics reports are treated as reports and not “dashboards” to drive change</li> </ul>
Better: Elements of PBL	<ul style="list-style-type: none"> <li>• Supplier is afforded flexibility to plan and implement continuous product and process improvement, but the PBL business arrangement does not provide incentive to do so</li> <li>• A formal continuous improvement program in place (e.g., Six Sigma, Lean, etc) aimed at making improvements; however, improvements are not directly focused on the top level desired outcomes</li> <li>• Metrics reports are reported on a regular basis – but not frequently; typical formal metrics reports reviews are monthly to quarterly with working level reviews monthly</li> <li>• Metrics reports are often used only by a few individuals</li> <li>• Metrics reporting is a mix of manually tracked information and data that is pulled from reports (e.g. Crystal Reports, Cognos, etc.)</li> <li>• Metrics reports are treated as reports and not “dashboards” to drive change</li> </ul>
Best Practice: Robust PBL	<ul style="list-style-type: none"> <li>• Supplier is clearly incentivized and afforded the authority to plan for and implement continuous product and process improvement</li> <li>• A formal continuous improvement program in place (e.g. Six Sigma, Lean, etc) that effectively drives improvements against the top-level desired outcomes.</li> <li>• Continuous improvement plan supported by investment plan for improvements in process, product, and reliability</li> </ul>

	<ul style="list-style-type: none"> <li>• Metrics reports are reported on a regular basis at frequent intervals; typical formal metrics report reviews are monthly with working level reviews weekly or daily for critical operational metrics</li> <li>• Metrics reports are used as part of regular review meetings across all functions/all levels (e.g., linking strategy to shop floor metrics to ensure all parties are marching to the beat of one drum)</li> <li>• Metrics are used to drill down and change the process to get results</li> <li>• Metrics are posted and communicated companywide (e.g., intranet, etc); Reports seen and used by all levels to proactively manage performance</li> <li>• Fully automated dashboards with “Drill down” functionality for Root Cause Analysis</li> </ul>
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Figure 22 Source: University of Tennessee

***Regular review cycles***

In addition to a formal QASP/metrics reports required by the government, a good PBL program will have a defined reporting process including formal reviews (e.g., Monthly and/or Quarterly Business Reviews) with the PBL customer stakeholders. Often reporting is tossed over the fence to a contracting officer in charge of QA. We recommend that review cycles include all key stakeholders, including the program office, key “customer” representatives, and the representative from the contracting community. Likewise, the support provider should include a cross-functional mix of stakeholders in the review as well.

While a support provider should only be contractually liable to measure what is in the scope of their control, we have observed best practice programs that use cross-functional reviews to measure the end-to-end performance as part of the contract. Support providers that measure only their own internal performance according to the letter of their contracts are missing the big picture, and may not be helping their government customers to solve wider issues as a value-added service. The best practice approach puts together all the pieces of the puzzle (e.g., performance from all of those accountable for a piece of the process) to obtain a landscape view of total performance. Unfortunately, far too often, organizations have not put the pieces of the puzzle together into a formal Performance Management Program that provides a comprehensive view of the company and that drives improvements in a focused manner.

***Metrics reports are used as part of regular review meetings***

Best practice organizations develop performance and cost reports regularly and frequently to help them proactively manage their programs. At a minimum, a best practice PBL team should have internal, formal performance metrics reviews monthly with working level reviews weekly or daily for critical operational metrics. We encourage cross-functional reviews at all levels to link the desired outcomes/strategy to shop floor metrics, which ensures all parties are marching to the beat of one drum.

One Navy Admiral at the Navy Inventory Control Point captured this thought best in the following quote, “What interests my boss is very interesting to me. If it is measured and reviewed as part of a regularly scheduled review, people will pay attention to it.”

### ***Drill down capability***

Metrics should be used to drill down to find the root causes of performance and change the process to get results. In the case of PBL, it is imperative to make sure that the warfighter requirements are translated to “shop-floor” metrics where change can be made to improve the performance against the key performance metrics the support provider is being held accountable for. If you think about where the work gets done, it is not a stretch to realize that this is where the biggest impact in process improvement will most likely come from. You are far more likely to experience successful process improvement if the people doing the work feel like they have ownership and become stakeholders in improving the process.

### ***Metrics are posted and communicated to entire team***

Another best practice is posting metrics reports so that all team members can read them. Performance against the key performance indicators (KPIs) that the support provider is held liable for should be seen and used by all levels to proactively manage performance. Some examples of best practices we have witnessed include posting performance against KPIs on the company intranet and in the various “communications” areas the functional teams use. All key employees in a program need to understand the level of performance, especially when gaps in performance could prevent the program from achieving its mission.

### ***Fully automated dashboards***

A fully automated dashboard helps promote drill down functionality and root cause analysis. While root cause analysis can be done without an automated metrics reporting tool or dashboard, we are witnessing more and more support providers invest in automated solutions to help them collect, manage and report on the metrics.

One tool that is emerging among best practice PBL programs is a “scorecard” to show performance toward the achievement of goals. As a reporting tool, a scorecard can be an important part of an overall performance management system. The concept of scorecards has been around since the 1890s when French process engineers invented the concept with their “*Tableau de Bord*” (dashboard). However, few companies utilized the concept until Kaplan and Norton popularized the idea with their “Balanced Scorecard” in the 1990s. Since then, a host of technology companies have made automated scorecards a reality. Our research has revealed that some of the more progressive PBL organizations use automated dashboards to help them manage their business, with some programs even linking to key suppliers and the depot to mine data for tracking overall program performance.

### ***Continuous Improvement***

The philosophy of PBL is to develop a business model that promotes performance improvement—and that means going beyond the metrics themselves to having a solid performance management approach aimed at driving success to achieving the desired outcomes. It’s one thing to have good performance metrics—but if you don’t have a

culture to rigorously drive performance improvements it is likely your PBL will only get so-so results.

Continuous improvement philosophies have been around for decades. Walter Shewart, the founder of statistical process control (SPC) laid the foundations of continuous improvement in the 1920s—striving to make these techniques accessible to the first level operators.<sup>23</sup> Today continuous improvement programs take many forms, ranging from rigorous approaches, such as six sigma, to more practical approaches such as the VVA method outlined above.

Regardless of which continuous improvement philosophy your organization chooses, some best practices are common across all good programs. A good PBL will demonstrate the best practices outlined in the below table.

***Supplier is clearly incentivized and authorized to use continuous improvement***

The culture of an organization is a key element in determining the effectiveness of its performance management and continuous improvement program. Organizations that encourage ownership and facilitate change and improvement succeed, while companies that punish for non-performance or mistakes encourage an atmosphere of “tell management or the customer what they want to hear.” We recommend that all PBL programs encourage and give the support provider the authority to plan for and implement continuous product and process improvements.

Government program managers should recognize that a key step to a sound PBL program is the creation of a positive environment where change and improvement are rewarded. In some PBL programs we have observed, the PBL agreement incentivized the supplier to undertake formal continuous improvement or to bring proactive ideas that would improve performance or costs. Many best practice PBL programs have used incentives linked to cost savings. For example, the F-117 TSSP contract had a 50/50 cost share split. When Lockheed Martin realized cost savings for their customer from their continuous improvement efforts, they were rewarded with an incentive fee equal to 50% of the savings. While not all PBL programs can or should provide incentives for the supplier to have a continuous improvement process, all best practice PBL programs should encourage and give the support provider the authority to plan for and implement continuous product and process improvements.

***A formal continuous improvement program in place***

We recommend that all PBL support providers have some form of formal continuous improvement effort in place (e.g. six sigma, lean, etc) that effectively drives improvements against the top-level desired outcomes. For some organizations, detailed process improvements such as SPC or six sigma may be too complex or not applicable. For example, in a distribution center environment a typical six-sigma metric of 3.4 late lines per million lines scheduled may require years of shipments without a single error—a goal so ambitious that it may not be appropriate for the order

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<sup>23</sup> Arthur M Schneiderman, The 7 Steps of Process Management

fulfillment process.<sup>24</sup> In addition, the closer an organization gets to actually reaching such high goals, the amount of time and effort devoted to it multiplies exponentially.<sup>25</sup>

On the other hand, for organizations with advanced metrics systems in place, six sigma may be a beneficial and logical next step. While some may think that achieving six sigma may be like trying to reach the unreachable star, having such a goal can provide a target. The Air Force has adopted six sigma and lean approaches to great benefit.

#### ***Continuous improvement plan supported by investment plan***

Continuous improvement efforts should be supported with a formal process for investing in the improvements that are identified. There is nothing less motivating to employees than asking them to come up with improvements that never get implemented. However, we recognize that not all improvement opportunities can be implemented due to time and cost constraints. As such, we recommend that the continuous improvement plan be supported by a formal investment planning process, which allows the best ideas to be prioritized and funded on a regular basis so that the program can effectively realize the improvement potentials. Improvements could be anything with a positive ROI, for example, meeting targets in process or product efficiencies such as increased reliability.

#### ***Metrics Aligned to Suppliers***

As mentioned above, DoDD 5000.01 states that the PM shall work with the users to document performance and support requirements in performance agreements specifying objective outcomes, measures, resource commitments, and stakeholder responsibilities. Performance agreements can take many forms such as product support arrangements for implementation. These arrangements should take the form of performance based agreements, memorandums of agreements, memorandums of understanding, and partnering agreements or contractual agreements with product support integrators (PSIs) and product support providers (PSPs), as appropriate. DoD groups these and similar agreements into a broad category called “Product Support Arrangements.”

We recommend that Product Support Arrangements (PSA's) be used with all of the key organizations that are involved in a PBL program. They serve two primary purposes:

1. As a tool to work out the details of the business relationship(s) prior to getting into the rule-constrained contracting process
2. As a tool to capture and document agreements when a contract will not apply (for example, in a relationship with DLA or a depot)

If the government is the PSI, then this role of aligning the various entities becomes part of the government PM responsibilities. However, if the PSI is a contractor, the

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<sup>24</sup> Arthur M Schneiderman, Metrics for the Order Fulfillment Process (part 2), Journal of Cost Management, Fall 1996

<sup>25</sup> Business Finance, “In Search of Perfection with Six Sigma”, by Tad Leahy (Jan 2000)

role of aligning the various Product Support Providers (PSPs) falls on the shoulders of the contractor.

Our research has revealed that very few support providers attempt to cascade/flowdown top level outcomes to sub-suppliers and various PSPs. Typically the sub-supplier contracts are transaction-based business models (i.e., payments for support based on resources consumed or activities performed by the supplier) even though the support provider is being held accountable for achieving the overall performance/cost outcomes. Even worse is when a support provider has an agreement with another government agency (such as a depot partnership); but that agreement does not align the overall performance to the top level desired outcomes that the support provider is being held accountable for.

The table below outlines best practices in effectively aligning metrics with suppliers.

In short, PSAs help align the various key players in a PBL program. Performance management should not be treated as something nice to have: it is an essential component of a support provider’s management process and fundamental to the success of a PBL program. A good support provider should adopt better and best practices across all four of the performance management areas to succeed in their PBL programs.

### ***How the Tenets Build Strong PBL Programs***

The approach laid out above, using the 10 tenets together to form the 3 success factors that build strong PBL programs, describes a proven method for getting from traditional product support to robust PBL implementation. All successful organizations know the ins and outs of product support, but fewer know how to properly incorporate PBL mechanisms at the tactical level—the process that links the inputs and the outputs to arrive at the government’s objective of top-flight support at a lower cost. This paper provides some useful tools to help support providers move their programs to a higher level of PBL implementation, as depicted in the graphic below.

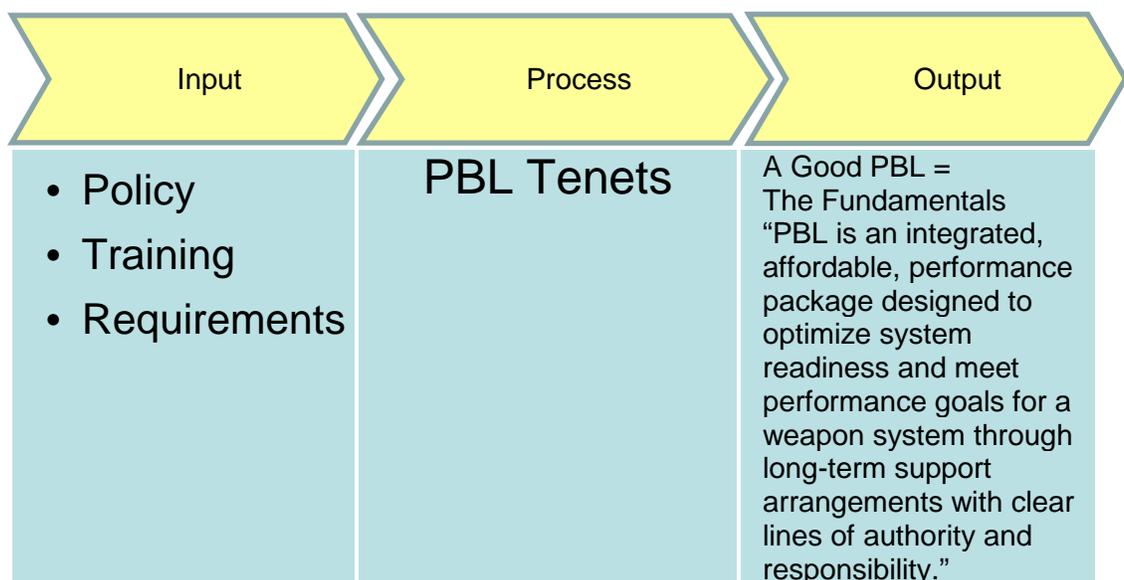


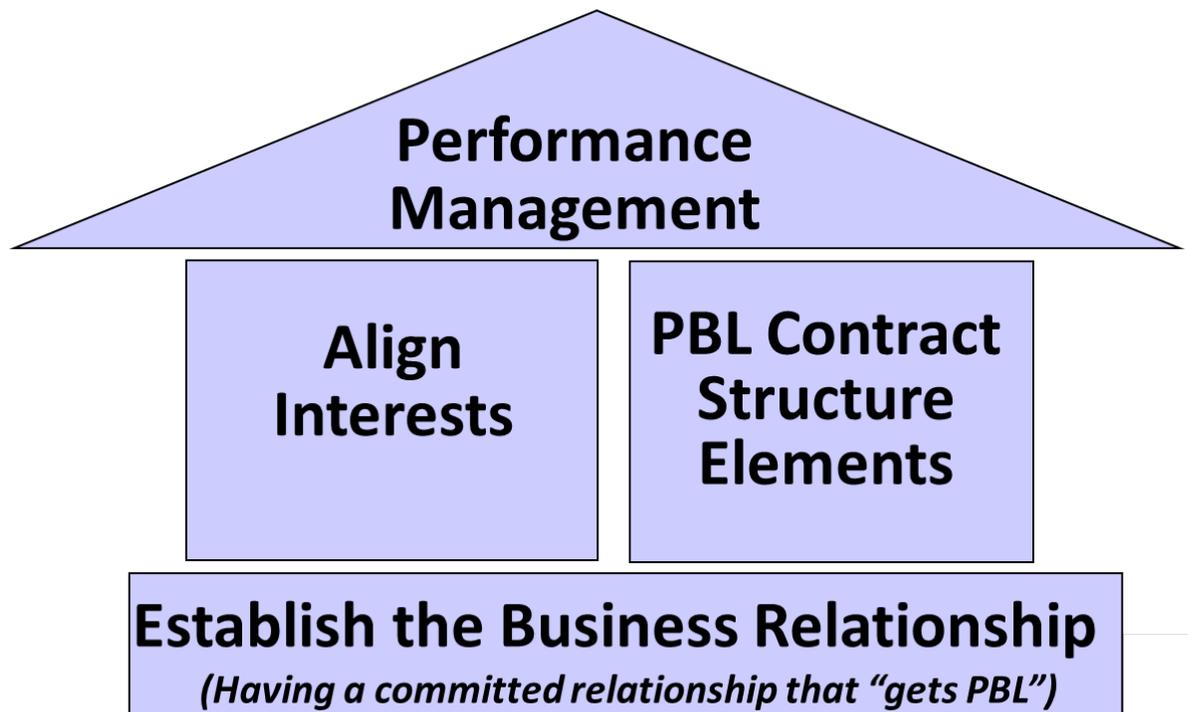
Figure 23 Source: UT Courseware

## Appendix: Consolidation of Tenets

This guide represents the first refresh of the original twenty tenets. After the initial release of the tenets, during follow-up conversations with programs, workshops, training sessions, and through continued research and practitioner interaction a recurring theme emerged. While widely supported and endorsed in the community, users also believed that the design of the original 20 tenets was overly complex, confusing and in some cases redundant.

Upon review, we found that the issues of redundancy and complexity could be addressed through realignment and consolidation. The objective was to simplify and reduce the 20 tenets to more manageable set to enable learning, understanding, adoption, and retention without impact to prior assessments or diluting the strength of the original set.

The review of Tenets was based on an assessment of value, complexity, and overlap. First, the original four organizing elements were consolidated and realigned into three. Figure A-1 reflects this review and consolidation. It was then possible to perform a detailed assessment of the twenty tenets with an eye on consolidation. The result was a reduction in the Tenets from twenty to ten. The discussion that follows describes the consolidation and realignment of the tenets in detail. Then, Figure A-2 depicts how the twenty evolved into the new structure of ten tenets.



**Performance Management**

**Contract  
Structure**

**Alignment**

*(A foundation that solidifies both internal  
and external relationships and frames the  
Foundation for the Project)*

Figure A-1 Source: Supply Chain Visions

***Consolidation 1: Champions and Stakeholder Analysis into  
“Organizational Support for PBL”***

Rationale: in the original version of the tenets, the need for support from above, in the form of leadership Champions was clearly articulated. In another tenet, development of support across the stakeholder community through rational stakeholder analysis was explored and defined. These are interlocking aspects of a single vector, creating “Organizational Support of PBL,” including other organizations within a product support ecosystem.

***Consolidation 2: PBL Center of Excellence and PBL Knowledge Base combined into “PBL Knowledge and Resources”***

Rationale: in the original version of the tenets, both the PBL Center of Excellence and PBL Knowledge Base addressed the issue of the availability of PBL implementation expertise to the program office. The Knowledge Base tenet dealt with PBL knowledge within the program office itself while PBL Center of Excellence addressed the issue at a higher organizational level which would actively collect knowledge from across a variety of programs and share that knowledge and expertise as necessary.

The two are closely related and may reasonably be combined into a single tenet, which addresses the existence of and/or acquisition of PBL knowledge and expertise at all organizational levels.

***Consolidation 3: Best Value Workload Allocation and Work Scope combined into “Workload Allocation and Scope”***

Rationale: in the original version of the tenets, it certainly made sense to have Best Value, Workload Allocation and Work Scope aligned in different areas, under Alignment of Interests and Contract Structure respectively. However, a reasonable case can be made for consolidation of the two. Any effort to effectively distribute workloads amongst candidate providers should not be completed without an eye toward the contractual implementation. In fact, ensuring that the contractual approach (work scope) is considered as the workload allocation strategy is developed may provide a clearer understanding amongst the providers and will facilitate good PBL implementation.

***Consolidation 4: Organizational Alignment and Win-Win Business Model into “Align Interests”.***

Rationale: in the original versions of the tenets, Organizational Alignment and Win-Win Business Model were treated as independent concepts. In fact, execution of a win-win strategy requires aligned organizations, because interests cannot be aligned if organizations are not in synch. So, in the consolidation, it makes sense to combine these two concepts into a single tenet.

***Consolidation 5: Appropriate Risk Management and Allocation and Off Ramps combined into “Appropriate Risk and Asset Management”.***

Rationale: in the original version of the tenets, the best practice description for Appropriate Risk Management and Allocation discussed “balancing of risk with a comprehensive mitigation strategy...” The establishment of Off Ramps can be viewed as part of an effective risk mitigation strategy. In fact, the DoD Risk Management Guide identifies off ramps as a critical component of a risk management program. Thus, it is reasonable to combine Risk Management with Off Ramps into a single tenet.

***Consolidation 6: Pricing Model, Incentives, and Contract Length combined into “Contracting Strategy”***

Rationale: This is a triple consolidation. While there may be a risk in combining too much into a single tenet, pricing model, incentives, and contract length represent primary components in the development of a PBL contracting strategy and could be reasonably considered as different facets of singular effort.

***Consolidation 7: Top Level Desired Outcomes and Continuous Improvement Focus combined into “Establish and Align Top Level Desired Outcomes”***

Rationale: There is a strong rationale for the combination of these two tenets. The alignment of metrics to the desired outcomes and the ability to use these outcomes to drive continuous improvement is a key enabler of performance improvement and cost reduction. Proper top-level outcomes are not a reporting requirement; rather, they represent the driving and aligning force for the PBL strategy.

***Consolidation 8: Metrics Aligned with Suppliers and Performance Reporting combined into “Metrics Reporting and Continuous Improvement Focus”***

Rationale: There is a mirror image of Consolidation 7. Just as Top level outcome metrics drive the organization, the performance results that flow down through the performance report, and ultimately the suppliers, serve as the touch points up, down, and across organizations to drive continuous improvement at all levels in support of the ultimate objectives.

The below figure summarizes the consolidations and resulting ten tenets.

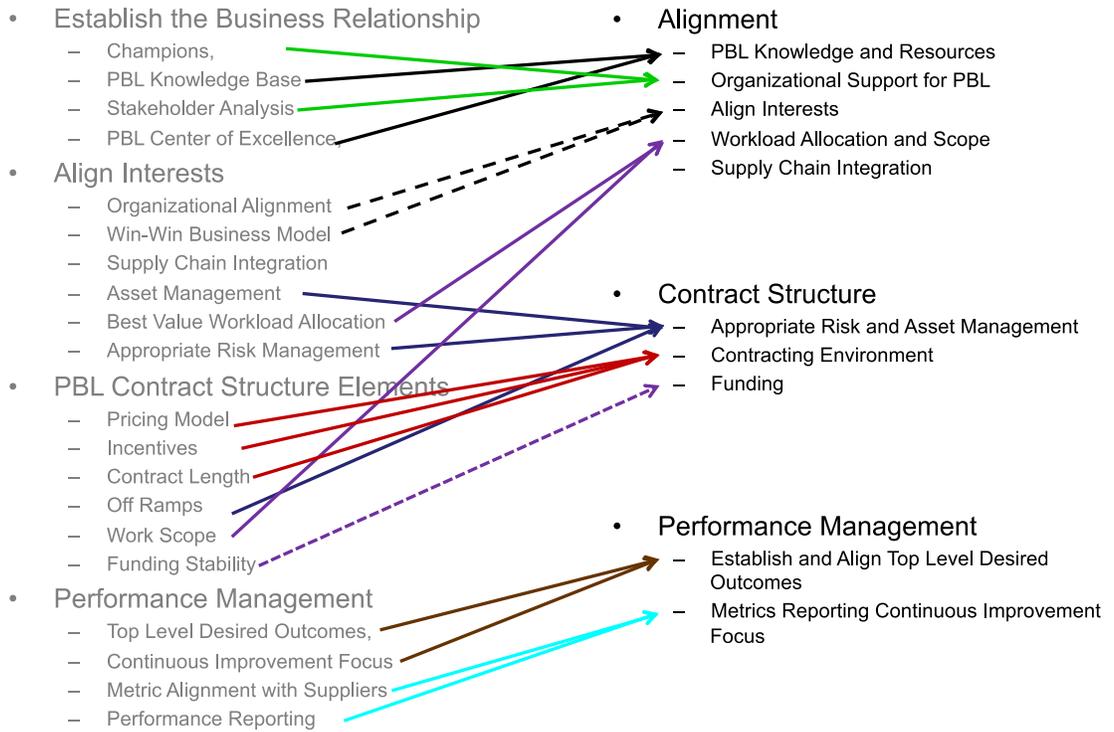


Figure A-2 Source: Supply Chain Visions