

Top Ten PBL Lessons Learned

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Performance-based logistics is a powerful tool to assist Defense Department logisticians in improving support activities. The preponderance of the weapon systems costs and—more important—the effectiveness of the warfighter are influenced more by logistics support than any other single factor. PBL has great potential, whether it is used to design new logistics support processes or to improve existing ones. As PBL initiatives become mainstream, it is appropriate to review the record and identify lessons learned. It is not our intent to exclude other lessons learned from this particular top-ten list; nor are the points listed in any priority order.

1. PBL is first and foremost a logistics study.

Costs are always relevant and need to be included in the business case analyses (BCAs). However, PBL is not a cost analysis by another name. If the question is, “What is the most cost effective means to perform a function?” (e.g., overhaul transmissions), then a cost analysis is the appropriate tool. If the question is, “How can we provide overhauled transmissions to maintenance soldiers in the manner that best meets their needs?” then logisticians are the best-qualified to answer. PBL is about how to improve logistics operations. Financial calculations alone will not provide the optimal solution.

While there is no standard BCA format, our experience demonstrates that the logistics or operational section should account for approximately 65 percent of the research and documentation, as well as the relative weighting considered in the recommendations. Risks should generally account for around 10 percent, and cost should be in the range of 25 percent of the study.

2. While the BCA sequence of events is standard, the effort varies greatly.

A good BCA is paramount. This is where the analysis is documented. Without a BCA, no one will be able to determine whether the PBL arrangement met the desired objectives. The sequence of events for the analyses and format of the BCA are now reasonably standardized (at least as much as they should be). However, the size of the BCA should vary, depending on the logistics function being assessed. For small processes that have an important but

narrow impact and may result in moderate cost savings, a BCA might cost \$8,000 and take three weeks to complete. At the other end of the spectrum, if one is evaluating the optimal means to provide all logistics support to a new, complex weapon system, it might cost \$800,000 and take two years to complete the BCA.

Consider the cost of aircraft turbine engines at \$750,000 each. If supply chain management practices can be implemented resulting in the Service’s having to own 100 fewer engines, the inventory savings will be \$75 million. This isn’t to suggest that saving money is the primary objective, but that the resources expended should be commensurate with the potential improvement.

3. Don’t turn over the leadership of the PBL or the BCA to outside consultants.

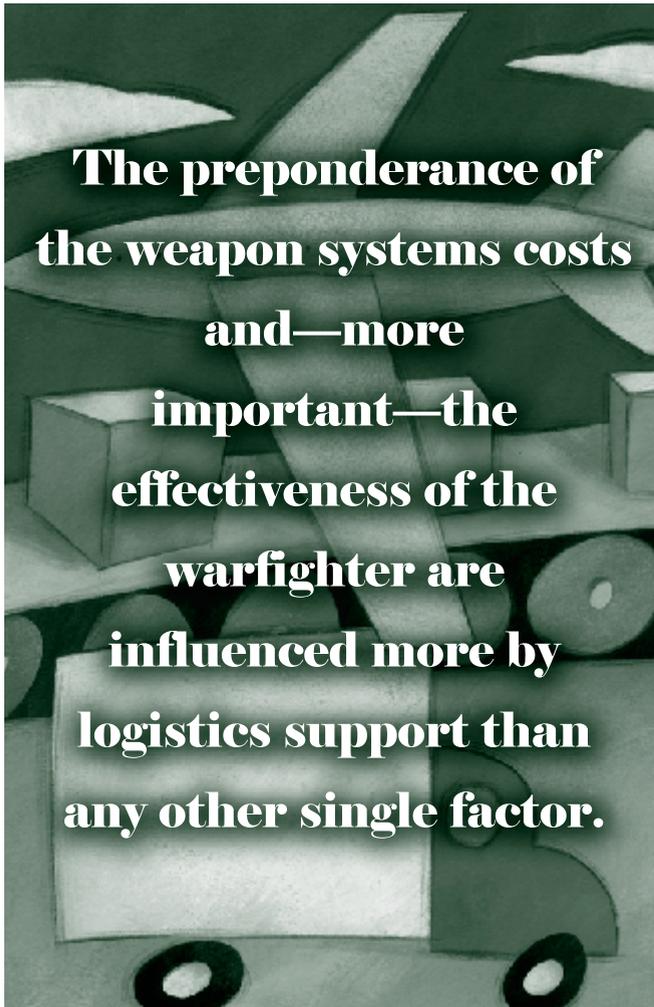
When the consultants are gone, the requirement to implement the recommendations will be with the government logisticians who have responsibility for the activity—and no one knows the needs and the constraints better than the long-time government logisticians. The likelihood of success increases dramatically if those who will be implementing the changes are the ones who developed the solution.

We don’t mean to suggest that PBL consultants can’t provide vital services. They can be especially valuable in structuring a plan; incorporating lessons learned; assisting in the difficult tasks of documenting best DoD and industry practices; providing precedents for desired policy waivers; developing complex funding and contractual means; organizing; facilitating brainstorming sessions; and providing other valuable assistance. But the consultants should be just that—consultants to government managers who have the authority and responsibility to provide the optimal logistics support to warfighters at reasonable costs.

4. Funding alternatives need to be understood and fully explained.

Funding is an aspect of DoD operations that presents challenges greater than those encountered in similar commercial process-improvement efforts. For example, a program office deals primarily with Army procurement funds. The limited Operations and Maintenance, Army (OMA) funds available are probably used for salaries. The Integrated Material Management Center manages the Army Working Capital Fund (AWCF). The Defense Logistics Agency and/or U.S. Transportation Command may have

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funding to perform aspects of the logistics support being evaluated.

These various types of funds (often referred to as “color of money”) present three challenges. One is that an agency is currently receiving these funds or, in the case of planned new systems, will receive them. Negotiations are difficult when requesting a portion of the funding in exchange for that agency’s not having to perform the function. A second problem is that these funds have different restrictions with respect to use and expiration limits. Rarely can the funds be comingled. A third challenge is that study participants have a tendency to overlook the significant savings that may accrue to an agency other than their own.

An error on some PBL initiatives has been the assumption of constant funding. Contracts have been issued that had to be modified because of funding decrements. PBL plans (whether contracts with commercial firms or performance-based agreements with government agencies) are still subject to the authority of congressional funding and DoD allocations. The best advice on these issues is simply to plan accordingly. It does little good to develop a solution that can’t be implemented because funding

wasn’t fully considered. Ensure that your PBL team includes someone knowledgeable in DoD funding and that this matter is fully addressed in the BCA.

5. Assembling an engaged Advisory Board is crucial to the success of large PBL studies.

If it is anticipated that implemented recommendations may disrupt existing practices, roles, funding, and/or personnel authorizations, then it is essential that a participatory advisory board be with the process from the beginning. The advisory board should be convened at least four times. First, the board should be briefed on the initial PBL plans, including the study scope, traditional difficulties, assumptions, alternatives, methodology, and preliminary evaluation factors. After the initial research phase, the advisory board should be presented with the findings and their impact on the planned BCA (e.g., the rationale for eliminating one of the alternatives). It is critical that the board agree with the planned BCA methodology before the resource-intensive data collection begins. This avoids the error of developing a recommendation and only then addressing objections to what should or should not have been included in the analyses. When the preliminary findings are known, the advisory board should again be briefed. If the recommendation is expected to be controversial, the advisory board members can begin to assemble plans to seek concurrence from other affected senior leaders. Finally, the advisory board should receive a briefing explaining in detail the BCA findings and recommendations.

6. New systems have more potential than fielded ones.

Nearly all DoD logisticians are familiar with the charts showing that the greatest costs of a weapon system are in the sustainment and that these sustainment costs are largely determined during the design phase. Consequently, the greatest opportunity to affect logistics support is during system design. The second window of opportunity is prior to initial fielding. It is during this period that logistics support functions such as overhaul and repair, training, publications, supply chain management, support equipment, and software support are planned. The absence of an existing logistics support process at this point results in four important opportunities: the ability to take a comprehensive look at the entire logistics support rather than a segmented one; a time when logisticians can step back and ask what the optimal support means could be; less resistance from existing workers who may be threatened by a loss of funding, jobs, or status; and little or no abandonment of existing fixed costs to perform the activity.

Once a system is fielded, the opportunities to implement substantial changes may be limited to reliability or cost-driven improvements. Developing an entirely new system to collect and distribute technical data or combining

the overhaul, repair, and movement of a component with tracing and tracking information to the soldier are very difficult at this stage, primarily because too much existing infrastructure would be adversely affected by such a change. This is not to suggest that PBL endeavors shouldn't be pursued for fielded systems—simply that the opportunities are generally more targeted. Even small PBL efforts can add great value to legacy programs by attacking the underlying causes of shortfalls in warfighter readiness.

7. Study participants typically know much more about government practices than commercial ones.

Government logistics practices have been in place for decades, and government logisticians have thoroughly learned them. Conversely, commercial practices have evolved, sometimes in dramatic ways. Wal-Mart's extraordinary supply chain management practices have given it an incomparable competitive advantage. FedEx, UPS, and DHL, through expedited shipping, have enabled firms not only to reduce their expensive inventories, but also to rid themselves of the whiplash effect that results in stock-outs and high inventory levels. Amazon.com provides buyers with immediate acknowledgement of the order and, within minutes, provides tracing and tracking information. Defense Logistics Agency personnel can explain why the procurement lead time is 88 days, but the real question is how Boeing and Caterpillar perform this same function in minutes? The lack of employee movement between commercial firms and DoD results in few government logisticians being familiar with current commercial logistics practices. The result is a combination of relying on outside consultants for this expertise and spending more time attending commercially oriented symposia and conferences.

8. Alternatives and the study methodology will often change as a consequence of initial research.

A key early step is to have the team identify the traditional difficulties, scope, assumptions, alternatives, study methodology, evaluation factors, and preliminary performance metrics. However, one should expect that initial research will alter some of these. It may be that research into the best commercial inventory management practices reveals that one of the alternatives needs to be changed or even eliminated. One may learn about best DoD or commercial practices that result in another alternative's being identified. It's not uncommon to discover that the planned method of collecting and evaluating as-is costs against the to-be costs of the alternatives won't work, primarily because the data don't exist or aren't accessible. Information that alters the BCA plan is the point of the initial research phase. Team members, as well as the leaders, should not only anticipate such changes but welcome them.

9. Collecting and documenting costs will likely be more difficult than expected.

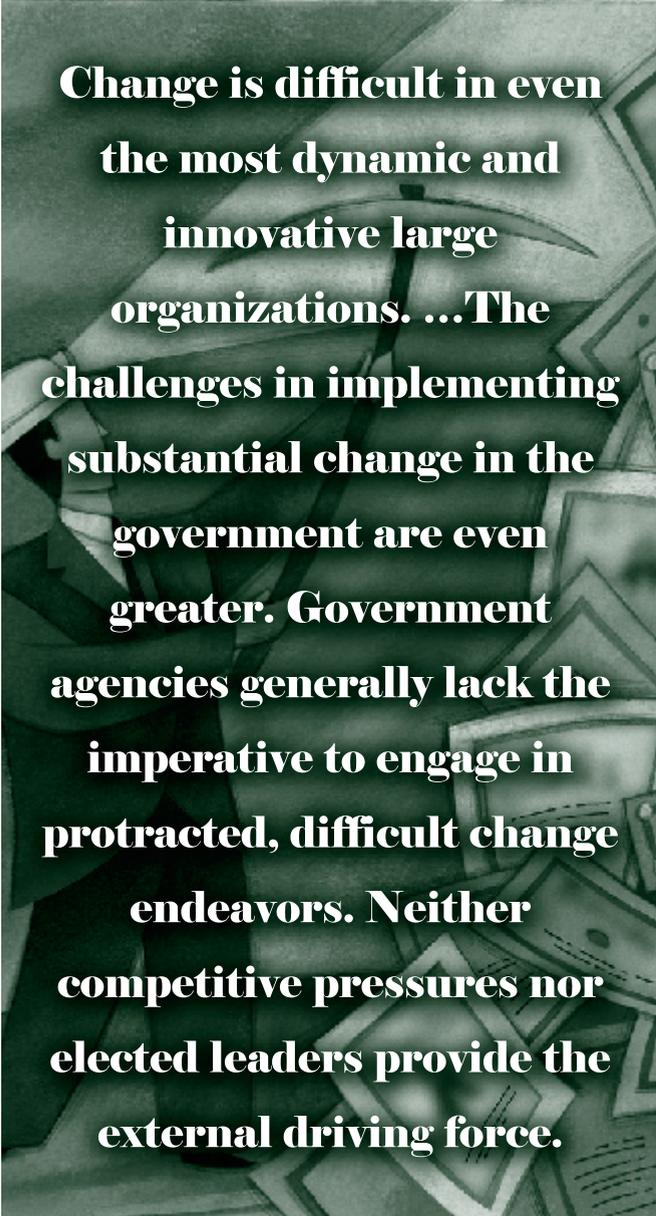
While the BCA is not primarily a cost analysis, this does not mean costs are irrelevant. A complete study will compare all the major features of each alternative to include the cost of each. Except for the most narrowly defined functions, that's easier said than done. In DoD, different organizations are responsible for buying the major components, repairs, stocking the items, overhauls, and transportation. Furthermore, the cost-accounting detail does not exist to provide the necessary data. Consequently, ascertaining the government as-is cost of managing, for example, the T56-A-14 engine is more difficult than determining the comparable support costs of the commercial PT6A-67D engine. When comparing alternatives, sunk costs are often a point of disagreement. One should ensure that the study methodology addresses which costs are included.

These difficulties are often mitigated, in part, by greater latitude in determining an acceptable margin of error in the cost estimates. As an example, if overhaul and repair labor hourly costs account for less than 30 percent of the total costs and less than 10 percent of the total weighting of evaluation factors, then the analysts should avoid spending a disproportionate amount of time and effort to determine a cost estimate with a \pm 90 percent confidence. Of course, these cost collection tradeoffs must be coordinated with the agency validating the cost portion of the BCA.

10. Change is hard.

Change is difficult in even the most dynamic and innovative large organizations. In his book *Mastering the Dynamics of Innovation*, James Utterback describes the resistance organizations encounter in abandoning established infrastructure. In addition to the business concerns, there are personal obstacles. If established processes are discarded and replaced with new ones, the value of individuals' expertise is diminished. Acknowledging that there's a better way to perform the function suggests that those performing the activity are not creative or effective.

The challenges in implementing substantial change in the government are even greater. In addition to the hurdles faced by commercial firms, government agencies generally lack the imperative to engage in protracted, difficult change endeavors. Neither competitive pressures nor elected leaders provide the external driving force. The time horizon for major change is often beyond the term of either the manager or his/her supervisor. Because responsibilities for functions are divided, individuals seek the best solution for their own areas rather than the enterprise as a whole. A common theme is protection of the institution. While there are some change-management and analytical techniques that are useful, the overall lesson learned is that substantial change does not occur



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without the active and consistent participation of a strong leader.

Adding it Up

PBL is a powerful tool that is welcomed by logisticians who want to improve the support provided to soldiers and, at the same time, serve the interests of taxpayers. Those who want to make a real difference are vigorous advocates; however, once engaged in PBL, one is reminded that even though the new tempered steel plow is much better than the old iron one, the ground remains hard and rocky.

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"Managing Risk" continued from page 40.

- ▲ 2nd Pass: Additional Risk process steps: Discuss the high-level risks for the organization (e.g., financial, safety, other)
- ▲ Assess risks
- ▲ Propose and evaluate mitigation options
- ▲ Select mitigation options
- Create a Future State Map; a 12-month-ahead vision for what the process should be
- Create action plans; integrate and prioritize risk-reduction items with other improvements
- Implement action plans
- Track improvements
- Repeat—schedule another analysis of this key process in 12 months, and spread the combined CPI/risk-management methodology throughout the organization.

Why Combine Risk Management and CPI?

There is synergy in combining risk management with CPI. There are also several similarities between risk management and CPI process steps that are worth noting; some of them are:

- Need for reflection or capturing lessons learned
- (Always) involving teams of subject matter experts
- Just-in-time training for the people implementing the changes
- Communication in many forms
- Good governance at the leadership level
- Great follow-through.

According to John Maxwell in his book *The 21 Irrefutable Laws of Leadership*, "everything rises and falls on leadership." This applies to risk management and CPI. As improvement efforts mature, workers see that the documented improvement philosophy does not change with new leaders and that this methodology is becoming part of the way people think and work every day.

Norman Vincent Peale said, "How you think about a problem is more important than the problem itself." Does your organization have a systematic process for improving processes (e.g., CPI)? Do your people all know and use that methodology? Where is your organization along the continuum of reactive to proactive in addressing risk? Does your organization see risk as another form of waste? And, one last question: Wouldn't it be nice if the CPI methodology used daily also reduced risk as well? This is the goal of combining risk management with CPI.

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