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ow often have you heard the expression that systems are "thrown over the fence" from acquisition to sustainment? Or that systems which transition from acquisition to sustainment often didn't adequately plan for and fund sustainment? As a result of this real or perceived scenario, the under secretary of Defense for acquisition, technology and logistics (USD(AT&L)) has been elevating the prominence of sustainment planning in requirements and acquisition, and instantiating it in policy documentation.

The import of sustainment planning and implementation is also reflected in the Sept. 14, 2010 USD(AT&L) memorandum, Better Buying Power: Guidance for Obtaining Greater Efficiency and Productivity in Defense Spending, which requires programs to establish an affordability target for a system's life cycle cost at Milestone A. It specifically states that in addition to a program's acquisition cost, the affordability calculation must include the system's operations and support (O&S) costs.

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The Nov. 3, 2010 USD(AT&L) memo, Implementation Directive for Better Buying Power—Obtaining Greater Efficiency and Productivity in Defense Spending, provides implementation detail that is more tactical and establishes the O&S cost baseline to be the "...average annual operating and support cost per unit." This requires a disciplined process to assess the new system's O&S cost for use in the "...quantitative analysis of the program's portfolio or mission area across the life cycle of all products in the portfolio or mission area."

The memo goes on to mandate that for new programs, specific adjustments to portfolio or mission areas will be identified to absorb the new program. This requires strong and detailed communication between the three communities of the DoD Decision Support System—the Joint Capabilities Integration and Requirements System (requirements), the Defense Acquisition System, and the Planning, Programming, Budgeting and Execution System.

For Milestone B, the memo changes the affordability target to an affordability requirement and further illuminates the O&S element; it also requires programs to document the affordability requirement in the Acquisition Decision Memorandum (ADM) and ensures linkage to the O&S cost element of the Acquisition Program Baseline (APB). While some may perceive this as a new requirement, it is not; rather, it builds on existing statutory language in Title X, Section 2435, baseline description, which specifically cites supportability as a parameter to be included in the baseline (e.g., acquisition program baseline). This has also long been reflected in the selected acquisition reports (SAR) within the report's O&S cost section.

Another cited element in the Better Buying Power memos that specifically affects sustainment is open systems architecture and the related acquisition of technical data rights. This is an integral element of the engineering tradeoff analysis that will be completed and presented at a program's Milestone B. A major purpose for the two elements is to ensure the government has the right information to compete future contracts (i.e., design documentation, interfaces, tools and information that can be shared with others). The data rights included in this element are not new, though arguably they may represent a poorly understood area, especially with respect to the sustainment aspects of technical data. Title X, Section 2320, Rights in Technical Data, has been in force for many years and instantiated in various Defense Federal Acquisition Regulation Supplement sections, and is dependent on multiple factors:

- Rights granted to the government depend on the nature of the data (form, fit, function, operations, maintenance, installation, and training)
- The source of funding for the item, process, or computer software (100 percent government, 100 percent private, mixed)

 Whether the government secured data rights through other agreements (cooperative research and development agreements)

Although planning and implementation of technical data rights is not the primary purpose of this article, data rights decisions made during acquisition do have far-reaching implications over the system's life cycle including sustainment activities. Specifically, the Better Buying Power memos require a business case analysis (BCA) that includes "...acquiring technical data rights to ensure sustained consideration of competition in the acquisition of weapon systems." By extension, the information in the initial BCA for technical data rights should inform the sustainment BCA completed to support Milestone B; the sustainment BCA was mandated in the same legislation and subsequent directive type memo that established the product support manager. As programs progress through the acquisition cycle, there exists a deliberate and effective review process that in the year since the BBP memos release, has now grown to include most or all of the major tenets of BBP. This includes the sustainment aspects of BBP which linked directly with ongoing sustainment governance and visibility improvements in the acquisition process.

The integrated process team (IPT) system has been one of the primary beneficiaries of BBP changes. From the lowest-level working IPT (WIPT), through the more senior Integrating IPT (IIPT) and overarching IPT (OIPT), up to the Defense Acquisition Board (DAB), BBP initiatives are now mandatory reporting elements for each program. All programs report on will cost/should cost implementation initiatives. Will cost/should cost is an analytical process that seeks to preclude cost overruns from exceeding the independent cost estimate (will cost) at which the program is funded, by conducting disciplined analysis of all government and contractor cost elements to arrive at a should-cost figure. Portfolio reviews for all systems within a given commodity group are mandatory briefing elements. Presentations on the development and status of affordability targets are now required.

While the primary focus of these particular BBP directives has been in the acquisition realm, there are a number of examples of programs applying them to sustainment, which is becoming the norm for programs coming before IPT or DAB meetings. The OHIO Class ballistic missile submarine replacement program is a prime example. The OHIO Replacement (OR) went through its Milestone A decision in late 2010, following a lengthy analysis of alternatives review. In the procession of meetings leading up to the DAB, it was evident that both the acquisition and sustainment cost projections were becoming unaffordable. The OR program became the first major program to have the BBP initiatives applied to it.

At the OR DAB, the USD(AT&L) cited the Navy's unit costs and O&S costs as too high and unaffordable. Using the new affordability target mandate for Milestone A, USD(AT&L) and the Navy worked to shed additive capabilities beyond the mini-

mum requirements for national security to lower the unit cost. Additionally, the Navy's assumptions on their average annual O&S cost per boat were declared unaffordable, and the Navy committed itself to a target that will match or improve upon current OHIO class O&S costs. Similarly, the littoral combat ship (LCS) program had a hard requirement for annual support costs set at their Milestone B decision in early 2011. These actions were merely the first examples of the enhanced amount of attention that sustainment and sustainment affordability now receive at programmatic reviews.

Another review forum that has seen increased sustainment focus and attention is the Defense Acquisition Executive Summary (DAES) meeting. All major defense acquisition programs (MDAPs) submit quarterly DAES reports, which are also assessed by OSD, and then a review is held monthly on select programs. The DAES process is used by DoD to monitor and assess the health of programs and identify and resolve risks before they become issues. Use of the DAES meeting as a forum for programmatic decision-making has been growing over the last 2 years to the point where DAES meetings have become equal to OIPTs in the amount of detail covered. Sustainment is not lacking for emphasis in this expansion.

Sustainment issues are primarily addressed on the Sustainment Quad Chart (Figure 1). The quad chart, which covers sustainment strategy, schedule, sustainment metrics performance and O&S costs, was mandated for all programmatic reviews in April 2010 by the USD(AT&L). It proved extremely popular in OSD management of sustainment issues, and its use was mandated for all DAES reviews. At the DAES meetings, sustainment performance and overall affordability are considered on par with all other programmatic decision

making. Affordability targets/requirements are tracked directly in the O&S cost portion of the quad chart, tying directly into the other mandatory BBP slides in the DAES brief. The product support manager (PSM) needs to be an activist in ensuring the chart reflects the current sustainment picture. It is an opportunity to highlight issues that require resolution or show off where a program has excelled in sustainment.

The acquisition phase has been the primary focus of the other initiatives of BBP. From mandatory reviews of should cost/will cost to portfolio views of similar systems, acquisition costs currently receive most of the attention. This should not be the case. The PSM should be actively seeking to find sustainment savings in a should-cost environment. When the CAPE gives their O&S cost projection in the independent cost estimate (ICE), the PSM

should treat this as a challenge to provide the required sustainability at a better cost relative to the ICE. The majority of expenditure for a program will be O&S dollars, so a true affordability focus cannot overlook sustainment costs.

Similarly, a true portfolio view of costs would look at O&S expenditures, not just the acquisition budget. In a period of flat or declining budgets, fielding a new system that costs more than what it replaces is probably not affordable. An excellent example of this type of concern is the Army's cost control efforts on the Ground Combat Vehicle ahead of the Milestone A decision in mid-2011. Emphasis on affordability across the life cycle led the Army to review and agree to an annual support cost per vehicle in consumables and repairables, compared to both what it was replacing, and the total expenditures in their heavy brigade portfolio.

Understanding the overall affordability now leads to better decision-making and a more supportable and affordable capability for the future warfighter. The Sustainment Quad Chart is the PSM's primary tool for highlighting the sustainment elements of a program, but a PSM's role does not end there. Capitalizing on the initiatives in the BBP memos, the PSM needs to understand how they affect their engagement in the program and its review process. While the largest potential savings are in the sustainment phase, an activist PSM should develop and present their program manager alternatives and analyses on the BBP tenets during the acquisition cycle. The current fiscal and political climate is ripe for aggressive promotion of affordability initiatives, with sustainment having an equal seat at the table for the first time.

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Figure 1. Sample Sustainment Quad Chart

