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HIMARS: A High Performance PBL Case Study

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Panel 3. Enhancing Acquisition Outcomes Through Performance-Based Contracting

Wednesday, May 14, 2014	
11:15 a.m. – 12:45 p.m.	**Chair: Stan Z. Soloway,** President and CEO, Professional Services Council **Discussant: David Lamm,** Professor Emeritus, Naval Postgraduate School ***HIMARS: A High Performance PBL Case Study*** William Lucyshyn, University of Maryland Jacques Gansler, University of Maryland ***Exploring Service Innovations in Performance Based Contracts in the Swedish Defence Sector: A Case Study of SK 60 Trainer*** Michael Dorn, The Swedish National Defence College Thomas Ekström, The Swedish National Defence College

HIMARS: A High Performance PBL Case Study[1]

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Before joining the Clinton administration, Dr. Gansler held a variety of positions in government and the private sector, including deputy assistant secretary of defense (material acquisition), assistant director of defense research and engineering (electronics), executive vice president at TASC, vice president of ITT, and engineering and management positions with Singer and Raytheon Corporations. [jgansler@umd.edu]

Abstract

The DoD is facing three significant challenges regarding weapon systems acquisition and support: dwindling budgets, aging and worn-out inventory, and high deployment levels. At the same time, rising operations and sustainment costs are consuming larger portions of the defense budget, while declining supply chain performance continues to negatively impact availability, putting the safety of the warfighter at risk.

This "perfect storm" of challenges is continuing to drive the DoD to look to adopt new strategies for weapon systems acquisition and sustainment that shrink total life cycle costs while improving system availability. Performance Based Logistics (PBL) is one such strategy.

The DoD formally established PBL in 2001 as a means of capturing the various management approaches that are effective within the private sector and to provide a bridge between system acquisition and logistics. PBL programs focus on the purchase of measurable performance outcomes (such as the availability of functioning weapon systems) through long-term support arrangements rather than the purchase of individual elements of

[1] This is a summary of the full report, which will be available in June 2014.

support—such as parts, repairs, and engineering support. PBL performance measures ultimately reflect the stated performance requirements for the warfighter.

PBL is intended to increase weapon system readiness through the creation of public–private partnerships that rely on cost-effective, integrated logistics chains.

In general terms, PBL aims to achieve five key military objectives:

- Operational Availability. The percentage of time that a weapon system is available for a mission or ability to sustain an operations tempo.
- Operational Reliability. The ability of a weapon system to meet mission success objectives (percentage of objectives met, by weapon system). Depending on the weapon system, mission objectives might include the completion of a successful sortie, tour, or launch; or the repeated successful demonstration of a specified capability.
- Cost per Unit Usage. The total operating costs divided by the appropriate unit of measurement for a given weapon system. Depending on the weapon system, the measurement unit could be flight hour, steaming hour, launch, miles driven, etc.
- Logistics Footprint. The government/contractor size or "presence" of logistics support required to deploy, sustain, and move a weapon system. Performance Metrics might include inventory/equipment, personnel, facilities, transportation assets, and/or real estate.
- Logistics Response Time. The period of time from logistics demand signal sent to satisfaction of that logistics demand. "Logistics demand" refers to systems, components, or resources (including labor) required for weapon system logistics support.

The Army began to deploy the High Mobility Artillery Rocket System (HIMARS), a wheeled, agile rocket and guided missile launcher in 2004, after successful completion of initial operational tests and evaluations. HIMARS incorporates self-loading, autonomous features, and has a fire controls system, electronics, and communications units that are interchangeable with its heavier, tracked predecessor, the multiple launch rocket system (MLRS). The system is designed to "engage and defeat artillery, air defense concentrations, trucks, light armor and personnel carriers, as well as support troop and supply concentrations" (Barnett, 2011). The system reached its initial operating capability in 2005.

Sustainment for the HIMARS system is provided by Lockheed Martin (the program is known as the Life Cycle Support System [LCSS]). The PBL agreement requires Lockheed Martin to provide inventory management, repair, overhaul, status monitoring, and database management. The Army retains control of project management, contract management, sustainment engineering, readiness monitoring, and program oversight.

In-theater maintenance work is performed by soldiers, with the assistance of Lockheed Martin employee field service representatives. Lockheed Martin's HIMARS supply chain management system is fully integrated with the standard Army system so that repair parts and other supplies can be quickly ordered and replaced.

During the initial four-year contract, the LCCS program exceeded all metrics for tracking performance and has earned incentives by delivering a 99% system status readiness. In addition, no launcher had been reported unavailable due to component problems. Upon fulfilling all PBL requirements for six consecutive calendar quarters, the

HIMARS received the Secretary of Defense PBL award (at the system level) in November 2006.

The program continued to exceed all of its performance metrics, and in December 2009, the system received the Secretary of Defense PBL award for the second time—the only program to receive the award twice.

The High Mobility Artillery Rocket System (HIMARS) exemplifies the characteristics of a successful PBL program. In this in-depth case study of the HIMARS PBL program, we have examined the program's history, structure, initial strategy, performance, and benefits, in addition to the challenges that the program faced in the developing stages. We believe that our analysis of the HIMARS program can be used to inform the design and attributes of future PBL programs.

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