

**HOLD UNTIL RELEASED BY THE  
HOUSE COMMITTEE  
ON ARMED SERVICES**

**STATEMENT BY**

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**BEFORE THE**

**PANEL ON DEFENSE ACQUISITION REFORM  
COMMITTEE ON ARMED SERVICES  
UNITED STATES HOUSE OF REPRESENTATIVES**

**DEPARTMENT OF DEFENSE  
OFFICE OF THE UNDER SECRETARY OF DEFENSE  
(ACQUISITION, TECHNOLOGY & LOGISTICS)**

**MEASURING PERFORMANCE:  
DEVELOPING GOOD ACQUISITION METRICS**

**MAY 19, 2009**

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Chairman Andrews and Members of the Panel:

My name is David Fitch. I have the pleasure of serving as a member of the senior leadership team at the Defense Acquisition University (DAU). I have held various leadership positions at the University, including nearly seven years as the Dean, Defense Systems Management College—School of Program Managers. Currently, I am the Director of the university's Leadership Learning Center of Excellence. I am a retired Navy Captain and I served in acquisition or acquisition related positions for approximately 18 years of my 30-year active duty career in the Navy. I held leadership positions including squadron command, command of a Navy laboratory, Deputy to the Assistant Commander of the Naval Air Systems Command, and five years as the major program manager for a successful international and joint Major Defense Acquisition Program (ACAT 1D). After retirement from the Navy and before returning to government service, I worked in the defense industry for three years.

I want to thank you for the opportunity to appear before the panel and to participate in today's discussion. I will address the general subject of acquisition performance metrics, and your specific questions about how to increase the realism of program baselines, making trades between affordability and performance, and how to assess the value of the systems that are delivered to our warfighters. Please recognize that these are my opinions based on over thirty

years in the business and do not necessarily reflect the views of the Defense Acquisition University or, the Department of Defense, or the Administration.

### **THE IMPORTANCE OF STRATEGIC CHOICE**

Measurement must encompass both “strategic” and “tactical” elements of acquisition. As emphasized in a recent Defense Science Board Report (Creating a DoD Strategic Acquisition Platform), what we call tactical acquisition—the management, execution and oversight of acquisition programs—is moot if we aren’t spending taxpayer dollars to buy the right capabilities—strategic choice.

With respect to strategic choice, it is as important to decide what we won’t buy, as well as what we will buy. The decision on how to allocate research & development and procurement dollars is a strategic issue. I believe one of the root causes of funding instability is “too many programs chasing too few dollars” -- this is a fundamental cause of overly optimistic cost estimates. The recently implemented Material Development Decision (MDD) process will bring the right players together. This will also increase collaboration and integration of the three major acquisition support systems known as: 1) requirements, 2) resources, and 3) acquisition. This should produce better informed and disciplined investment decisions. The MDD process has the potential to change the DOD culture and, in the future, to resource programs at higher confidence levels to lower programmatic risk.

Improving the requirements process is another high potential initiative focused on addressing systemic acquisition issues. Having a formal requirements, capabilities-focused definition process is not unique to DOD and we can learn important lessons by benchmarking best practices from industry. If you compare the DoD acquisition system with a commercial market example, such as the development of electronic games, there are marked similarities, as well as differences in practice. Notably, the year long process to get games on shelves for the December holiday season starts with a precise clarity of what will be developed—by when—and includes a corporate commitment to provide the resources required for the project. That level of clarity is the result of intense interaction between the people that define the capabilities of the game and the people that will develop and test the software before mass production starts.

We have recently deployed an initiative to improve the acquisition process by training of members of the Requirements Community on the fundamentals of acquisition. This initiative, supported by Congress, provides training to ensure requirements writers have a sufficient understanding of critical elements of acquisition, such as systems engineering and testing. The intent is straightforward and simple: to improve collaboration between the Department's acquisition and requirements community throughout the acquisition life cycle to better identify cost and performance trades at the right decision points to enhance opportunities for improved acquisition outcomes.

## **TACTICAL ACQUISITION METRICS**

The most effective tools and templates incorporate metrics—both quantitative and qualitative. The question was raised, "Are there metrics beyond cost and schedule performance that are of value?" Yes, and an ongoing example is the "Probability of Program Success" (POPS) metrics that are currently being deployed across the Services and other federal agencies such as the Department of Homeland Security.

The objective of POPS is to identify a system of program metrics to alert senior leaders to situations that might require their attention and intervention. Starting with a blank sheet of paper, a group of DAU faculty, experienced program managers and other functional experts, asked themselves a series of questions: What conditions facilitate the success of programs? What metrics are leading indicators of derailment? Which of these elements are within the control or influence of the program manager and which aren't? The resulting tool, POPS, is a structured process and display that describes and assesses key elements of planning, resourcing, execution and external influences that promote or negatively impact program success.

This initiative is still evolving and is being actively used within the Army, Air Force, Navy, Marine Corps, and Coast Guard. The tool has been incorporated into DAU program manager training. Metrics in and of themselves do not produce success. However, when timely, accurate, and transparent metrics are integrated

into the management and oversight processes, better decisions and timely risk mitigation can be achieved.

Among the information that goes into POPS are earned value, integrated master schedule, and technical performance metrics. These represent the key building blocks of system capability - cost, schedule and performance. Another important "Probability of Program Success" metric is the adequacy of personnel resources—numbers and competencies—in industry and government. A highly qualified and appropriately sized workforce is vital to achieving successful program outcomes.

In addition to teaching POPS in program manager courses, we also use them when we are providing performance support to acquisition organizations in helping them solve problems.

### **IMPROVING ACQUISITION PROGRAM BASELINES**

The question has been raised, "Can we ensure improved, realistic baselines?" We believe the answer is yes and there are several initiatives ongoing in the Department now. These include increased emphasis by the Department on assessing technology readiness and retiring risk early before starting major systems development. These will, in my opinion, result in better cost estimates, better acquisition strategies, and more realistic schedules—in short, better acquisition program baselines. In addition to retiring technical risk and producing realistic acquisition program baselines, the process of competitive

prototyping included in the new DoD 5000.02 and pending legislation increases the opportunity to appropriately address affordability and capability trades.

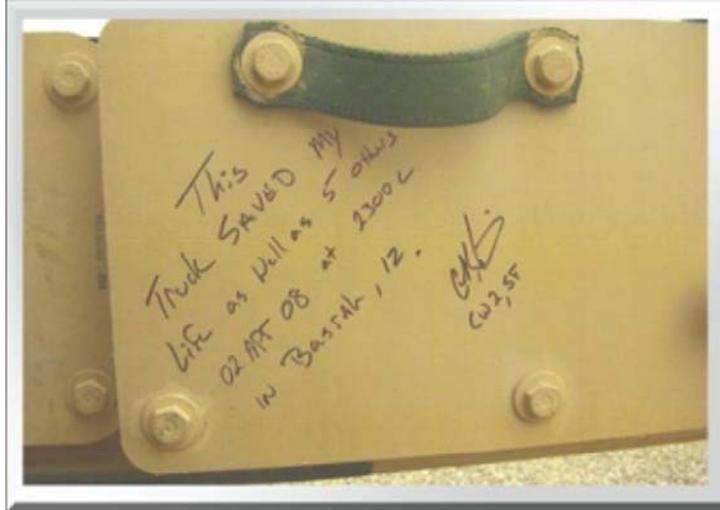
The competitive prototyping process allows program teams to better define technology maturity, risk, cost, and other programmatic challenges earlier.

Bottom line -- this allows the government to make better decisions with actual performance data of competing industry teams before making a down select for engineering and manufacturing development. No matter how thoughtfully we plan or discipline the execution of source selections, a paper-only selection process is never as good as hard data from competing contractors. This produces actual results – not just promises. Competitive prototyping requires industry to put sufficient talent on programs or they reduce their chance of being the winner. Program performance and success is in doing, not just paper proposals.

Another important change is related to conducting preliminary design reviews (PDRs) prior to Milestone B. The intent of this change, like competitive prototyping, is to give the government and industry much greater insight into derived requirements that may drive cost and schedule. Obtaining this knowledge sooner will result in better cost and schedule estimates for engineering and manufacturing development and more realistic acquisition program baselines.

### **DELIVERING OPERATIONAL CAPABILITIES**

The ultimate assessment of whether we have delivered value and the needed capability to the warfighter is feedback from the field.



*"This truck saved my life as well as 5 others 2 Apr 08 at 2300L in Basrah (Iraq)"*

Field feedback can come in different forms. The picture above is a great example of the value of the products delivered and the appreciation of the Soldiers, Sailors, Airmen, and Marines who use these products.

Before equipment is fielded, it undergoes rigorous levels of developmental and operational testing. Testing, whether at the component or system level, is the true indicator of a system's progress towards delivering the intended operational capability. The new DOD 5000.02 has increased the emphasis on oversight and analysis of developmental testing, to include earlier developmental testing and technology maturation.

## CONCLUSION

Mr. Chairman, thank you for the opportunity to participate in this important discussion.