



# PROGRAM SUPPORT REVIEWS

## Background

In 2004, the Under Secretary of Defense for Acquisition, Technology and Logistics (USD (AT&L)) established a policy to revitalize systems engineering throughout the Department of Defense (DoD). The policy states that AT&L and other Office of the Secretary of Defense (OSD) staff members will conduct program support reviews for programs where the USD (AT&L) is the Milestone Decision Authority. These assessments will identify and help resolve issues and risks and ultimately improve the probability of program success.

## Progress Report

To date, 55 Program Support Reviews (PSR) and 13 Assessments of Operational Test Readiness (AOTR) reviews have been conducted. A further 11 Systems Engineering/risk reviews in support of "Nunn-McCurdy certification" have also been completed, along with 18 technical and Service-led independent reviews. Since the policy was established 97 program support events have been conducted.

These reviews examined a number of areas including scheduling, requirements, integration/interoperability, software, maintainability, test and evaluation, and systems engineering.

Approved technical findings and recommendations are presented to AT&L leadership to support acquisition decisions, and to the Project Managers (PMs) for follow-on action. Findings are also considered as part of ongoing analysis to improve DoD policy and guidance.

## A New Approach

The Office of the Director, Systems and Software Engineering (SSE) now conducts cross-functional, multidisciplinary program support reviews to provide PMs with recommendations to reduce program risk.

These reviews enable programs to foster technical discipline at the early stages of acquisition, preventing major technical issues from affecting cost, schedule and performance in a system's development, demonstration or production phases.

A standard and consistent methodology was developed to help conduct reviews, and includes an extensive list of programmatic and technical factors that are used to build the review plan.

## Ensuring Program Success

Program support reviews examine a lengthy checklist of items in order to avoid major technical, logistical or funding problems in later phases of development. Emerging watch areas include:

### Schedule

- ★ Ensure schedule is realistic
- ★ Avoid compression and schedule-based activities

### Requirements

- ★ Early definition of tangible, measurable and testable requirements
- ★ Suppress appetite for new capability once requirements are defined (accommodate through planned/phased improvements or an incremental approach)

### Management

- ★ Establish clear roles and responsibilities, empower authority and instill good communications
- ★ Establish sound foundations through comprehensive Work Breakdown Structures, Integrated Master Plans and Integrated Master Schedules (WBS/IMP/IMS)
- ★ Apply Earned Value Management (EVM) and other metrics to plan, execute and control
- ★ Augment staff expertise (e.g. core competency groups), and work towards a common goal

### Systems Engineering

- ★ Institutionalize rigorous processes and perform comprehensive risk/issue analyses
- ★ Instill rigor in technical planning and allow for sufficient trade space
- ★ Right-size commercial off-the-shelf (COTS) integration activities

### Software

- ★ Institutionalize architecture, design and development discipline
- ★ Emphasize fidelity of estimates and ensure staffing/skill levels and organizational competency

### Test Planning

- ★ Ensure proper breadth, depth and sufficiency of resources/facilities
- ★ Avoid compression or incomplete developmental testing, which causes ineffective operational tests ("discovery" rather than "confirmation" events)

### Maintainability

- ★ Fully consider life cycle sustainment costs beyond initial fielding
- ★ Ensure focus on maturing reliability during development, not as a product improvement activity

### Acquisition Strategy

- ★ Reconcile competing budget priorities and ensure funds are properly phased
- ★ Avoid poor technical assumptions and right-size the effort against customer needs

