

Assessment of DOD Efforts to Implement WSARA Systems Engineering and Developmental Testing Requirements

**Presentation by
Cheryl Andrew
Acquisition & Sourcing Management Team
U.S. Government Accountability Office**

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Agenda

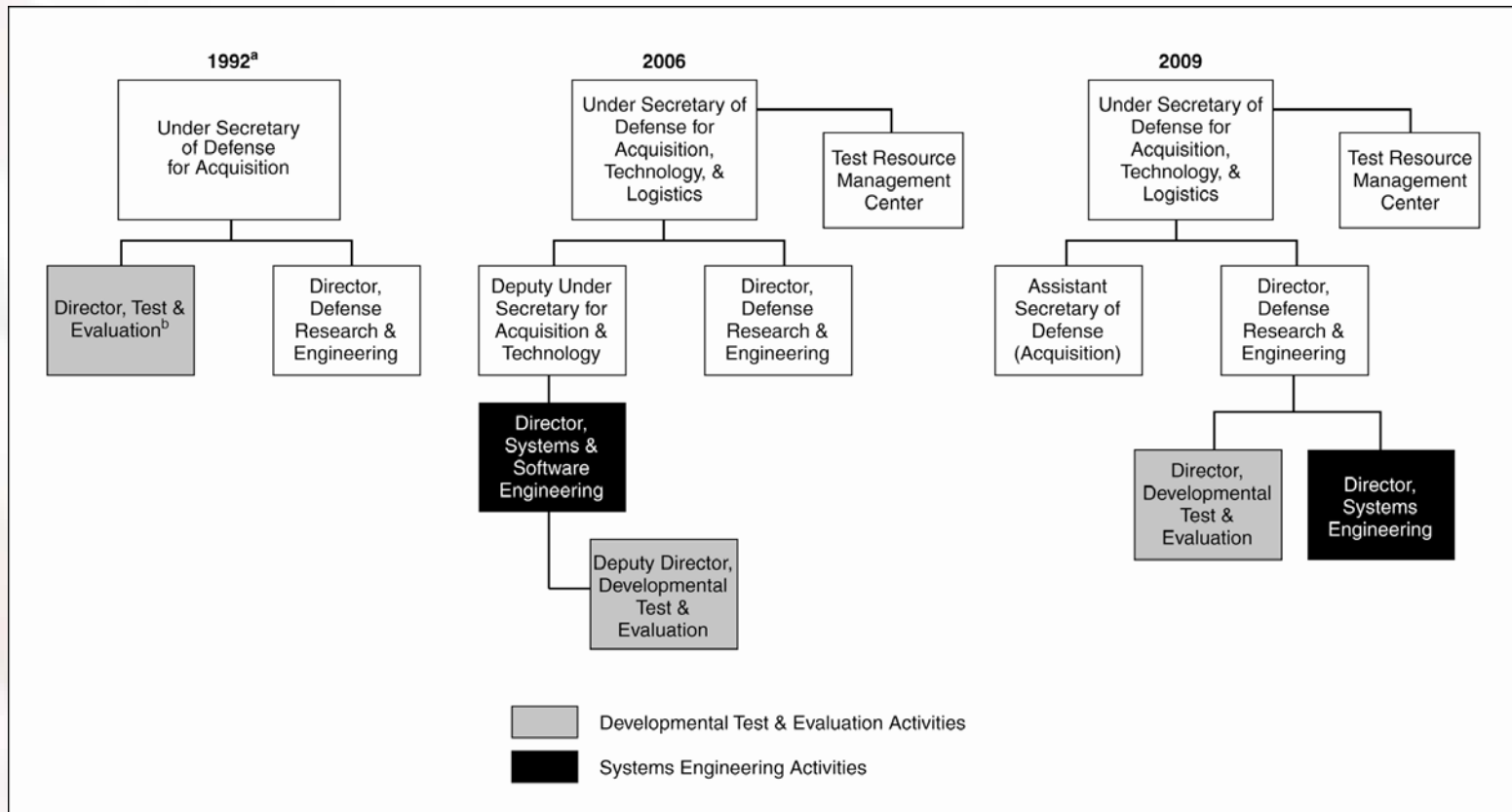
- Background
- GAO Study Objectives
- Study Findings
- Conclusions
- Recommendations



Background

- Defense Science Board- May 2008
 - Operational testing results showed a dramatic increase in the number of systems not meeting suitability requirements
 - Caused by several factors, including
 - Lack of disciplined systems engineering process
 - Lack of a robust reliability growth program
 - Weaknesses in developmental testing
 - Acquisition workforce reductions
 - Limited government oversight
 - Increased weapon system complexity
 - Increased reliance on contractors

Background



Source: GAO presentation of Defense Science Board and DOD information.



Background

- Weapon System Acquisition Reform Act - May 2009
 - Places greater emphasis on activities occurring early in weapon system development
 - Created Director, Developmental Test and Evaluation and Director, Systems Engineering and requires directors to
 - Approve systems engineering and developmental testing planning documents,
 - Review, assess, and report on programs
 - Advocate for their respective workforces
 - Develop new policies for the conduct of these activities
 - Services were required to report on their plans to ensure they have an adequate number of trained personnel



GAO Study Objectives

- Determine the status of DOD's implementation of systems engineering and developmental testing WSARA requirements
- Obtain the views of experts on the placement of the new directors' offices within the Office of the Secretary of Defense
- Identify military service challenges in enhancing systems engineering and developmental testing activities



WSARA Implementation Status

- Some requirements have been fully implemented
 - Established Directors' offices
- Implementation of other requirements has begun but requires a sustained effort
 - Monitor and review major acquisition programs
 - Review military service organizations and capabilities and identify needed changes
 - Prepare joint annual report
 - Develop policies and guidance

WSARA Implementation Status

- Two provisions, one of which is discretionary, have not been completed
 - Joint guidance on development of detailed, measurable performance criteria to include in acquisition plans
 - Unclear whether the guidance will include criteria such as technology maturity, design stability, manufacturing readiness, concurrency, prototyping, and adequacy of resources
 - Option to permit the Director of Developmental Test and Evaluation to serve as Director of Test Resource Management Center
 - Possible consolidation is still being examined



Views on the Placement of the New Systems Engineering and Developmental Testing Offices

Experts offer varying opinions

- Director, DDRE and some others support current placement
 - Director, DDRE recognizes challenges, but believes they can be overcome
 - Stretches the role of and mission of DDRE
 - Strengthens organization's role in acquisition
 - Plans for the offices to perform both assessment and advisory roles



Views on the Placement of the New Systems Engineering and Developmental Testing Offices

Most current and former systems engineering and testing officials oppose placement

- Appropriately placed under Assistant Secretary of Defense (Acquisition) or Principal Deputy
- Mission of DDRE too focused on technology development
- Believe cultural change in DDRE would have to take place
 - Otherwise- no clout or resources to affect change
 - Most believe this cultural change will not occur

Military Service Challenges

- Identifying current and future systems engineering and developmental testing workforce
 - Services indicated they have adequate workforces to perform these activities in November 2009 self assessments;
 - However, personnel data reported by the services may not be entirely accurate
 - Systems Engineering numbers may be overstated
 - Developmental Testing numbers do not identify people who are conducting their primary work in another area
 - Director, Developmental Test and Evaluation disagreed with services in first joint annual report to Congress (March 2010)
 - Unclear how many people are needed to perform full scope of systems engineering and developmental testing activities



Military Service Challenges

- Placing greater emphasis on and creating a consistent approach for development planning activities
- Relying too much on contractors for test and evaluation activities
 - Could lead to inaccurate, misleading test results
- Training the large influx of new government personnel expected to be hired over the next 5 years
- Ensuring an adequate workforce is in place in both the short- and long-term
- Funding the upgrade of test facilities and instrumentation
- Addressing morale and retention issues

Conclusions

- Efforts to implement Reform Act requirements are progressing, but it will take time before results can be evaluated
- Present placement of the two new offices may present several challenges
- Determining best place of new directors' offices should be based on results
 - A comprehensive set of performance criteria have yet to be developed
 - Even with these, in order to improve outcomes, program managers need to be held accountable
- Military services may need additional staff and training resources



Recommendations

- Develop a comprehensive set of performance criteria to assess program risk
- Track extent to which program offices are adopting recommendations
- Directors and services need to work together to determine the appropriate number of personnel needed
- Develop plans to address training needs
- Report to Congress on the status of these efforts in future joint annual reports

Future GAO Efforts

- More in-depth examination of workforce and test range challenges
- Impact of WSARA on
 - DOD's approach to pre-milestone B activities
 - weapon system outcomes



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Web site: <http://www.gao.gov/>

Contact

Chuck Young, Managing Director, Public Affairs, youngc1@gao.gov
(202) 512-4800, U.S. Government Accountability Office
441 G Street NW, Room 7149, Washington, D.C. 20548

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