

Synopsis and Impact of
Weapon Systems Acquisition
Reform Act of 2009

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The descriptions of the Weapon Systems Acquisition Reform Act of 2009 contained in this Paper were extracted in whole or in part from Senate Bill S.454 signed into law (Public Law No. 111-23) on May 22, 2009; or the Defense Acquisition University (DAU) presentation, "Weapon Systems Acquisition Reform Act of 2009," May 29, 2009. The opinions and conclusions expressed are solely those of the SM&A analysts and authors.

Synopsis and Impact of Weapon Systems Acquisition Reform Act of 2009

1 INTRODUCTION

A series of statements from both government and industry regarding defense spending has focused much attention on the defense acquisition community. For example, the GAO published a report in March 2009, “Defense Acquisitions: Assessments of Selected Weapon Programs,” which raised several issues and caught the attention of the U.S. Congress.

As a result, Senators Carl Levin (D-MI) and John McCain (R-AZ), the Chairman and Ranking Member of the Senate Armed Services Committee, introduced a bill that included extensive reform of Department of Defense (DoD) acquisition oversight and reporting.

Through a bipartisan effort, the bill was mirrored in the House of Representatives with only minor alterations. In both the Senate and the House, the legislation passed unopposed, and President Obama signed the bill into law on May 22, 2009.

The **Weapon Systems Acquisition Reform Act of 2009** establishes new Directorates within DoD providing an additional layer of oversight and specific points-of-contact reporting to Congress. It also defines new requirements that these Directorates must implement and enforce.

The law directs the DoD to increase internal regulation and external reporting in three key acquisition areas:

- Cost Estimation
- Systems Engineering
- Performance Assessment

It increases involvement of combatant commands to ensure the warfighters are involved in the development and acquisition of the systems they will use.

It introduces lifecycle competition beginning with competitive prototyping, requiring DoD to continually monitor programs for opportunities to re compete in order to reduce cost and/or increase performance.

It highlights Organizational Conflicts of Interest (OCI) by specifying certain situations that are to be monitored and avoided.

The Act is focused on the DoD Acquisition community, providing increased oversight from independent Directorates.

The Act also puts into law the main points of DoDI 5000.02, implementing the Operation of Defense Acquisition System.

2 SENATE SPONSORS

Remarks by Senators Levin and McCain included goals for the legislation that are not reflected in the Act, such as Fixed Price Contracts.

When introducing the legislation to the Senate, Senator Levin and Senator McCain emphasized the perceived waste and mismanagement highlighted in the “Defense Acquisitions: Assessments of Selected Weapon Program” report.

Senator Levin’s remarks included:



“DoD acquisition programs fail because the department continues to rely on unreasonable cost and schedule estimates and continues to establish unrealistic performance expectations.”

The Director of Independent Cost Assessment will “not be popular in the department,” will be “truly independent,” and will insist on assessments of “cost, schedule, and performance trade-offs.” The department wanted it deleted from the bill, because it’s “tough medicine.”

Senator McCain’s remarks included:



This is a “broken system” with “out of control costs on our weapons systems” meaning that “we cannot afford to take care of our obligations in two wars.”

“Fixed Cost Contracts” are going to be pushed in place of “Cost-Plus Contracts” to reduce government risk and cost.

Technical changes are “allowing perfect to be the enemy of good,” meaning that over-engineering must be curtailed.

We are going to have an “evolutionary knowledge-based acquisition process that beats out technology risk early in a program.”

The statements specified several important issues and policies including:

- Knowledge points in development programs
- Early program risk assessments
- Higher Technology Readiness Levels (TRL) at the outset of government involvement

We want “predictable programs” where “milestones are met, estimated costs equal actual costs, and performance is to contract specification.” This is a direct reference to the GAO report which concluded that several of DoD’s most prominent programs have become unpredictable in both cost and schedule.

3 SUPPORTING ORGANIZATIONS

Several organizations were specifically cited by Senator Levin in his introduction of the Bill on the Senate floor to establish non-partisan support for the law.

Senator Levin specifically cited three recognized organizations to demonstrate the level of non-partisan support for the legislation. The supporting organizations are:

Business Executives for National Security (BENS)

Business Executives for National Security (BENS), a nationwide, non-partisan organization, is the primary channel through which senior business executives help enhance the nation's security. BENS members use their business experience to deliver messages to decision makers. BENS was the primary industry contributor to this Reform Act.

Defense Science Board

The Defense Science Board (DSB), under the provisions of the Federal Advisory Committee Act of 1972, as amended, provides the Office of the Secretary of Defense and the Joint Chiefs of Staff independent advice and recommendations on scientific, technical, manufacturing, acquisition process, and other matters of special interest to the Department of Defense. The Defense Science Board (DSB) was not established to advise on individual Defense procurements, but instead to focus on the pressing and complex technology problems facing the Department of Defense. It provides recommendations in such areas as research, engineering, and manufacturing, and ensures the identification of new technologies and new applications of technology to strengthen national security.

U.S. Government Accountability Office (GAO)

The U.S. Government Accountability Office (GAO) is an independent, nonpartisan agency that works for Congress. Often called the “congressional watchdog,” GAO investigates how the federal government spends taxpayer dollars.



**Business Executives
for National Security**

4 OVERVIEW OF THE LEGISLATION

SECTIONS

TITLE I ACQUISITION

These sections create new Directorates to provide additional

Sec. 101.	Cost Assessment and Program Evaluation	Establishes the Director and Deputies of Cost Assessment and Program Evaluation and specifies their responsibilities, management and reporting chain
Sec. 102.	Directors of Developmental Test and Evaluation and Systems Engineering	Establishes the Director of Developmental Test and Evaluation and Systems Engineering and specifies that they will operate with “joint governance”
Sec. 103.	Performance Assessments and Root Cause Analyses for Major Defense Acquisition Programs	Designates Senior Official Responsibility for Performance Assessments and Root Cause Analyses for Major Defense Acquisition Programs, including responsibilities and limitations
Sec. 104.	Assessment of Technological Maturity of Critical Technologies of Major Defense Acquisition Programs by the Director of Defense Research and Engineering	Requires the Director of Defense Research and Engineering and the Director of Developmental Test and Evaluation, to assess the technological maturity of critical technologies
Sec. 105.	Role of the Commanders of the Combatant Commands in Identifying Joint Military Requirements	Installs new Directorates specifically to provide additional information for Congress

TITLE II ACQUISITION

These sections define new requirements

Sec. 201.	Consideration of Trade-offs Among Cost, Schedule, and Performance Objectives in Department of Defense Acquisition Programs	Requires completion of trade studies and inclusion of trade-off analysis in acquisition programs
Sec. 202.	Acquisition Strategies to Ensure Competition Throughout the Lifecycle of Major Defense Acquisition Programs	Requires and specifies measures to ensure competition throughout the lifecycle of major defense acquisition programs and the subcontract level (at such tier or tiers as may be determined) as a means to improve contractor performance
Sec. 203.	Prototyping Requirements for Major Defense Acquisition Programs	Requires that the acquisition strategy for each major defense acquisition program include prototyping requirements before Milestone B approval
Sec. 204.	Actions to Identify and Address Systemic Problems in Major Defense Acquisition Programs Prior to Milestone B Approval	Identifies specific actions designed to close any reporting requirements for any waivers
Sec. 205.	Additional Requirements for Certain Major Defense Acquisition Programs	Identifies specific requirements regarding how the Secretary of Defense reports to the Secretary of Defense
Sec. 206.	Critical Cost Growth in Major Defense Acquisition Programs	Outlines an extensive set of procedures, penalties, and consequences for Critical Cost Growth in Major Defense Acquisition Program (MDAP) experience
Sec. 207.	Organizational Conflicts of Interest in Major Defense Acquisition Programs	Details OCI situations to be avoided that, if violated, could result in a program

TITLE III ADDITIONAL ACQUISITION

These sections specify additional responsibilities of those not directly in the

Sec. 301.	Awards for Department of Defense Personnel for Excellence in the Acquisition of Products and Services	Establishes a program to provide cash bonuses to Department of Defense personnel in acquisition
Sec. 302.	Earned Value Management	Outlines changes to the existing earned value management system, including baselines, increase training, and explore alternative methods
Sec. 303.	Expansion of National Security Objectives of the National Technology and Industrial Base	Provides for assessment of impact on the skilled workforce of a major program
Sec. 304.	Comptroller General of the United States Reports on Costs and Financial Information Regarding Major Defense Acquisition Programs	Specifies the responsibilities of the Comptroller General of the United States

OVERVIEW

IMPACT

ON ORGANIZATION

ional oversight and a direct point of contact for Congress.	
Assessment and Program Evaluation; the law assigns in for each position	Establishes positions with increased authority – requires Senate confirmation; may increase impact of Cost Analysis Improvement Group (“CAIG”) estimate; will impact AoA thoroughness
and Evaluation, and the Director of Systems Engineering Guidance”	Codifies DT&E and SE organizations in Title 10 and requires additional reports to Congress; increases emphasis on Systems Engineering
Performance Assessments and Root Cause Analyses,	Requires, by law, analysis of procurement shortcomings in cost, schedule, or performance of the Program
Engineering, in consultation with the Director the technological maturity and integration risk	Potentially causes an update to the Technology Readiness Assessment (TRA) Deskbook; establishes required knowledge-based standards for the measurement of technological maturity and integration risk
Additional oversight and a single point of contact	Highlights the need for Joint Requirements Oversight Council (JROC) to include Combatant Commanders’ participation in the acquisition process

POSITION POLICY

s the Directorates must implement and enforce.	
es the role of the Joint Requirements Oversight Council	Highlights the importance of proper DoDI 5000.02 and JCIDS implementation of Trade Studies to meet cost, schedule and performance objectives during requirements development
etition, or the option of competition, at both the prime (appropriate) throughout the lifecycle of the program	Increases potential of government program offices dealing directly with subcontractors; at a minimum, will increase oversight of subcontract competition, selection, and make-buy decisions
major defense acquisition program provides for competitive	Requires competitive prototyping of systems or critical subsystems prior to MS B, unless waived by Milestone Decision Authority
loopholes in Sec. 203 (Prototyping Requirements), and	Imposes 25% threshold for cost and schedule assessments for MS A approval; increases application to legacy “pre MS B” programs
he Milestone Decision Authority handles waivers and	Highlights PDR and Post PDR assessment required by DoDI 5000.02 and requires Technology Readiness Assessment by DDR&E
es, reports, and responsibilities in the event a Major nces a significant cost growth	More rigorous unit cost reports; creates the triggers for Program Assessments Root Cause Analysis outlined in Sec. 103
lated, will eliminate a contractor from future work	Highlights the continued emphasis on eliminating organizational conflicts of interest in LSI, SETA, and company intradivision work

ACQUISITION PROVISIONS

the acquisition community and additional rewards possible for those who are.	
o individuals or teams to recognize excellent performance	Highlights the need to continue to recognize excellent performance and reward quality work within the acquisition workforce
management procedures designed to tighten reliance natives	Emphasizes increased importance of established and approved EVMS; increases scope of EV reports to Congress
workforce in the event of the termination	Highlights the importance of maintaining an industrial base; focuses on the critical design skills required for new development
General resulting from the Acquisition Reform Act	Adds scope to Comptroller responsibilities; requires report on growth of O&S costs; includes termination assessment of defense capability loss

5 INDUSTRY CHALLENGES AND IMPACTS

These changes to the acquisition process are embedded in the responsibilities of the Directorates. It will be the new Directorates and acquisition community who drive additional requirements and restrictions into the contractor community in order to ensure their compliance with the law.

The Acquisition Reform Act has significant impact on how industry does business with DoD. The defense acquisition community is facing increased requirements, scrutiny, and pressure, and will pass those conditions on to the contractor community. Requirements of the new Directorates will generate more contractor effort and emphasis on supporting the customers' reporting and decision-making in a number of areas, to include: systems engineering, EVMS, technological readiness, maturity of solutions, integration risk, early proof by developmental testing and evaluation, and cost containment.

Contractors will be required to change business practices in several areas:

- Initial Cost and Schedule Accuracy
- Cost Overrun Penalties
- Lifecycle Competition
- Organizational Conflict of Interest
- Trade Studies
- Systems Engineering

Initial Cost and Schedule Accuracy. Several sections of the new Act emphasize lifecycle management and sustainability costs, requiring better initial cost and schedule estimating based on Initial Capabilities Documents (ICDs). The customer will look to the contractor to provide these estimates and support (Sec. 101, 302). This increases emphasis on EVMS suitability of baseline descriptions for performance assessment (Sec. 302). The coordination of the initial EVMS schedules and resourcing with initial cost estimates has become critical. The Act requires increased use of "confidence levels" in evaluation of cost estimates (Sec. 101) where any level below an 80% threshold requires justification.

Cost Overrun Penalties. The Nunn-McCurdy Act, made permanent in 1983, specifically addresses the perceived run-away overspending in Defense by defining how much a program could be allowed to overrun its initial estimates before punitive actions are taken. This Act both re-emphasizes and restricts those guidelines (Sec. 204). Contractors experiencing cost and schedule problems will face requirements for corrective action, or possible termination.

Lifecycle Competition. This Act increases the opportunities for competition throughout a program. Contractors could potentially win back a program (or a portion of it), or lose a program previously won based on lack of progress or increased cost, as determined by the government's increased level of oversight targeting re-competition (Sec. 202). Specific measures to increase competition are:

- Competitive prototyping
- Dual-sourcing
- Unbundling of contracts
- Funding of next-generation prototype systems or subsystems
- Use of modular, open architectures to enable competition for upgrades
- Use of build-to-print approaches to enable production through multiple sources

Lifecycle Competition (continued)

- Acquisition of complete technical data packages
- Periodic competitions for subsystem upgrades
- Licensing of additional suppliers
- Periodic system or program reviews to address long-term competitive effects of program decisions
- Cost impact of logistics and sustainment

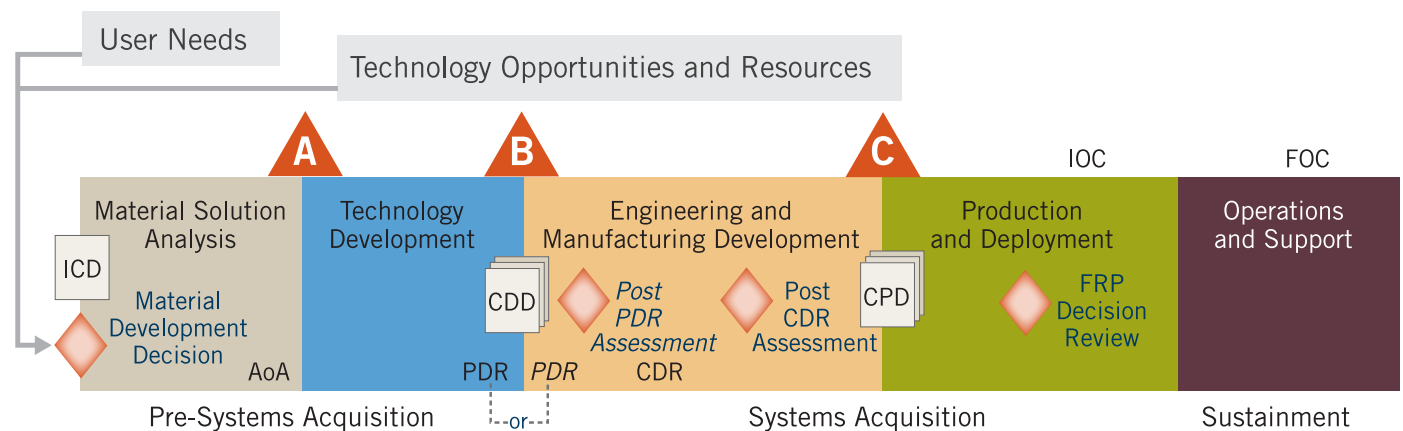
Organizational Conflict of Interest. The Reform Act includes several enhanced OCI provisions (Sec. 207) which increase customer requirements to monitor teaming arrangements, development of software requirements, and initial program plans. The OCI provisions include:

- Restrictions on being the Systems Engineering and Technical Assistance (SETA) contractor if you are a company competing for the production, thus reducing the chance of the design being unfairly targeted for a specific company’s capabilities
- Restrictions on a prime contractor awarding software integration contracts to daughter business units to avoid compromise of proprietary software being designated in the system design
- A requirement to ensure that DoD receives advice on systems architecture and systems engineering matters on major defense acquisition programs from federally funded research and development centers or other sources independent of the prime contractor

Trade Studies. Trade-offs among cost, schedule, and performance are emphasized (Sec. 201). Senator McCain’s statement, “allowing perfect to be the enemy of good,” reinforces to the DoD acquisition community that trade studies must be completed and included in any evaluation of a development program. This reduces the pursuit for “the best of the best” when a lesser solution will suffice.

Systems Engineering. Emphasis on “Systems Engineering” principles and best practices (Sec. 102) includes the requirement to “monitor and review the systems engineering and development planning activities of the major defense acquisition programs.” This includes:

- A requirement for the Directorate to review and approve Systems Engineering Management Plans generated by the contractor
- Increased Developmental Test and Evaluation (DTE) is identified and coordinated between Directorates, the customer, and the contractor
- Emphasis on “technological maturity and integration risk of critical technologies” (Sec. 104), as proven through the DTE



6 HOW SM&A CAN HELP

Initial Cost and Schedule Accuracy. Increased emphasis on initial cost and schedule estimates backed by analyses of confidence levels requires a disciplined and proven approach. Our systems engineering based capture and proposal solutions utilize our industry recognized program planning and controls experience to provide clients with well-supported and executable programs.

Avoiding Cost Overrun Penalties. Contractors experiencing cost and schedule problems as detailed in the GAO report will face demands for corrective action, or possible termination. We support our clients in developing real-time status and actionable plans to present to the government during critical reviews and audits. Our EVMS experts identify our client's cost and schedule issues early and accurately, helping to keep programs sold.

Lifecycle Competition. Increased competition throughout a program's lifecycle will be the norm. Our competition management solutions address these specific measures to optimize our clients' ability to win re-competitions through all phases of a program.

Organizational Conflict of Interest. Enhanced OCI provisions in the law increase customer, and therefore contractor, requirements to monitor teaming arrangements, development of software requirements, and initial program plans. With increased focus on OCI, our clients and their customers benefit from our win strategy support as we create winning team structures that eliminate OCI concerns.

Trade Studies. The Act emphasizes to the DoD acquisition community that cost, schedule, and performance trade-off studies must be completed and included in any evaluation of a development program. Our technical management associates provide our clients with an objective, rigorous systems engineering-based analysis of their solutions to achieve the optimal balance between cost, schedule, and performance.

Systems Engineering. The Defense Science Board reported in May 2008 that "the single most important step necessary" to address high rates of failure on defense acquisition programs is "a viable systems engineering strategy from the beginning." Our technical management associates average more than 25 years experience creating customer-accepted Systems Engineering Management Plans and providing thought leadership around DTE of critical technologies to ensure a sound strategy from the start.



7 CONCLUSION

The Department of Defense acquisition process has seen significant changes over the past year. The release of DoDI 5000.02 in December 2008 along with the Weapon Systems Acquisition Reform Act of 2009 signals a strong desire for additional oversight and review. As costs involved in research and manufacture of defense systems increase, the decisions about where to apply limited Defense resources will get more difficult, and consequently attract closer examination. Industry should expect additional scrutiny and more changes ahead in the acquisition environment.

SM&A offers this document as a resource to help support our Clients during this changing acquisition climate. Our experienced associates are knowledgeable in these changes, and stand ready to help our Clients succeed at every stage of Defense program lifecycles, from opportunity identification through execution. For further information, call us at (949) 975-1550, or visit our Web site, www.smawins.com.



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*Carl Levin
Senator Michigan*

We are going to have an “evolutionary knowledge-based acquisition process that beats out technology risk early in a program.”

*John McCain
Senator Arizona*

A Winning Partnership



4695 MacArthur Court, 8th Floor, Newport Beach, CA 92660
O 949 975 1550 F 949 975 1624
WWW.SMAWINS.COM