A Report by the Assessment Panel of the

Defense Acquisition Performance Assessment Project

For the Deputy Secretary of Defense

Defense Acquisition Performance Assessment

Report

January 2006

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Defense Acquisition Performance Assessment Project

The Honorable Gordon England

You assigned us a difficult and complex task – and we believe that we have met your challenge. After six months and much public and private deliberation, we reached complete consensus about the performance assessments and the performance improvements that are reflected in this report. I want to make sure you understand that we are not suggesting that these recommendations will result in immediate budget savings. This effort was focused on making better decisions and benefiting from getting things done quicker and more efficiently.

Although our Acquisition System has produced the most effective weapon systems in the world, leadership periodically loses confidence in its efficiency. Multiple studies and improvements to the Acquisition System have been proposed – all with varying degrees of success. Our approach was broader than most of these studies. We addressed the "big A" Acquisition System because it includes all the management systems that DoD uses not only the narrow processes traditionally thought of as acquisition The problems DoD faces are deeply imbedded in the "big A" management systems not just the "little a" processes. We concluded these processes must be stable for incremental change to be effective -- they are not.

We propose sweeping changes to dramatically improve the Department's ability to stabilize and integrate key elements of the Acquisition System–organization, workforce, budget, requirements, acquisition and industry. We also recognize the potential for unintended consequences of such changes. Therefore, we recommend "strategic gaming" during the implementation process. A valuable library of materials and data bases, that have resulted from our review, will be available to the Acquisition Community through the Defense Acquisition University.

I am grateful to my colleagues on the Panel and our very competent staff for their expertise and their commitment to this project. With the submission of this report we will officially stand down. However, we are ready individually, as well as collectively, to brief and explain our report in any forum you deem necessary.

Thank you for the opportunity to serve and contribute to this important effort.

Sincerely,

Ronald T. Kadish
Chairman

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DEPUTY SECRETARY OF DEFENSE
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WASHINGTON, DC 20301-1010

JUN -- 7 2005

MEMORANDUM FOR SECRETARIES OF THE MILITARY DEPARTMENTS
CHAIRMAN OF THE JOINT CHIEFS OF STAFF
UNDER SECRETARIES OF DEFENSE
COMMANDERS OF THE COMBATANT COMMANDS
ASSISTANT SECRETARIES OF DEFENSE
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DIRECTOR, NET ASSESSMENT
DIRECTOR, FORCE TRANSFORMATION
DIRECTORS OF THE DEFENSE AGENCIES
DIRECTORS OF THE DOD FIELD ACTIVITIES

SUBJECT: Acquisition Action Plan

There is a growing and deep concern within the Congress and within the Department of Defense (DoD) Leadership Team about the DoD acquisition processes. Many programs continue to increase in cost and schedule even after multiple studies and recommendations that span the past 15 years. In addition, the DoD Inspector General has recently raised various acquisition management shortcomings.

By this memo, I am authorizing an integrated acquisition assessment to consider every aspect of acquisition, including requirements, organization, legal foundations (like Goldwater-Nichols), decision methodology, oversight, checks and balances – every aspect. The output of this effort, provided to me through the Under Secretary of Defense (Acquisition, Technology and Logistics), will be a recommended acquisition structure and processes with clear alignment of responsibility, authority and accountability. Simplicity is desirable.

This effort will be sponsored by the USAF with Dave Patterson as lead. The first action will be to establish a baseline of recommendations from earlier studies and to integrate all other acquisition reform activities into a single coordinated roadmap. This roadmap will determine the schedule to implementation and will be delivered to the DoD Leadership team within 30 days.

Restructuring acquisition is critical and essential. Accordingly, kindly cooperate fully with Dave in this assignment. Dave Patterson can be reached at (703) 695-8777. Thanks.

Gordon England
Acting Deputy Secretary of Defense

OSD 10870-05

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Foreword

On the surface, defense acquisition appears to have little in common with commercial acquisition. For starters, defense acquisition occurs in a monopsony. Further, it is replete with mini-monopolies. (From how many places could one have purchased, say, an additional B-2?) Defense acquisition also operates in a governmental system that intentionally traded optimal efficiency for strong checks and balances – such as those implicit in separating the Legislative and Administrative branches. Nonetheless, there are certain fundamentals of sound management which are applicable virtually everywhere, including in the defense acquisition process. They are just much more difficult to apply in government, where the stakes are higher, authority less hierarchical, and the spotlight much brighter.

The problems in defense acquisition – and there are many – tend to be widely misunderstood. Outright dishonesty, for example, is extraordinarily rare...but when it occurs its impact is particularly devastating. Over the years, toilet seats, coffee pots and screwdrivers have also received an abundance of ink, but they are not the problem either.

A number of studies of the defense acquisition process have been conducted since the genre was born with the Hoover study in 1949. There is remarkable agreement as to the problems which need to be addressed. The difficulty resides in having the will to do anything about those problems.

Gil Fitzhugh's study in 1966 observed that a fundamental problem is that everyone is responsible for everything and no one is responsible for anything. Dick DeLauer's study in the 1970's concluded that the problem was "turbulence" – perpetually changing budgets, schedules, requirements and people. Dave Packard's somewhat more recent study pointed to the shortage of experienced managers as the root cause of many problems. And in a particularly indiscreet moment, I once described the defense acquisition process as "the epoxy that greases the wheels of progress."

But it is important to note that in spite of such criticisms, the Department of Defense's acquisition process has provided our armed forces with the equipment that is the envy of the world's military forces. It's just that it could, and should, do even better.

The present review, requested by Secretary England (himself deeply experienced in acquisition management), affords a relatively unique opportunity. Change is almost always the result of a culmination of pressures, and rarely are those pressures greater than today as our nation conducts multiple combat operations, recovers from hurricanes, counters terrorist threats here at home, and endures intense budgetary demands.

Experience suggests that promising areas to look for progress include seeking experienced, capable managers; supporting basic research; starting fewer and finishing more projects; reducing turbulence; assigning clear responsibilities; providing financial reserves; incrementally budgeting to milestones; accepting prudent risks; controlling cost; disciplining requirements; utilizing appropriate contractual and competitive instruments; emphasizing reliability; creating fast-tracks; and, as always, insisting on ethical comportment.

Our nation's military forces may be called upon to fight outnumbered, to fight at great distances from home, and to win with very few casualties. Only with a properly functioning defense acquisition process can this be possible. The present review, as was the case with its predecessors, will ultimately be judged not by how well it identified the problems, or even how well it points to the solutions. It will be judged by what it (the DAPA Project) actually makes happen.

Norman R. Augustine

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Section I

Summary

The Context

For nearly 60 years, the Department of Defense has been engaged in a continuous process of self assessment to identify and improve the way it acquires weapons systems. Frequent major acquisition reform initiatives have responded to concerns that acquisition costs are too high, that the Department is buying the wrong things, or that the process is too slow.

The need to review the process and to institute change has become very obvious to the acquisition community. The House and Senate Fiscal Year 2006 Defense Authorization Committee Reports addressed concerns about the ability of the Department's Acquisition System to develop and deliver required capabilities when needed and at predictable costs. The reports further stated that addressing symptoms one program or one process at a time is unlikely to result in substantial improvement. (Figure 1)

Both Congress and the Department of Defense senior leadership have lost confidence in the capability of the Acquisition System to determine what needs to be procured or to predict with any degree of accuracy what things will cost, when they will be delivered, or how they will perform. This was particularly evident during the confirmation hearing before the Senate Armed Services Committee, for Gordon England to become the Deputy Secretary of Defense.

The Task

On June 7, 2005, then Acting Deputy Secretary of Defense Gordon England authorized a sweeping and integrated assessment to consider "every aspect" of acquisition, giving rise to the Defense Acquisition Performance Assessment Project. The centerpiece of this project is a panel governed by the tenets of the Federal Advisory Committee Act of 1972 (Public Law 92-463).

"The committee is concerned that problems with organization structure, shortfalls in acquisition workforce capabilities, and personnel instability continued to undermine the performance of major weapons systems programs... Problems occur because the Department of Defense's weapon programs do not capture early on the requisite knowledge that is needed to efficiently and effectively manage program risks...The committee believes that one answer can be found in the inability of the Department to address the budget and program stability issues... Funding and requirements instability continue to drive up costs and delay the eventual fielding of new systems."

Senate Committee Report 109-069 – S1042, Title VIII Acquisition Policy

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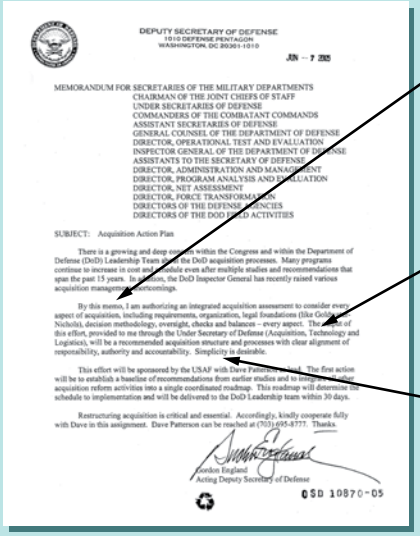
"...The committee is concerned that the current Defense Acquisition Management Framework is not appropriately developing realistic and achievable requirements within integrated architectures for major weapons systems based on current technology, forecasted schedules and available funding ..."

House Committee Report 109-89 – HR1815, Title VIII Acquisition Policy

Congress is concerned about the Department's Acquisition System (Figure 1)

THE DEFENSE ACQUISITION PERFORMANCE ASSESSMENT TASK



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"The output... will be a recommended acquisition structure and processes with clear alignment of responsibility, authority and accountability."

"Simplicity is desirable…. Restructuring acquisition is critical and essential."

The Deputy Secretary's direction to the panel was unambiguous (Figure 2)

The task assigned to the panel "to consider every aspect of acquisition and to develop a recommended acquisition structure and processes with clear alignment of responsibility, authority and accountability" was difficult and complex. (Figure 2)

Over many years, 128 studies have been done to address perceived problems with the system and to prevent waste, fraud and abuse. Historically, we observed that cost and schedule instability have been a problem in all system acquisitions since the Civil War. We see some of the same issues as problems today that the Packard Commission saw 20 years ago. We asked the obvious question -- why?

We concluded that the problems are deeply imbedded in many of the acquisition management processes that we use in the Department of Defense and not just the traditional procurement processes. We need a radical approach to improvements that can make the Acquisition System better and adapt these improvements to the new security environment of the 21st century. Our acquisition performance assessment process and conclusions are outlined in this report.

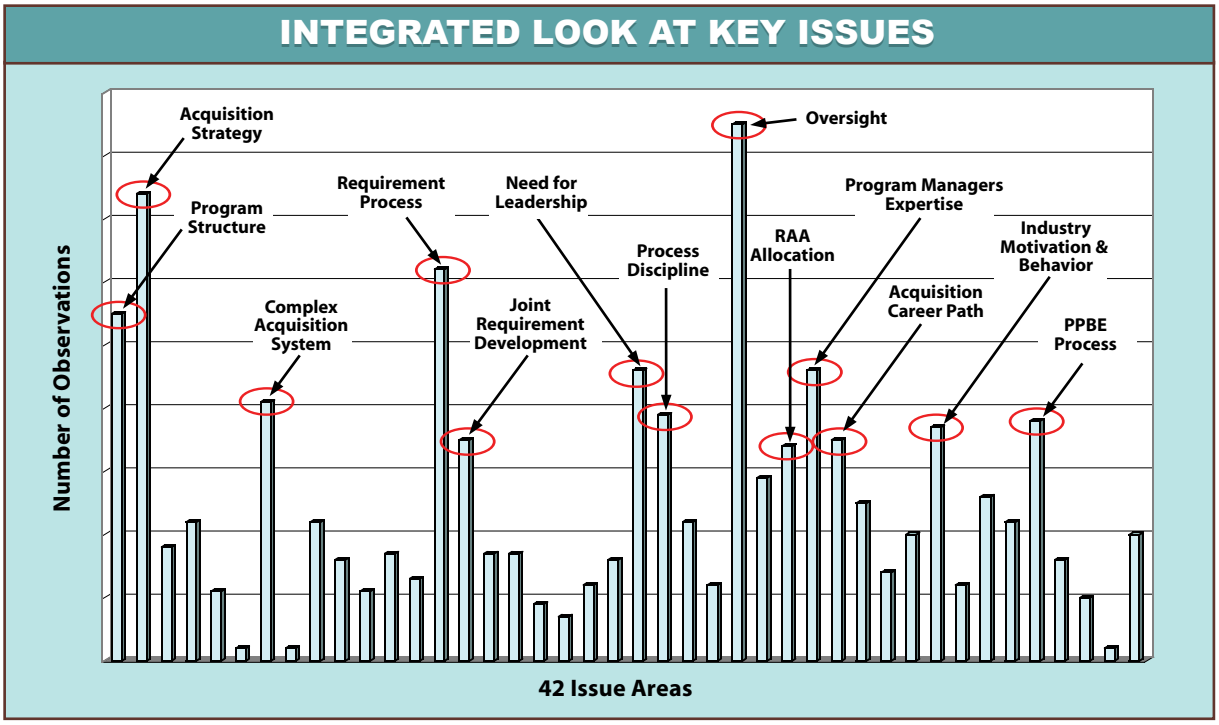
Proposing change to improve performance is not without risk. The existing Acquisition System is the product of more than 60 years of continuous focus dedicated to fielding systems with the best possible performance. Despite its flaws, this system has produced some of the finest military equipment that the world has known. It has delivered the foundation for today's military and it has become an important element of U.S. strategic advantage. Therefore, when proposing improvements or modifications to the existing Acquisition System, the potential for unintended

consequences must be considered carefully. But failing to make improvements will have other unintended consequences -- and they are potentially more problematic.

Integrated Assessment

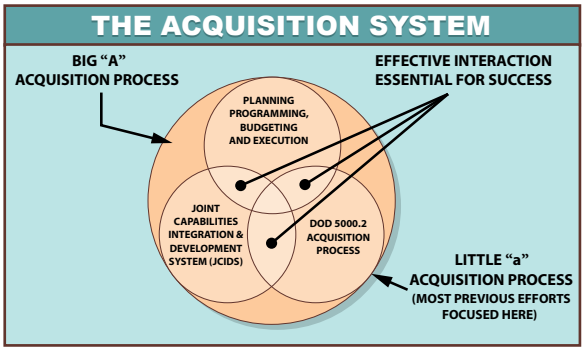
This comprehensive review was conducted to form the basis of our conclusion that integrating all of the elements of the Acquisition System is essential. However, our detailed review was complicated by the absence of a standard, consistent and coherent cost tracking system that is necessary to add clarity to any analysis. We reviewed more than 1,500 documents to establish a baseline of previous acquisition reform recommendations, held open public meetings and operated a web site to obtain public input. We heard from 107 experts, received more than 170 hours of briefings, conducted a detailed survey and interviews of over 130 government and industry acquisition professionals, and subsequently developed 1,069 observations.

From these observations, we identified 42 issue areas upon which to focus our attention. In addition to assessing each of the Defense Acquisition processes and their performance, we developed specific integrated assessments that are grouped into six broad areas: Organization, Workforce, Budget, Requirements, Acquisition and Industry. These assessments resulted in the Panel's proposals for performance improvements and recommendations to establish specific criteria within specific timeframes. (Figure 3)



Aggregation analysis helps identify areas of wide-spread interest (Figure 3)

Understanding the Complexity of the Acquisition System

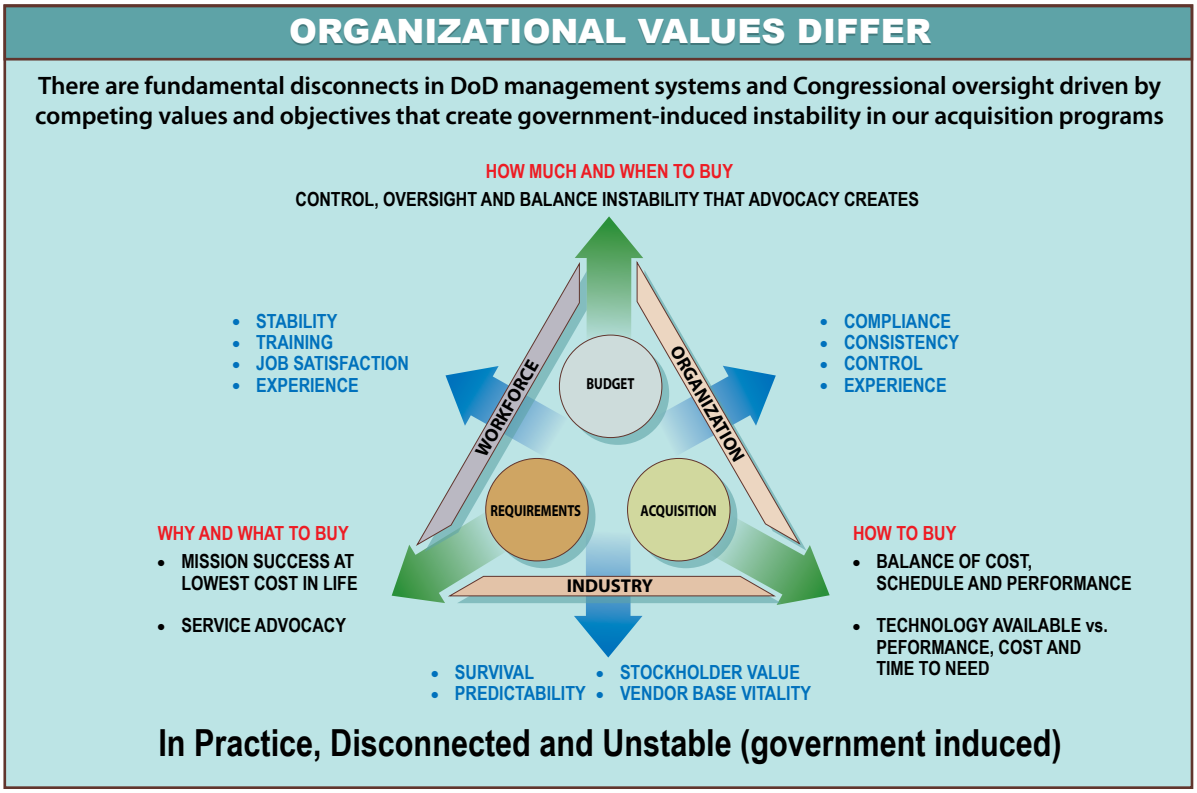


In theory, the requirements, budget and acquisition processes work together (Figure 4)

The Panel found that the Acquisition System is believed to be a simple construct that efficiently integrates the three interdependent processes of budget, acquisition and requirements termed -- "Big A."

Little "a" is the acquisition process that tells us "how to buy" but does not include requirements and budget, creating competing values and objectives. (Figure 4)

Actually, our observations showed the system to be a highly complex mechanism that is fragmented in its operation. Further, the findings we developed indicated that differences in the theory and practice of acquisition, divergent values among the acquisition community, and changes in the security environment have driven the requirements, acquisition and budget processes further apart and have inserted significant instability into the Acquisition System. (Figure 5)



Differing organizational goals and values interfere with Acquisition Process Integration (Figure 5)

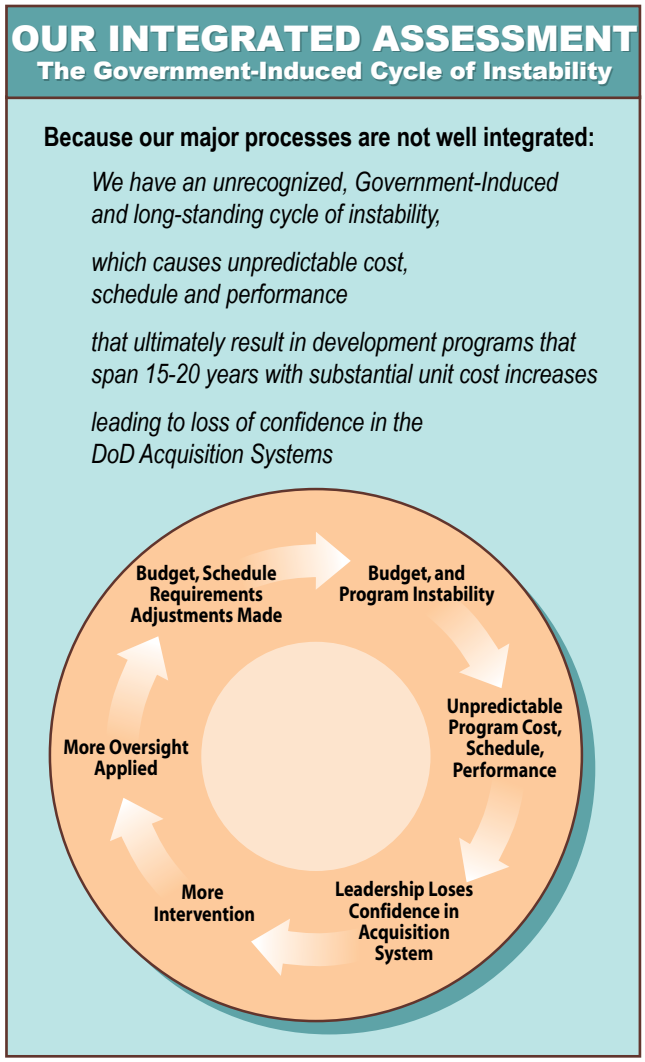
In theory, new weapon systems are delivered as the result of the integrated actions of the three interdependent processes whose operations are held together by the significant efforts of the organizations, workforce, and the industrial partnerships that manage them. In practice, however, these processes and practitioners often operate independent of one another. Uncoordinated changes in each of the processes often cause unintended negative consequences that magnify the effects of disruptions in any one area.

Incompatible behaviors often result because organizational values differ among process owners and participants.

- Organizations providing oversight and coordination of "little a" acquisition activities value compliance, consistency of approach and control of program activities.
- The workforce is incentivized by job satisfaction, the opportunity for continuous training and stability in the process.
- The budget process values how much and when to buy and focuses on control and oversight to balance the instability that advocacy creates.
- The requirements process values the "why" and "what to buy", focusing on obtaining the ability to achieve mission success and to protecting the life of the warfighter.
- The "little a" acquisition process values "how to buy," striving to balance cost, schedule and performance.
- For industry, the critical issue is survival, followed by predictability in the defense market segment and achieving stockholder confidence.

While each of these sets of values is legitimate, pursuing them without consideration for their impacts in other processes adds instability to the entire system.

In unstable acquisition processes, owners and practitioners take actions without considering the impact the actions will have on the entirety of the system. Requirement developers mandate systems that are technologically unrealistic or unable to be delivered within the "time-to-need" that is desired by Combatant Commanders. Program teams allow requirements to escalate without discipline, thereby driving costs beyond baseline budget and schedule. Those who hold the budget purse strings in the Department of Defense look dispassionately on the Acquisition System and reduce annual program budgets to fit within the "top-line" of the President's Budget by trading off some programs to "fix" others.



Lack of process and organizational integration induces instability (Figure 6)

This creates a cycle of government-induced instability that results in a situation in which senior leaders in the Department of Defense and Congress are unable to anticipate or predict the outcome of programs as measured by cost, schedule and performance. When defense and congressional leaders are surprised by unanticipated cost overruns, and failure to meet expected schedule and system performance, they lose confidence in a system that is expected to be transparent and consistent to provide promised capabilities. Leaders and staffs at all levels react by becoming more involved, applying more oversight and often making budget, schedule or requirements adjustments that significantly lengthen development and production cycles and add cost. (Figure 6)

Although the operational environment faced by the U.S. Armed Forces has changed significantly since the Cold War, the system that we use to design, develop and deliver the necessary systems has not changed. Further, efforts today to improve the performance of this Acquisition System have focused almost entirely on only one portion of the process, namely "little a" acquisition. These factors are exacerbated by changes in the international security environment.

Major Findings

Several major findings became obvious as we reviewed defense acquisition performance and documented the integrated nature of the process. (Figure 7)

MAJOR FINDINGS

- ***Strategic Technology Exploitation - Key U.S. Advantage***
- ***The U.S. Economic And Security Environments Have Changed***
- ***The Acquisition System Must Deal With External Instability***
- ***DoD Management Model Based On Lack Of Trust***
- ***Oversight Is Preferred To Accountability***
- ***Oversight Is Complex -- Not Process or Program Focused***
- ***Complex Acquisition Processes Do Not Promote Success -- They Increase Cost And Schedule***
- ***Incremental Improvement Applied Solely To The Little "a" Acquisition Process Requires All Processes To Be Stable - They Are Not***

Major Findings were developed across the spectrum of acquisition processes (Figure 7)

- Strategic technology exploitation is a key factor that allows the U.S. to maintain dominant military capabilities. Militarily critical technologies need to be identified and documented early in the acquisition process to ensure that cutting edge technologies have appropriate export controls.

- The fundamental nature of defense acquisition and the defense industry has changed substantially and irreversibly over the past 20 years. New and emerging global markets have substantially affected the dynamics of acquisition reforms envisaged in the Goldwater-Nichols Act. In 1985, defense programs were conducted in a robust market environment where more than 20 fully competent prime contractors competed for multiple new programs each year. The industrial base was supported by huge annual production runs of aircraft (585), combat vehicles (2,031), ships (24) and missiles (32,714). In 1985, threats were well-known and well-defined. This allowed the Department to conduct stable strategic planning. Today, the Department relies on six prime contractors who compete for fewer and fewer programs each year. Reductions in plant capacity have failed to keep pace with the reduction in demand for defense systems (188 aircraft, 190 combat vehicles, 8 ships, 5,072 missiles). The security environment has become unpredictable, threats are often difficult to define and situations often require asymmetric responses. The world dynamic has changed.

- The Acquisition System must deal with external instability, a changing security environment and challenging national security issues. The Department must be agile -- to an unprecedented degree -- to respond quickly to urgent operational needs from across the entire spectrum of potential conflicts.

- Although the Department functions with a single serial acquisition process with extended planning horizons, the Department's budgeting process is based on short-term decision making in which long-term cost increases are accepted to achieve short-term budget "savings" or "budget year flexibility."

- The Department compounds the chaotic nature of its financial model with a program oversight philosophy based on lack of trust. Effective oversight has been diluted in

a system where the quantity of reviews has replaced quality, and the tortuous review processes have obliterated clean lines of responsibility, authority and accountability. The oversight process allows staffs to assume de-facto program authority, stop progress and increase program scope. The current system is focused on programs, not on improving and standardizing the processes of acquisition; it inhibits rather than promotes steady improvement in achieving program success.

- Complex acquisition processes do not promote program success -- they increase costs, add to schedule and obfuscate accountability.

Over the past twenty years, many acquisition reform recommendations have focused on making incremental improvements to a narrowly defined acquisition process. (Figure 8)

SAMPLES OF PAST ACQUISITION REFORMS

Packard Commission - 1985
- Followed 131 separate investigations of 45 of the Department's 100 top contractors
- Focused on Defense management issues, evauated Department's acquisition system, organization and decision-making as well as Congressional oversight

Defense Reorganization Act - 1986
- Established the Service Acquisition Executive and consolidated acquisition decision-making in the hands of the civilian leadership
- Codified many of the Packard Commission recommendations

Section 800 Report - 1993
- Reviewed existing legislation and recommended repeal or amendments
- Focused on streamlining and simplifying acquisition laws

National Performance Review - 1993
- Vice President Gore initiative in light of the end of the Cold War
- Promoted using commercial standards for more acquisition programs

Federal Acquisition Streamlining Act - 1994
- Consolidated and simplified hundreds of laws into unified procurement code

SecDef Perry Memo - 1994
- Addressed shrinking industrial base
- Commercial technologies are outpacing DoD sponsored efforts

Defense Reform Initiative - 1997
- Consolidation of industry and erosion of core capabilities addressed
- Need to recover interest in DoD requirements by commercial sector

The Road Ahead - 1999
- Addressed the slowness of logistics to meet sustainment needs
- Requirement to integrate civil-military industrial base

Rumsfeld's Challenge - 2001
- Bureaucratic inertia stopping crucial initiatives, excess infrastructure
- Planning, Programming and Budgeting System outdated
- Technology moving faster than DoD, that is deploying outdated technology

The Acquisition System has been reviewed extensively (Figure 8)

If incremental improvements to the acquisition process are to achieve success in improving program cost, schedule and performance, then all six internal elements of the Acquisition System (organization, workforce, budget, requirements, acquisition and industry) must operate in a stable and predictable manner. Also, external influences on the Acquisition System, including leadership and congressional oversight, must exert stabilizing and predictable guidance. None of these processes and influences are stable and predictable today.

The Department of Defense needs a new, integrated Acquisition System. It must be able to deal with an unstable external environment typified by rapidly changing security and economic challenges that are emerging with the expansion of the global marketplace. We concluded that an effective Acquisition System requires stability and continuity that can only be developed through improving all of the major elements upon which it depends.

Overview of Performance Improvements

We recommend reducing government-induced instability through an integrated transformation of the major elements of the larger Acquisition System that can reduce cost, enhance acquisition performance and accelerate by years the delivery of key capabilities. (Figure 9)

Organization

OVERVIEW

- ***Organization***
  - Realign authority, accountability and responsibility at the appropriate level and streamline the acquisition oversight process.
  - Establish dedicated Four-Star Acquisition Systems Commands, at the Service level.
- ***Workforce***
  - Rebuild and value the acquisition workforce, and incentivized leadership.
- ***Budget***
  - Transform the Planning, Programming and Budgeting process and establish a distinct Stable Program Funding Account.
- ***Requirements***
  - Replace the Joint Capability Integration and Development System with the Joint Capabilities Acquisition and Divestment Plan (a Combatant Commander-led requirements process in which the Services and Defense Agencies compete to provide solutions.)
  - Establish a two-year recurring process to produce an integrated, time-phased and fiscally-informed Joint Capability Acquisition and Divestment plan and a continuous Materiel Solutions Plan Development Process to identify and initiate development of Materiel Solutions.

Performance improvement recommendations have been made for each of the major elements of the Acquisition System (Figure 9)

OVERVIEW CONTINUED

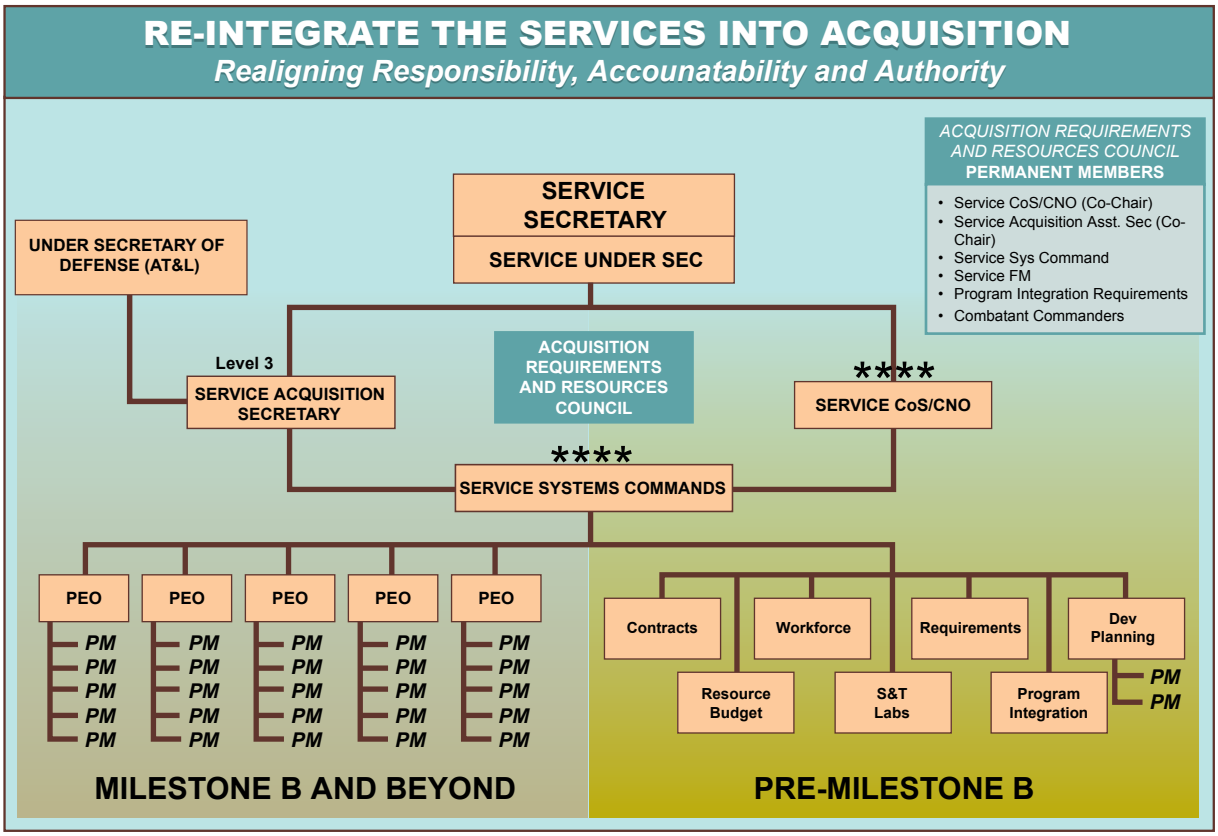
- ***Requirements Continued***
  - Add an "Operationally Acceptable" test evaluation category.
  - Give program managers explicit authority to defer non-Key Performance Parameter requirements to later spirals or block upgrades.
- ***Acquisition***
  - Adopt a risk-based source selection process.
  - Shift to time-certain development procedures and make schedule a Key Performance Parameter.
  - Mandate a time start and end dates that are clearly defined and revamp the acquisition processes to support it.
- ***Industry***
  - Overcome the consequences of reduced demand by sharing long range plans and restructuring competitions for new programs.
  - Require government insight and favor formal competition for major subsystems when a Lead System Integrator acquisition strategy is pursued.

(Figure 9) continued

Fully implement the intent of the Packard Commission. Create a streamlined acquisition organization with accountability assigned and enforced at each level.

- Direct the Army and Air Force Chiefs of Staff, and the Chief of Naval Operations to establish Systems Commands for Acquisition that report to the Service Chiefs of Staff, the Chief of Naval Operations and the Service Acquisition Executives. These Systems Commands will align the acquisition workforce, including requirements and acquisition budget personnel, by establishing appropriate certification requirements based on formal training, education and practical experience. They will direct and manage the preparation of Service Materiel Solution proposals and advocate for the future technology requirements of the Services. (Figure 10)
- Elevate both the Service Acquisition Executives and the Under Secretaries of all the Services to Executive Level 3.
- At Milestone B, assign accountability for overseeing day-to-day execution and integration of programs to the Service Acquisition Executives and through them to the Four-Star Acquisition Systems Commands, Program Executive Officers and Program Managers.
- Designate the Under Secretary of Defense for Acquisition, Technology and Logistics a full member of the Joint Requirements Oversight Council and delegate authority to the Under Secretary of Defense for Acquisition, Technology and Logistics to budget and program for a newly created Stable Program Funding Account.

- Assign responsibility to establish and operate a Materiel Solution Development Process to the Under Secretary of Defense for Acquisition Technology and Logistics, the process should be responsive to the capability needs of the Combatant Commands as identified in a new time-phased and fiscally-informed Joint Capabilities Acquisition and Divestment Plan. (See Figure 22)
- Disestablish the Acquisition Integrated Product Teams in the Office of Under Secretary of Defense for Acquisition, Technology and Logistics, and replace the current oversight process with a small staff, focused on decision-making to support joint programs.



Four-Star Acquisition Systems Commands will facilitate integration of the Acquisition System (Figure 10)

Workforce

Realign responsibility, authority and accountability at the lowest practical level of authority by reintegrating the Services into the acquisition management structure.

- Seek legislation establishing the Service Acquisition Executives as Five-Year Fixed Presidential Appointments renewable for a second five-year term. This will add leadership continuity and stability to the Acquisition System.
- Seek legislation to retain high-performance military personnel in the acquisition workforce to include allowing military personnel to remain in uniform past the limitations imposed by the Defense Officer Personnel Management Act and augment their pay to offset the "declining marginal return" associated with retired pay entitlement.
- Request that the White House Liaison Office create a pool of acquisition-qualified, White House pre-cleared, non-career senior executives and political appointees to fill executive positions, to provide leadership stability in the Acquisition System.
- Immediately increase the number of federal employees focused on critical skill areas, such as program management, system engineering and contracting. The cost of this increase should be offset by reductions in funding for contractor support.
- Establish a consistent definition of the acquisition workforce with the Under Secretary of Defense for Acquisition Technology and Logistics, working with the Service Secretaries to include in that definition all acquisition-related budget and requirements personnel.
- Establish and direct standard and consistent training, education, and certification and qualification standards for the entire acquisition workforce.

Budget

Transform the Planning, Programming, and Budgeting and Execution process and stabilize funding for major weapons systems development programs.

- Establish a separate Stable Program Funding Account to mitigate the tendency to stretch programs due to shortfalls in the Department of Defense non-acquisition accounts that ultimately increase the total cost of programs. (See Figure 21)
- Reduce substantially the incidence of reducing program funding or procurement quantities to solve budget year shortfalls to significantly enhance program funding stability.
- Create a Management Reserve in the Stable Program Funding Account by holding termination liability at the Service level. Availability of a Management Reserve will substantially reduce the impact of unexpected technical distortion during program execution and thus stabilize the contract management and execution process.

- Adjust program estimates to reflect "high confidence" -- defined as a program with an 80 percent chance of completing development at or below estimated cost --when programs are baselined in the Stable Program Funding Account.

Requirements

Transform the requirements process to adapt to the new security environment by including the Combatant Commanders as the major influence for requirements and by changing the requirement development process.

- Replace the Joint Capabilities Integration and Development with the Joint Capabilities Acquisition and Divestment Plan. (See Figure 23)
- Task each of the Combatant Commanders to prepare extended planning Annexes to each of their operational and contingency plans, to be updated on a two-year cycle, that will provide a 15-year forecast of both capability gaps and excesses relative to mission requirements.
- Seek legislation to create an Operationally Acceptable evaluation testing category and issue new implementing instructions. Systems will be evaluated as Operationally Acceptable when their performance is not fully adequate when tested against criteria established by the Director of Operational Test and Evaluation but the Combatant Commander has determined that the system, as tested, provides an operationally useful capability and the Combatant Commander desires immediate fielding of the "as tested" capability.
- Delegate explicit authority from the Under Secretary of Defense for Acquisition, Technology and Logistics to reschedule achievement of non-Key Performance Parameter requirements to future production blocks or program spirals. Transfer this authority to the Service Acquisition Executives through the Program Executive Officers to Program Managers. This will assist in maintaining Time Certain Development delivery requirements and will limit the time that systems are in development, thereby reducing program cost risk and enhancing the ability to meet Combatant Commander capability needs in a timely manner. (See Figure 24)
- Direct the Deputy Director for Research and Engineering to coordinate service science and technology transition plans with the appropriate military service.
- Direct the Deputy Director for Research and Engineering to actively participate in the Joint Capabilities Acquisition and Divestment process to reemphasize technology push initiatives.

Acquisition

Change the Department's preferred acquisition strategy for developmental programs from delivering 100 percent performance to delivering useful military capability within a constrained period of time, no more than 6 years from Milestone A. This makes time a Key Performance Parameter.

- Create acquisition strategies for each program prior to Milestone A to streamline procurement, reduce time-to-market, require formal subcontractor level competition, and tie award fees to contractor performance.
- Change existing source selection guidance to enhance communication to industry. Eliminate the requirement for single competitors to share all questions or information they submitted and responses received, with all competitors, prior to issuance of the final request for proposals.
- Direct changes to the DoD 5000 series to establish Time Certain Development as the preferred acquisition strategy for major weapons systems development programs.
- Submit proposed changes to the Defense Supplement to the Federal Acquisition Regulation by formalizing a risk-based source selection process. Replace detailed evaluations of cost proposals with an affordability determination based upon a most probable cost estimate agreed upon by industry and government.
- Realign the Milestone B decision to occur at Preliminary Design Review.
- Direct changes to the DoD 5000 series to require the Test and Evaluation Master Plan and the Initial Operational Test and Evaluation Plan to be completed and signed prior to Milestone B.
- Direct the Service Acquisition Executives to appoint Program Managers to be held accountable for each baseline from Milestone B through completion of the Beyond Low Rate Initial Production report.

Industry

Share Department of Defense long-range plans with industry with the goal of motivating industry investments in future technology and performance on current programs.

- Establish regular roundtable discussions hosted by the Deputy Secretary of Defense with executives from industry to share Joint Capabilities Acquisition and Divestment plans and align industry and defense strategic planning.

- Establish a Blue Ribbon panel of owners of large and small businesses that are not traditional defense suppliers to create an aggressive set of recommendations with accompanying implementation plans to eliminate the barriers for them to do business with the government.
- Direct changes to the DoD 5000 series by the Under Secretary of Defense for Acquisition, Technology and Logistics to require government insight and favor formal competition over make/buy decisions for major subsystems where a Lead System Integrator acquisition strategy is involved. The trend toward Lead System Integrator acquisition strategies is reducing subcontractor opportunities to compete, and impacts the viability of the vendor base.

In addition to these specific recommendations, we propose that the Department and the Congress evaluate the impact of industrial consolidation and its unintended effects. Such a review should be conducted with an acute awareness of the current security environment and the nature of our fundamental assumptions about the industry upon which our policy, laws and regulations are based.

Our Perspective and Commitment

The operation of all of the Department's Acquisition System elements must be stable for incremental improvements in the acquisition process to achieve success -- we found that they are not. We concluded the problems we face are deeply imbedded in many acquisition management systems. We therefore need a radical approach to stabilize processes and adapt them to the new and evolving security environment.

One thing is clear: the larger acquisition process was designed and optimized to respond to a security environment dominated by a single strategic threat, the former Soviet Union. The security environment is very different today; therefore, the processes need to change to meet the demands of this new environment. We must have the flexibility and agility to respond to dynamic security challenges and rapidly changing needs.

The hours we spent were rich in providing an opportunity to view the entire spectrum of issues -- past and present, and to look through a prism to the future. Implementation is about putting everything in focus.

The performance improvements we propose will significantly improve the Department's ability to deliver capabilities to the warfighter by stabilizing and integrating key elements of the Acquisition System. Taken together, our recommended performance improvements represent significant transformation of the Acquisition System, and they are designed to address the obvious sources of instability and lack of accountability. We believe we have offered a sweeping set of choices to the decision makers to reduce government-induced instability and complexity. We acknowledge that these choices are difficult but necessary to resolve this very complex process.

Strategy does not (or should not) stand alone as a management process. A continuum exists that begins in the broadest sense, with the mission of the organization. The mission must be translated so that the actions of individuals are aligned and supportive of the mission. A management system should ensure that this translation is effectively made. Strategy is one step in a logical continuum that moves an organization from a high-level mission statement to the work performed by frontline and back office employees.

"The Strategy Focused Organization"

Robert S. Kaplan and David P. Norton. Harvard Business School Press. Page 72. 2000

Effective communication of the Panel's strategic recommendations will be essential (Figure 11)

Because these are hard choices with potentially unintended consequences, implementation should be approached rigorously. We recommend that the Department do "strategic gaming" on the changes, in parallel with implementation, to get better insight and confidence in the outcome. Our legacy of war gaming has served us well in operations and we should use this approach to manage change in our Acquisition System.

The timing for change has never been better. Congressional interest in ensuring that the funding it provides is turned into usable and effective military capability, the dedication of the Secretary of Defense to transform the way the Department of Defense does its acquisition business, the Quadrennial Defense Review's challenge to improve the acquisition process, the 2005 Defense Science Board Report on Business Practices and, the Business Transformation Enterprise Plan, all combine to create a very fertile ground for change. The Defense Acquisition Performance Assessment Panel is committed to the validity of its assessment and the value of its recommendations for improvement. The specifics of our proposals, as well as the methodology that we used to develop our conclusions, are described in the following sections of this report. (Figure 11)

It is one thing to create and establish vision and to recommend focusing on change -- it is quite another to motivate the unity of purpose required to achieve success and to ensure that the stakeholders understand not only what is written and said, but also what we meant to write and say about these ideas and issues. We tried to be as clear and unambiguous as time and talent allowed, but this subject is extremely complex. We are prepared to meet the need to further clarify, interpret, discuss and explain our effort.

Section II

Background

Establishing the Framework

History of Defense Acquisition Reform

Multiple reviews of the Department of Defense Acquisition System have been conducted since the establishment of the Department, in 1947. Many of these reviews have focused on procurement practices but have not comprehensively addressed requirements and budget issues. This is significant, since these processes impact the ability of the procurement process to deliver effective capabilities on time and within cost. These past reviews were limited in their assessment of the processes and the inter-relationship between workforce performance, the responsibility of industry to deliver capabilities, and the oversight and control mechanisms that are intended to make the Acquisition System work efficiently.

The Necessity for Acquisition Performance Assessment

GENERAL ACCOUNTING OFFICE REPORT

Acquisition Processes Have Significant Shortcomings Leading to Loss of Confidence by Congress and the Defense Community.

- *Increased cost over-runs*
- *Failure to establish acquisition priorities and trade-offs*
- *Undefined requirements*
- *Undefined performance characteristics*
- *Accepting compromised performance*
- *Untested and undetermined technology risks*
- *Poorly defined requirements*
- *Complex and inefficient organizational management*
- *Lack of centralized responsibility and authority*
- *Major delays in product delivery*
- *Inadequate attention to the conceptual phase*

"Acquisition of Major Weapons Systems" (B-163058), March 18, 1971 (Figure 12)

Many improvements to the Department's Acquisition System have been made as a result of these past reviews, and the system has produced some of the finest military equipment in the world. However, the ability of the acquisition process to deliver operational performance of major systems within predicted cost and schedule has not improved over the last 20 years and the economic and security environment has changed substantially.

Multiple reports by the U.S. Government Accountability Office have highlighted performance deficiencies, Especially noteworthy is the March 18, 1971 Report to Congress regarding "Acquisition of Major Weapons Systems" (B-163058). (Figure 12)

At the time, the General Accounting Office recommended that the Department should make every effort to develop and perfect the Department of Defense-wide method to determine what needs to be procured and

identify mission priorities relative to other systems development. The report recommended that cost-effectiveness studies meet certain standards and that these studies should be updated regularly where a major program alternative was considered. The report further suggested that greater decision-making authority for each major acquisition be placed within a single organization in the service concerned, and that this organization be vested with more direct control over the operations with sufficient status to overcome organizational conflict. The report also required that each selected acquisition report contain a summary statement regarding the relationship of the mission designed for the weapon compared with other complementary weapon systems and to include the current status of the program.

As the result of concerns expressed by Members, in testimony by the then Deputy Secretary before the House Committee on Government Operations in September 1970, major reforms were already underway in the Department before this March 1971 General Accounting Office report was released. The 1971 report followed numerous other reports that were critical of the acquisition processes. For example, reports by the Blue Ribbon Panel, National Security Industrial Association, and the Defense Science Board Task Force on Research and Development Management, and a report from the House Government Operations Committee dated December 10, 1970 all addressed the same concerns.

The General Accounting Office Report, "Weapons Cost – Analysis of Major Weapons Systems Cost and Quantity Changes," published on December 31, 1987 noted that the combined total program cost estimate of Selected Acquisition Report systems was 40.5 percent over base year estimates. In 1999, the Defense Systems Management College published technical report TR 1-99 that documented an average cost growth of 40 percent over base year estimates -- a number very close to the performance reported by the General Accounting Office 12 years earlier. In March 2005, the Government Accountability Office published Report 05-301, stating that "it is not unusual for estimates of time and money to be off by 20 to 50 percent."

It is clear that, despite frequent reform and some isolated successes, the overall performance of the Acquisition System remains problematic.

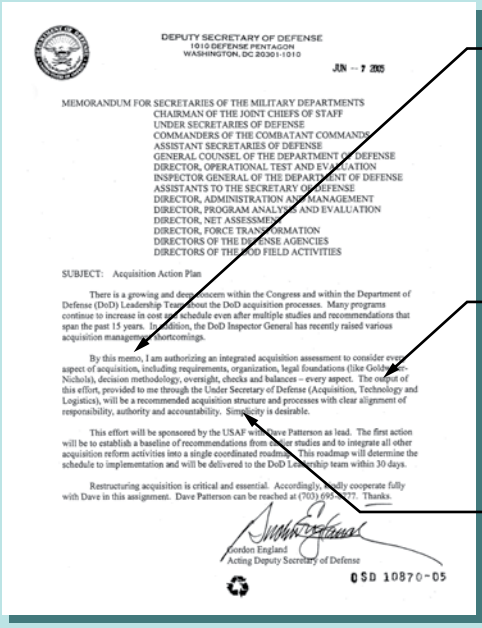
The Task for Acquisition Performance Assessment

During congressional hearings on defense acquisition issues, Deputy Secretary of Defense Gordon England and committee members agreed that the Acquisition System requires dedicated leadership and aggressive initiatives for improvement.

During subsequent congressional hearings, Secretary England stated that "the entire acquisition structure within the Department of Defense needs to be re-examined and in great detail...there is growing and deep concern about the acquisition process within the Department of Defense and in the Committee..."

Secretary England concluded that Congress and the senior leadership of the Department of Defense had lost confidence in the ability of the Defense Acquisition System to deliver the right products to the warfighter on time and within cost. Accordingly, on June 7, 2005, the Deputy Secretary directed an integrated assessment of all aspects of the Department of Defense processes and procedures for acquisition. The Defense Acquisition Performance Assessment Project was established to accommodate this tasking. (Figure 13)

THE DEFENSE ACQUISITION PERFORMANCE ASSESSMENT TASK



DEPUTY SECRETARY OF DEFENSE
1010 DEFENSE PENTAGON
WASHINGTON, DC 20301-1010

JUN - 7 2005

MEMORANDUM FOR SECRETARIES OF THE MILITARY DEPARTMENTS
CHAIRMAN OF THE JOINT CHIEFS OF STAFF
UNDER SECRETARIES OF DEFENSE
COMMANDERS OF THE COMBATANT COMMANDS
ASSISTANT SECRETARIES OF DEFENSE
GENERAL COUNSEL OF THE DEPARTMENT OF DEFENSE
DIRECTOR, OPERATIONAL TEST AND EVALUATION
INSPECTOR GENERAL OF THE DEPARTMENT OF DEFENSE
ASSISTANTS TO THE SECRETARY OF DEFENSE
DIRECTOR, ADMINISTRATION AND MANAGEMENT
DIRECTOR, PROGRAM ANALYSIS AND EVALUATION
DIRECTOR, NET ASSESSMENT
DIRECTOR, FORCE TRANSFORMATION
DIRECTORS OF THE DEFENSE AGENCIES
DIRECTORS OF THE DOD FIELD ACTIVITIES

SUBJECT: Acquisition Action Plan

There is a growing and deep concern within the Congress and within the Department of Defense (DoD) Leadership Team about the DoD acquisition processes. Many programs continue to increase in cost and schedule even after multiple studies and recommendations that span the past 15 years. In addition, the DoD Inspector General has recently raised various acquisition management shortcomings.

By this memo, I am authorizing an integrated acquisition assessment to consider every aspect of acquisition, including requirements, organization, legal foundations (like Goldwater-Nichols), decision methodology, oversight, checks and balances – every aspect. The output of this effort, provided to me through the Under Secretary of Defense (Acquisition, Technology and Logistics), will be a recommended acquisition structure and processes with clear alignment of responsibility, authority and accountability. Simplicity is desirable.

This effort will be sponsored by the USAF with Dave Patterson as lead. The first action will be to establish a baseline of recommendations from earlier studies and to integrate all other acquisition reform activities into a single coordinated roadmap. This roadmap will determine the schedule to implementation and will be delivered to the DoD Leadership team within 30 days.

Restructuring acquisition is critical and essential. Accordingly, I fully cooperate fully with Dave in this assignment. Dave Patterson can be reached at (703) 695-5727. Thanks.

Gordon England
Acting Deputy Secretary of Defense

DSD 10870-05

"... I am authorizing an integrated acquisition assessment to consider every aspect of acquisition, including requirements, organization, legal foundations...decision methodology, oversight, checks and balances — every aspect... "

"The output... will be a recommended acquisition structure and processes with clear alignment of responsibility, authority and accountability."

"Simplicity is desirable…. Restructuring acquisition is critical and essential."

The Deputy Secretary directed an integrated assessment and requested recommendations for an acquisition structure with clear alignment of responsibility, authority and accountability (Figure 13)

The Defense Acquisition Performance Assessment Project was organized as a Federal Advisory Committee. This ensured a transparent and open process as well as a forum to solicit comments and suggestions from stakeholders in industry and government, academia, trade associations, labor unions and the general public. This forum resulted in multiple and diverse observations as evidence of the complexity of the issue.

The centerpiece of the DAPA Project is a Panel governed by the tenets of the Federal Advisory Committee Act of 1972 (Public Law 92-463). The Federal Advisory Committee was organized into a six member Panel with an executive director, senior advisors and support staff. (Figure 14)

Panel members are successful leaders from government, industry and academia (Figure 14)

Toward an Integrated Assessment - Analyzing the Data

Observations and Aggregation Analysis

We analyzed the observations captured during the data-gathering phase to identify the causes for the inability of the Acquisition System to consistently and successfully predict the ultimate cost, schedule and performance of defense systems. These observations were organized into issue areas in a process called aggregation analysis. In aggregation analysis, observations that address similar topics are grouped into issue areas. The number of observations in each issue area is indicative of how widespread the perception of an issue is among the population interviewed. Our analysis identified a total of 42 issue areas. We considered each of these issue areas when conducting our integrated assessment.

Performance Assessment Structure

We developed performance assessments for each of the six basic elements of the Acquisition System (organization, workforce, budget, requirements, acquisition and industry). Our performance assessment structure is comprised of four parts: the performance of the Acquisition System element, major findings, suggested performance improvements and implementation

criteria.

Reporting the Conclusions

The Panel's Executive Director and the Panel Chairman provided our findings to the Deputy Secretary of Defense, the Under Secretary of Defense for Acquisition, Technology and Logistics and reported the assessments and implementation plan to the Quadrennial Defense Review.

This is an opportunity for a new beginning. The success of these recommendations depends upon improved internal and external communication, clarity and simplicity in the regulations and instructions that guide the processes, more effective oversight and accountability and enhanced

Effective cooperation between the Department and Congress is essential (Figure 15)

relationships and cooperation between the Legislative and Executive Branches of government. (Figure 15)

Section III

Our Integrated Performance Assessment

Process Integration and Stability

The evidence we discovered was persistent in recognizing that an effective Acquisition System requires stability and continuity that only can be provided through successful integration of the major elements upon which it depends. When we began this task, we presumed the Department's Acquisition System to be an efficient integration of the acquisition, requirements and budget processes. However, in the course of our review we found that the System is a highly complex mechanism that is fragmented in its operation. We found that the budget, requirements and acquisition processes function in a framework that is bound by process practitioners and stakeholders. To make the whole System operate, acquisition-related organizations structure the processes, industry turns requirements into weapon systems and the acquisition workforce provides human capital. In this framework, divergent bureaucratic goals and values have resulted in behaviors that drive the budget, acquisition and requirements processes apart -- processes that need to be in harmony for the Sytem to work.

In a non-integrated Acquisition System, process practitioners and stakeholders take actions without understanding the impact that these actions have on each other and on the rest of the system. Requirement developers and operational testers mandate system requirements that are neither technologically realistic nor deliverable within the time-to-need established by the Combatant Commander. Program teams allow requirements to "creep" without discipline, driving costs beyond the baseline budget and extending schedules. Those who hold the budget purse strings reduce annual Research Development Testing and Evaluation, Procurement, and Operations and Maintenance for Program budgets to ensure that all the acquisition funding accounts fit within the "top-line" President's Budget. This results in causing some programs to be "un-executable" at the expense of others, essentially borrowing from one to pay for another.

The failure of process integration engenders instability in programs and results in the Department being unable to anticipate or predict the outcome of programs as measured by cost, schedule and performance. When defense and congressional leaders are surprised by unanticipated cost overruns, failure to meet expected schedule and system performance, they lose confidence in a system that is expected to provide promised capabilities. Leaders and staffs at all levels react by becoming more involved, applying more oversight and often making budget, schedule or adjustment of requirements that significantly lengthen development and production cycles and add cost.

If the Department is to restore confidence in its ability to adequately predict program performance, aggressive steps must be taken to re-integrate the acquisition-related process. We must modify the behavior of process practitioners and stakeholders, thus reducing system instability. Significant improvements across the entire scope of all six major elements of the Acquisition System -- organization, workforce, budget, requirements, acquisition and industry -- are required to achieve this result.

The Six Major Elements

Organization

Performance Assessment

Our assessment is that we do not meet the standards set by the Packard Commission. The Department of Defense relies on multiple staff oversight regimes, lengthy lines of communication and adversarial relations. These procedures result in excessive and ineffective exercise of derived authority without accountability and inhibit proper execution of our programs. As a result, uncertainty is introduced into the decision process and instability is created in execution of programs. The current decision-making process is flawed. (Figure 16)

PACKARD COMMISSION AND COMMUNICATION

Successful organizations have "short, unambiguous lines of communication among levels of management, small staffs of highly competent professional personnel . . . [and] most importantly, a stable environment of planning and funding."

"President's Blue Ribbon Commission on Defense Management. National Security Planning and Budgeting"
The Packard Commission, June 30, 1986

The Packard Commission emphasized a simple, efficient organization (Figure 16)

Major Findings

An unintended consequence of implementing the Packard Commission recommendations is that the budget, acquisition and requirements processes are not connected organizationally at any level below the Deputy Secretary of Defense. This induces instability and erodes accountability. Segregation of requirements, budget and acquisition processes create barriers to efficient program execution. It subsequently decoupled leadership from acquisition and requirements increases the likelihood of program disconnects.

The rigidity of the Acquisition Category designation process and its single focus on program cost results in an excessive number of programs requiring Defense Acquisition Board review. This dilutes the authority of the Service Acquisition Executives and causes excessive review and reporting requirements.

According to 97 percent of the input that we received, the current oversight and leadership process is deficient. Existing oversight relies upon overlapping layers of reviews and reviewers at the expense of quality and focus. For example, the preparation for each Defense Acquisition Board meeting requires a variety of review sessions that are conducted as part of the Joint Capabilities Integration and Development System process. In addition, there are Service reviews and meetings of a variety of Integrated Product Teams. Each of these reviews has the potential to significantly lengthen the nominal 180 work days, as outlined in the Defense Acquisition Guidebook, for the Defense Acquisition Board preparation. Multiple reviews result in multiple revisions to program documentation the generation of new tasks. The review construct allows the staff in the Office of the Secretary of Defense to assume de facto program authority that allows them to stop progress and increase program scope. Actually, none of these outcomes enhance the likelihood of program success. Furthermore, responsibility and accountability are blurred since none of these review bodies are accountable for the impact of the imposed changes.

Despite the involvement of thousands of people in the community and ineffective oversight, there is evidence that the current structure does not promote program success. Actually, programs advance in spite of the oversight process rather than because of it. In addition, regardless of this oversight, troubled programs still manage to pass through the laborious approval process.

The Department of Defense does not have a single consistent, sufficient set of metrics applicable across programs to manage acquisitions or measure success. Key Performance Parameters, originally conceived to be the critical measures of system performance, are excessive in number. They do not correlate with either force or system capability and often are not testable. Frequent program re-baselining complicates identification and assessment of cost and schedule performance.

Finally, although programs are burdened with large data reports and updates, it is not clear the data are effective program oversight tools. The Secretary of Defense Office of Program Analysis and Evaluation summarizes program performance data into Defense Acquisition Executive Summaries. When the Department re-baselines a program, it tracks program performance and reports program status relative to the new baseline in the Defense Acquisition Executive Summary. The Government Accountability Office summarizes program performance data reported in Selected Acquisition Reports using different criteria. The Government Accountability Office reports performance against the originally reported program cost and schedules, not re-baselined cost and schedule. As a result, programs performing “on track” in the Defense Acquisition Executive Summaries are reported to Congress as “over-running” in Government Accountability Office reports. Conflicting criteria in performance evaluations contributes to confusion about program performance in the community.

Performance Improvement

To correct these vulnerabilities, we determined that it is necessary to implement the intent of the Packard Commission more fully and regain stability in the Acquisition System by realigning authority, accountability and responsibility at the appropriate levels. Increasing the stature and authority of the Under Secretary of Defense for Acquisition, Technology and Logistics and the Service Acquisition Executives will improve accountability. Establishing a dedicated Four-Star Acquisition Systems Command at the Service level will consolidate responsibilities and streamline the acquisition oversight process of the Department. (Figure 17)

CHANGE THE CULTURE

The Department requires a culture that embraces change. Both the Military and Civilian workforce must become more agile, responsive and lean. We must encourage high performance individuals and foster organizations that are:

- quick and responsive
- attracting and retaining the best qualified employees, and,
- rewarding high performers.

Department of Defense Business Transformation.
Volume I. Page 4. September 30, 2005

The Department has recognized the need for a more efficient and effective organization (Figure 17)

Implementation Criteria

Successful implementation will require the personal involvement of the Service Secretaries, the Army and Air Force Chiefs of Staff, and the Chief of Naval Operations.

By Fall 2006, the original intent of the Packard Commission should be more fully implemented.

- Designate the Under Secretary of Defense for Acquisition, Technology and Logistics as a full voting member of the Joint Requirements Oversight Council.
- Assign the Under Secretary of Defense for Acquisition, Technology and Logistics ownership of the Stable Program Funding Account. Delegate authority to the Under Secretary of Defense for Acquisition, Technology and Logistics to budget and program for this account. (See Figure 21)

- Establish a small office within the Office of the Under Secretary of Defense for Acquisition, Technology and Logistics, using existing Office of the Secretary of Defense personnel to manage the allocation of the Acquisition Category One, Stable Program Funding Account. Charter this office to develop a single, consistent set of metrics acceptable and useful to Congress, the Government Accountability Office and the Department to monitor acquisition programs funded through this Stable Program Funding Account.
- Assign execution responsibilities within the new Joint Capabilities Acquisition and Divestment system to the Under Secretary of Defense for Acquisition, Technology and Logistics. Include responsibility to choose Materiel Solutions from among those proposed by the Services. (See Figure 22)
- Eliminate the endless cycle of program reviews and replace them with a time-constrained decision support review process that is resident in the Services. The review process should focus on enhancing program success. The review teams should not have the ability or authority to slow progress or require program changes. Effective alignment and enforcement of responsibility, authority and accountability at the program level will provide substantially better oversight than any number of layers of repetitive staff reviews.
- Disestablish Acquisition Integrated Product Teams and replace the current oversight process with a small Acquisition, Technology and Logistics staff to support the most significant joint programs.
- Push program management to the Acquisition Systems Commands or Defense Agencies. Acquisition programs should not be managed by the Office of the Secretary of Defense or Service staff personnel.
- Elevate the Service Acquisition Executives and the Service Under Secretaries from Executive Level Four to Executive Level Three.
- Establish a dedicated Four-Star Acquisition Systems Command within each Service, as program execution agent for the Army and Air Force Chiefs of Staff, and the Chief of Naval Operations, prior to Milestone B. The major responsibilities of this command are to integrate decision responsibilities for budget, requirements and acquisition; serve as technology advocates for the future objectives of each Service; advocate and manage the acquisition workforce; and provide day-to-day program execution and oversight.
- Establish a Program Initiation Activity in each Four-Star Acquisition Systems Command charged with management from Milestone 0 to Milestone B. A Program Execution Charter for each program and for each phase (Milestone 0 to Milestone A, Milestone A to B) will be produced by this office. A Program Manager that is an expert in defining operational requirements, and an acquisition professional Deputy Program Manager should be identified for each program at Milestone 0 by the Program Initiation Activity.

At Milestone B, an acquisition professional will become Program Manager and a requirements professional will become the deputy.

- Vest Milestone A decision authority in the Army or Air Force Chief of Staff, the Chief of Naval Operations or appropriate Agency head at Milestone 0, when the program execution agent (Service or Agency) is selected to deliver a Materiel Solution.
- Vest decision authority for Milestone B and beyond in the Service Acquisition Executive.

Workforce

Performance Assessment

A successful program requires a professional workforce with subject matter expertise. Our assessment is that the acquisition workforce does not include requirements or budget personnel and does not properly recognize the value of Program Managers. Since 1990 there has been a concerted effort to reduce the government acquisition workforce. As a result, the government workforce has become increasingly overburdened as the demands have increased with the nature and complexity of the Acquisition System. In addition, both political and Senior Executive Service appointments are not filled in a timely way. All of this results in instability in the decision-making process.

Major Findings

One unintended consequence of removing the Army and Air Force Chief of Staff and the Chief of Naval Operations from Acquisition is that the Services are now isolated from their Acquisition workforce stewardship responsibilities. The Defense Acquisition Workforce Improvement Act does not compensate for this neglect.

With the exception of training and certification, the implementation of the Defense Acquisition Workforce Improvement Act has been spotty across the Department. The focus on compliance with the Act's certification requirements has led to the illusion that we are managing the workforce.

The definition of the Acquisition workforce does not include requirements and budget personnel and these key personnel are not covered in the Defense Acquisition Workforce Improvement Act. Requirements personnel are assigned to major commands and staff offices to establish and codify threshold and objective performance requirements and sit on requirements generation, control and approval boards. They represent the warfighting community in Acquisition decision-making forums, such as Acquisition strategy panels, source selection committees and milestone reviews. Budget officers are personnel assigned to the Services and the Office of the Secretary of Defense to allocate and manage program

accounts. Thus, no single organization is accountable for overall acquisition workforce career development, no consistent training or experience requirements exist for these key skills and training and certification standards are not enforced.

Failure to rapidly fill senior acquisition leadership positions, both political appointments and within the Senior Executive Service, has led to serious gaps in leadership and management continuity and this has contributed significantly to a lack of direction and leadership in the acquisition workforce.

Key Department of Defense acquisition personnel who are responsible for requirements, budget and acquisition do not have sufficient experience, tenure and training to meet current acquisition challenges. Personnel stability in these key positions is not sufficient to develop or maintain adequate understanding of programs and program issues. System engineering capability within the Department is not sufficient to develop joint architectures and interfaces, to clearly define the interdependencies of program activities, and to manage large scale integration efforts.

Experience and expertise in all functional areas has been de-valued and contributes to a "Conspiracy of Hope" in which we understate cost, risk and technical readiness and, as a result, embark on programs that are not executable within initial estimates. This lack of experience and expertise is especially true for our program management cadre.

The Department of Defense exacerbates these problems by not having an acquisition career path that provides sufficient experience and adequate incentives for advancement. The aging science and engineering workforce and declining numbers of science and engineering graduates willing to enter either industry or government will further enforce the negative impact on the Department's ability to address these concerns.

With the decrease in government employees, there has been a concomitant increase in contract support with resulting loss of core competencies among government personnel.

Performance Improvement

To become a competent procurer of capability and improve performance, it is necessary to rebuild and value the acquisition workforce as well as to stabilize its leadership. It is time to "go back to basics" and make Acquisition a core competency in the Services, comparable to the combat arms.

Implementation Criteria

The following criteria should be met prior to the stand-up of the new Four-Star Acquisition Systems Commands, by Fall 2006.

- Seek legislation establishing the Service Acquisition Executives as five year, fixed-term presidentially-appointed and Senate-confirmed positions renewable for a second five year term to add leadership continuity and stability for the process.
- Request that the White House Liaison Office create a pool of acquisition-qualified, pre-cleared non-career senior executives and political appointees to fill executive positions. This will add leadership continuity and stability to the acquisition process.
- Seek legislation to retain high-performance military personnel in the acquisition workforce, to include allowing military acquisition personnel to remain in uniform past Defense Officer Personnel Management Act mandated years of service and augment their pay to offset the "declining marginal return" associated with retired pay entitlements.
- Increase immediately the number of the Department's Acquisition federal employees focused on critical skill areas such as program management, system engineering and contracting. The cost of this increase should be offset by reductions in funding for contractor support.
- Establish a consistent definition of the acquisition workforce to include all acquisition-related budget and requirements personnel and to reflect an integrated System.
- Establish and direct standard and consistent training, education, certification and qualification standards for the entire Acquisition workforce including acquisition-related requirements and budget personnel. These standards already largely exist for "little a" acquisition personnel. The standards for a newly created "requirements generation" career field and "acquisition budget" career field need to be created and implemented. (Figure 18)

LEADERSHIP

The key to creating and sustaining the kind of successful twenty-first-century organization is leadership -- not only at the top of the hierarchy, with a capital L, but also in a more modest sense (l) throughout the enterprise. This means that over the next few decades we will see both a new form of organization emerge to cope with faster-moving and more competitive environments and a new kind of employee. The twenty-first-century employee will need to know more about both leadership and management than did his or her twentieth-century counterpart. The twenty-first-century manager will need to know much about leadership.

"Leading Change"
John P. Kotter, Harvard Business School Press.
Chapter 12. Page 175. 1996

Extensive training and education programs are required to develop an effective workforce (Figure 18)

- Assign responsibility for and direct the newly established Four-Star Acquisition Systems Commanders to take aggressive and sustained action to enhance Acquisition Workforce training, education, experience levels and expertise.
- Designate the Four-Star Acquisition Systems Commanders as the certification authority for the Acquisition Workforce.
- Require political appointees assigned to acquisition-related positions to receive orientation about the Acquisition System and the Department of Defense administrative procedures prior to assuming positions.
- Assign workforce management responsibility to the Under Secretary of Defense for Acquisition, Technology and Logistics, to include career development training and promotion for personnel in the Offices of the Secretary of Defense, the Joint Staff and Defense Agencies.
- Reduce to 30 days the time required to establish and fill Senior Executive Service and Highly Qualified Expert positions.
- Submit legislation to reinstate Public Law 313 that provides for recruiting highly qualified personnel and placing them in positions where they may direct and supervise other federal employees.
- Infuse program management expertise into the workforce in the near-term by routinely contracting for and providing expert mentoring to Program Managers.
- Fund and direct the Services to implement an Acquisition Career Incentive Program to encourage highly experienced professionals to remain in the Federal Government and motivate the workforce to gain broader experience and greater expertise.

Budget

Performance Assessment

Successful Research, Development, Test and Evaluation and Procurement programs require stable budgets and accurate planning. Our assessment concluded that this stability does not exist. Current budget reallocations, and or, shortfalls are frequently resolved by stretching programs, thereby introducing instability and long-term cost growth. In taking these actions, the Department accepts long-term cost increases and delays in acquisition programs to achieve short-term savings and budget flexibility.

Major Findings

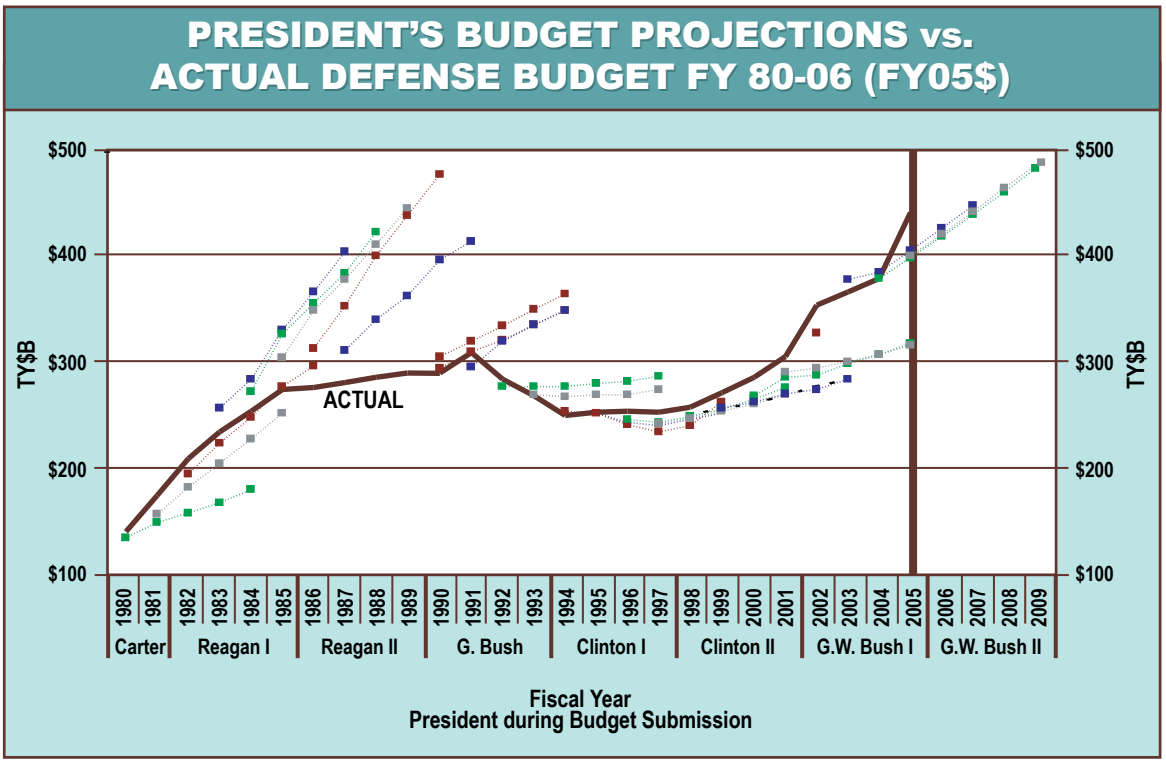
Variability between annual budget predictions and the ultimate budget authority makes program planning difficult.

Congressional inclination to take money from specific program elements for non-programmatic reasons as well as the Services' propensity to take procurement investment account money to pay Military Personnel and Operations and Maintenance bills have combined to create a root cause for program instability. (Figure 19)

CONGRESSIONAL CHANGES TO DEFENSE PROCUREMENT REQUESTS

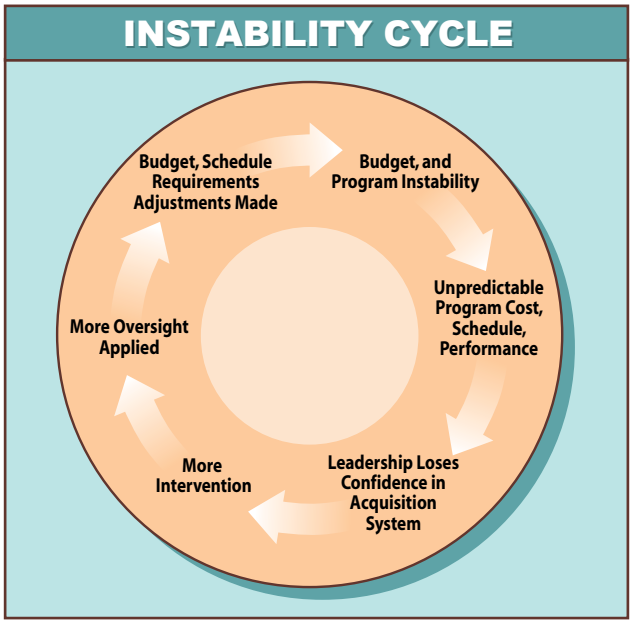
Fiscal Year	Request $M	Net Change		Additions Only		Subtractions Only		Gross Changes	
		$M	%	$M	%	$M	%	$M	%
1996	$39,409	$3,978	10	$8,468	21	-$4,490	-11	$12,958	33
1997	$38,937	$5,332	14	$7,961	20	-$2,628	-7	$10,589	27
1998	$42,606	$2,487	6	$5,140	12	-$2,653	-6	$7,793	18
1999	$48,705	$471	1	$2,923	6	-$2,452	-5	$5,375	11
2000	$53,020	$1,848	3	$5,686	11	-$3,838	-7	$9,524	18
2001	$61,191	$753	1	$5,967	10	-$5,213	-9	$11,181	18
2002	$61,129	$1,115	2	$6,005	10	-$4,889	-8	$10,894	18
2003	$68,710	$1,721	3	$7,118	10	-$5,398	-8	$12,516	18
2004	$72,746	$8,382	12	$12,976	18	-$4,594	-6	$17,570	24
2005	$74,904	$4,720	6	$9,806	13	-$5,086	-7	$14,892	20

Comparison of identical Department of Defense procurement lines between President's Budget Request and Congressional Appropriation. Differences can include changes due to congressional action, budget amendments, and supplemental budget appropriations. (Figure 19a)



Example of budget instability (Figure 19b)

Using optimistic budget estimates (50/50 prospects to achieve realistic cost projections, versus 80/20 prospects) for Military Personnel, Operations and Maintenance, Research, Development, Test and Evaluation and Procurement activities forces excessive annual reprogramming and budget exercises within the Department, which in turn causes program "restructuring" that drives long-term cost, causes schedule growth, and opens the door to requirements creep. Requiring the use of unrealistic inflation factors in program cost estimates and other planning factors causes further instability. (Figure 20)



The Department's management and oversight systems generate significant program instability (Figure 20)

The Research, Development, Test and Evaluation and Procurement accounts become the source of funding to cover shortfalls in the Military Personnel and Operations and Maintenance budgets.

The absence of a Program Management Reserve makes fiscal management extremely problematic for Program Managers. Not providing Program Managers with financial authorities, similar to what is available to nearly every corporate Chief Executive Officer and Chief Financial Officer, puts government acquisition executives at a significant disadvantage.

Performance Improvement

To correct the budget process, it is necessary to enhance the Planning, Programming, Budgeting and Execution system to achieve budget and programming stability by programming to high confidence estimates for all accounts and establishing a distinct Stable Program Funding Account. (Figure 21)

STABILIZING THE FUNDING FOR ACQUISITION

For the purpose of this performance improvement recommendation, the term "Stable Program Funding Account" is defined as a single account appropriated by the Congress that funds all Acquisition Category I Programs at the beginning of the fiscal year and is managed through a Capital Budgeting process. Capital Budgeting and execution is the total process of generating, evaluating, selecting and following-up on capital expenditures that are expected to have a significant impact on financial performance. Capital Budgeting means a budget process that identifies large capital outlays that are expected to be made in future years, together with identification of the proposed means to finance those outlays and the expected benefits of those outlays. Major Acquisition Programs would be fully funded at a level that would cover the program from Milestone A through the first delivery of low rate production.

Funds will be appropriated by Congress for Acquisition Category I Programs through the Under Secretary of Defense for Acquisition, Technology and Logistics, who will allocate the funds to the Military Departments in amounts equal to the approved program annual budgets. Military Departments will then be accountable for the individual program management and the stability of the programs.

This approach is a departure from the single line item budgeting that the Department has implemented in the past. Consequently, the Panel recommends a phased approach to implement the Stable Program Funding Accounts. The Under Secretary for Acquisition, Technology and Logistics should identify three to five Major Acquisition Programs for test programs. Successful results would give the Congress confidence that the Department is capable of executing a capital budgeting approach, while maintaining appropriate oversight and accountability. Stable Program Funding Accounts will establish a stability in the budgeting process that heretofore has been absent.

The Panel's proposal to stabilize the budget process (Figure 21)

The Stable Program Funding Account will be budgeted and programmed by the Under Secretary of Defense for Acquisition, Technology and Logistics for all Acquisition Category One programs at Milestone A through Initial Operating Capability. It is necessary to include and maintain a practical Management Reserve held at the Service level.

Implementation Criteria

Take explicit actions necessary to achieve stability that results in savings and flexibility in the current budgeting process.

- Establish a separate Stable Program Funding Account prior to submission of the Fiscal Year 2007 budget.
  - Complete a Concept of Operations with appropriate policies by defining organizational and leadership responsibilities, authority and accountability for a new and distinct Stable Program Funding Account, by Summer 2006.
- Require the Services to ensure that the acquisition process discipline is in place in order to support Capital Budgeting and execution.
  - Create Management Reserves in the Stable Program Funding Account by holding expiring termination liability budgeted funds at the Service level, under the authority of the Service Acquisition Executive, by early Spring 2006 for the Fiscal Year 2007 and subsequent budgets. Availability of a Management Reserve will substantially reduce the impact of unexpected technical upsets during program execution and thus stabilize the contract management and execution process.
  - Program and Budget in all accounts, and or categories to an 80/20 confidence level for inclusion in the Service Fiscal Year 2008 Program Objective Memorandum submissions.
  - Program for items such as those funded through the Small Business Innovative Research. Historically, they have been funded through a "tax" on programs.

Requirements – The Process

Performance Assessment

A successful acquisition process must be based on requirements that are relevant to the obvious security environment. Those requirements should be derived in a timely way from capability shortfalls identified by Combatant Commanders and should be informed by realistic technical assessments and fiscal guidance. Our assessment is that the current requirements

process does not meet the needs of the current security environment or the standards of a successful acquisition process. Requirements take too long to develop, are derived from Joint Staff and Service views of the Combatant Commands' needs and often rest on immature technologies and overly optimistic estimates of future resource needs and availability. This fact introduces instability into the system when the lengthy and insufficiently advised requirement development process results in capabilities that do not meet warfighter needs or the capabilities that are delivered "late-to-need."

Major Findings

Combatant Commanders participate but do not play a leading role in defining capability shortfalls, nor do they have a mechanism to identify areas of excess capability. Therefore, requirements frequently are not linked to the capabilities desired by the Combatant Commanders.

Senior military leadership is not adequately involved in managing the requirements process.

Neither the Joint Capabilities Integration and Development System nor the Services requirement development processes are well informed about the maturity of technologies that underlie achievement of the requirement or the resources necessary to realize their development.

No time-phased, fiscally and technically informed capabilities development and divestment plan exists to guide and prioritize the development and understanding of weapon system requirements.

The Joint Capabilities Integration and Development System, like its predecessors, is slow and complex. It is particularly ill-suited to respond to urgent needs arising from current operations and is structured for a "Cold War," traditional opponent.

There is a significant disconnect between "requirements management and development" and the budget and acquisition processes in the Acquisition System.

Most of the comments that the Panel received concerning the Joint Capabilities Integration and Development System found it too complex, with little added value in defining capabilities that require Materiel Solutions or that establish actionable parameters to guide program definition. The consequence is a widely-held doubt that the Department is acquiring the "right things" in the "right quantities."

Management of the requirements process was the third most frequently cited issue of concern among our observations.

While satisfying urgent needs depends on readily available new technologies, the Department's science and technology program is not adequately sized and structured to meet this requirement. It is not well-integrated with major system acquisitions and does not efficiently transition technology into products rapidly, if at all. Further, active investigation and infusion of science and technology efforts conducted by non-defense or small businesses is not routinely solicited. This results in lost opportunities.

Performance Improvement

Replace the Joint Capabilities Integration and Development System with the Joint Capabilities Acquisition and Divestment Plan. The Panel proposes this Plan in which the Combatant Commands play the lead role in defining needed capabilities, and Services and Department of Defense Agencies compete to provide solutions. (Figure 22)

JOINT CAPABILITIES DIVESTMENT ACQUISITION PLAN

Our proposed requirements' development process will include two major activities designated to help the Department procure a balanced portfolio of capabilities responsive to current and future operational needs of the combatant commands -- to "buy the right things."

- *The first activity is a two-year, recurring process to produce an integrated, time-phased and fiscally-informed Joint Capabilities Acquisition and Divestment (JCAD) Plan.*
- *The second is a continuous Materiel Solutions Development Process to identify and initiate development of materiel solutions to satisfy needs identified in the JCAD Plan.*

The Panel developed an implementation plan and a process flow and schedule for the Joint Capabilities Acquisition and Divestment Plan System (Figure 22)

To participate in this Divestment Plan, Combatant Commands should develop 15-year extended planning annexes for each of their operational plans. These annexes should consider projected changes in the environment and potential threats in their areas of responsibility. They should match them against Service and or Agency programs of record to identify capability gaps or areas of excess capability and we provided the resources to accomplish this effort.

The Combatant Commands should define the capability required and the date by which the capability is needed, the relative priority of the capability, and a time-phased plan for divesting current capabilities or assets that are either reaching the end of useful service life, or which are excess-to-need.

The Joint Requirements Oversight Council should then integrate these Combatant Commands analyses into a time-phased, fiscally-informed Joint Capabilities Acquisition and Divestment Plan. The Under Secretary of Defense for Acquisition Technology and Logistics should be a full member of the Joint Requirements Oversight Council.

This plan should guide the development of fiscally and time-constrained Materiel Solution solicitations against which the Services and other Agencies of the Department propose solutions to address the needs. A parallel, but much accelerated, process should be developed to respond to urgent needs identified by Combatant Commands engaged in ongoing operations.

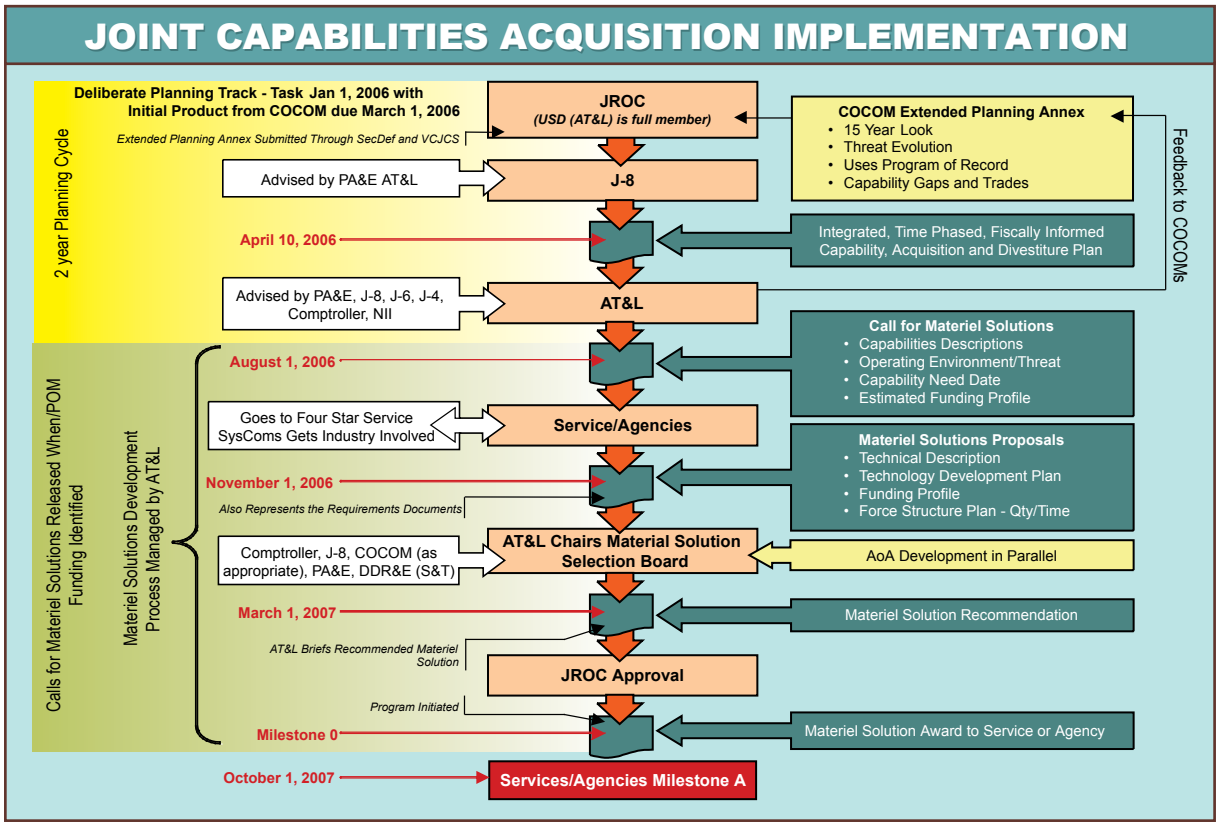
We recommend the first Joint Capabilities Acquisition and Divestment process planning cycle be compressed to 100 days in order to kick start the process of acquisition performance improvement, recognizing that this first plan, and the processes used to create it, will require much refinement and improvement as it evolves. Nevertheless, with strong and determined leadership, this first Joint Capabilities Acquisition and Divestment Plan will identify the Combatant Commander's highest priority capability needs and will serve as an adequate guide to the Materiel Solutions Development Process, until a more refined product can operate.

Upon completion of the compressed Joint Capabilities Acquisition and Divestment process planning cycle, the Office of the Joint Chiefs, Force Structure, Resources and Assessment Directorate (J8) should lead a two-month assessment of the process to identify lessons learned and develop detailed instructions to guide the next planning cycle, by Spring 2008.

Implementation Criteria

To meet the needs of the current security environment and to establish a successful process for determining credible requirements for the warfighter, the Panel believes a replacement for the Joint Capabilities Integration and Develop System is necessary. The chart depicts the Joint Capabilities Acquisition and Divestment system that the Panel recommends. (Figure 23)

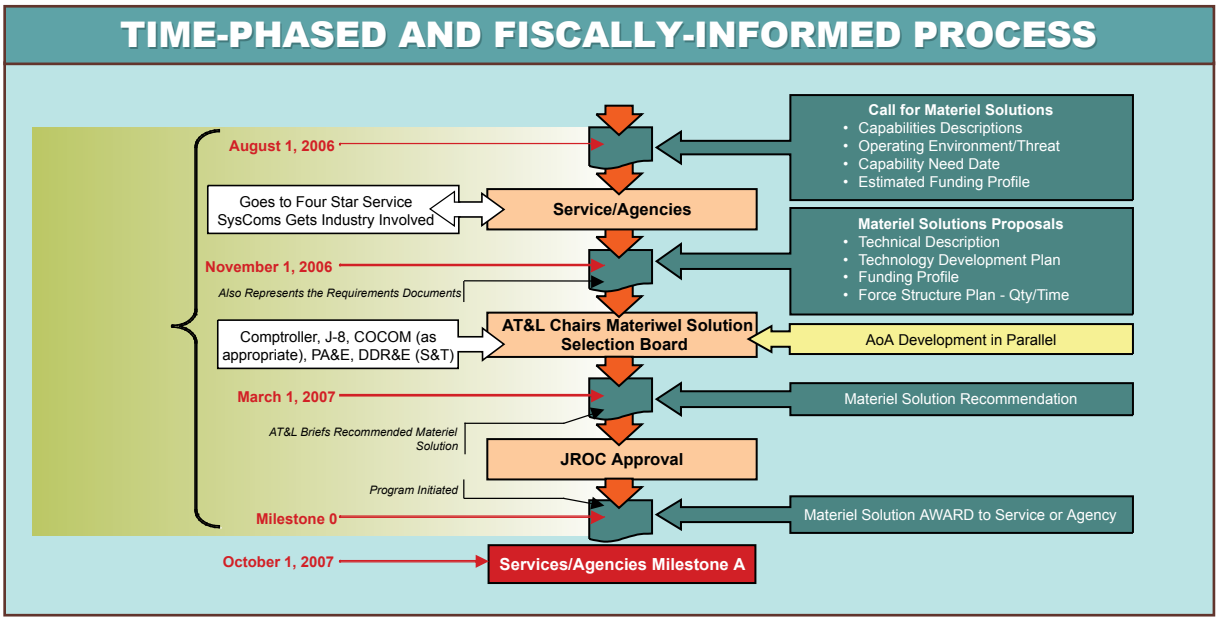
- Direct the Combatant Commanders with support from the Services and other Defense Agencies to prepare 15-year Extended Planning Annexes to include capability gaps and redundancies for all Operational and Contingency Plans and to submit this extended plan to the Secretary of Defense, by early Spring 2006.



If implemented immediately, the Panel's Joint Capabilities Acquisition and Divestment Plan process can support the Fiscal Year 2007 budget development process (Figure 23)

- Annexes will match the capabilities that are expected to be provided by the program of record in support of the Combatant Commanders' assessment of those capabilities needed to successfully accomplish the missions for which the plan was created.
- Annexes will use a 15-year planning horizon and will consider expected changes in threats, the geopolitical environment, and doctrine, training and operational concepts. It will also include potential capability enhancements from the program of record and current science and technology programs.
- Annexes will be time-phased with capability assessments provided for the current year as well as 5, 10 and 15 years into the future.
- Annexes will identify and prioritize gaps not likely to be closed by the program of record, as well as areas where the program of record is expected to provide more capability than required.

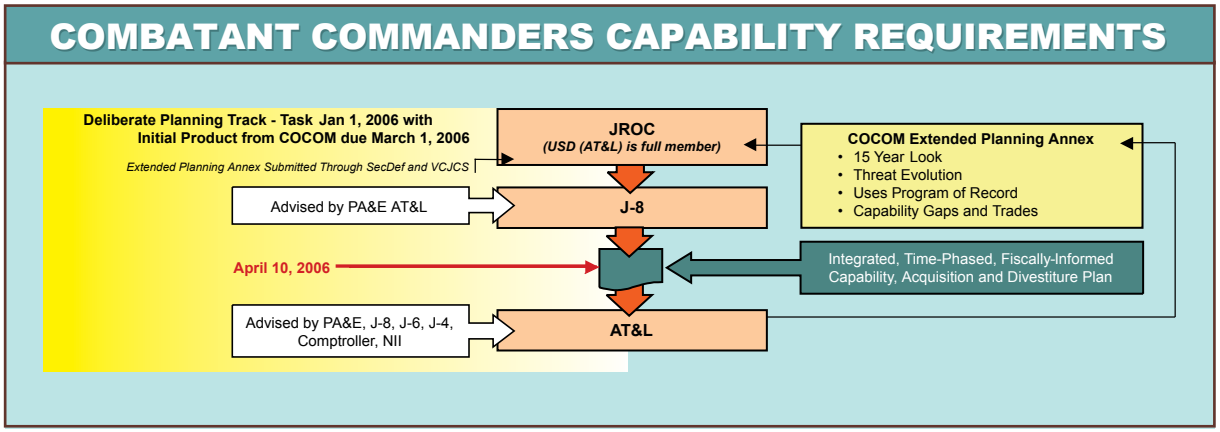
- Direct the Joint Staff to coordinate with the Services and the Office of Program Analysis and Evaluation and the Office of the Under Secretary of Defense for Acquisition, Technology and Logistics to integrate the Combatant Commander's Annexes into a departmental time-phased, fiscally-informed and prioritized Joint Capabilities Acquisition and Divestment Plan, by early Spring 2006. This part of the process repeats on a two-year cycle while the actions shown in the Figure 25 are a continuous execution process paced by resource availability. These actions fit in the Joint Capabilities Acquisition and Divestment process. (Figure 24)



The Joint Capabilities Acquisition and Divestment Plan process delivers a time-phased, fiscally-informed and prioritized plan (Figure 24)

- Direct the Under Secretary of Defense for Acquisition, Technology and Logistics, with support from the Office of the Secretary of Defense for Program Analysis and Evaluation; Office of the Joint Chiefs Logistics Directorate (J4); Command, Control, Communications and Computer Systems Directorate (J6), and Force Structure, Resources and Assessment Directorate (J8); the Office of the Assistant Secretary of Defense Networks and Information Integration; and the Office of the Secretary of Defense, Comptroller to prepare an initial set of "Calls for Materiel Solutions" for release, by late Summer 2006. The Under Secretary of Defense for Acquisition, Technology and Logistics will release "Calls for Materiel Solutions" only when resources can be identified in the Program Objective Memorandum to fund potential solutions. The initial set of "Calls for Materiel Solutions" will be developed to satisfy the highest priority capability gaps identified in the newly established Joint Capabilities Acquisition

and Divestment Plan, for which resources can be identified. After completion of these initial "Calls for Materiel Solutions," subsequent "Calls for Materiel Solutions" will be prepared and released on a continuous basis as resources are identified in the Program Objectives Memorandum and long-range financial plans. A "Call for Materiel Solutions" is analogous to a "Request for Proposal" and will include a detailed description of the capability to be provided, the environments in which it will be expected to operate, the threats it is expected to face, a capability need date and an estimated funding profile for Systems Design and Development and procurement. "Calls for Materiel Solutions" will be informed by a dialogue with the Services and Defense Agencies, just as Request for Proposals are currently informed by Request for Information and other forms of collaboration with industry. (Figure 25)



The Joint Capabilities Acquisition and Divestment Plan process creates robust competition for Materiel Solutions to fill the Combatant Commander's capability gaps (Figure 25)

- Direct the Office of Program Analysis and Evaluation to initiate work on Analyses of Alternatives as likely alternative solutions become clear.
- Direct the Office of Program Analysis and Evaluation to complete Analyses of Alternatives on the initial set of "Calls for Materiel Solutions" in order to support "Materiel Solution Awards," by early Spring 2007.
- Direct interested Services and Defense Agencies to respond to the "Calls for Materiel Solutions" and submit an initial set of "Materiel Solution Proposals" to the Under Secretary of Defense for Acquisition, Technology and Logistics, by Fall 2006. Materiel Solution Proposals will include a detailed technical description of the solution, a technology development and maturation plan, a concept of employment, a proposed force structure quantity and rate of fielding, and an estimated cost. Note that this is not

a program baseline. Preparation of Materiel Solution Proposals will be led by the Service Four-Star Acquisition Systems Commands and Agency counterparts, and is expected to involve extensive collaboration with their industry partners who will compete for subsequent Systems Design and Development and production contracts.

- Direct the Under Secretary of Defense for Acquisition, Technology and Logistics with support from the Office of the Secretary of Defense for Program Analysis and Evaluation; the Office of the Joint Chiefs of Staff, Resources and Assessment Directorate (J8); the Director of Defense Research and Engineering, the Office of the Secretary of Defense, Comptroller and the staff of the requiring Combatant Commanders to evaluate Materiel Solution Proposals submitted by the Services and Agencies and recommend solutions for approval by the Joint Requirements Oversight Council.
- Direct the Joint Requirements Oversight Council to award authority to initiate a program to the selected Service or Agency for the initial set of programs resulting from the Joint Capabilities Acquisition and Divestment Plan, by Spring 2007.
- Formally establish programs at Milestone 0 at which time the Program Execution Agent (Service or Agency) for the Under Secretary of Defense for Acquisition, Technology and Logistics and Service Acquisition Executives will be identified and the specific program budget will be created.
- Direct the Program Execution Agent (Executing Service or Agency) to fund program initiation activities and achieve a Milestone A decision for the initial set of programs resulting from the Joint Capabilities Acquisition and Divestment Plan, no later than Fall 2007.
- Direct the Director, Defense Research and Engineering to coordinate service science and technology transition plans to minimize duplication of effort, enhance cross service application of emerging technology and re-emphasize “technology push”.
- Establish a permanent Advanced Technology System Deployment budget in the Office of the Director, Defense Research and Engineering to expand the current Advanced Concept Technology Demonstration program. The expansion will enable systems to be deployed to meet Combatant Commanders’ emerging needs without having to get a single Service to take ownership under a new or existing program of record.
- Request funding in the Fiscal Year 2008 budget submission to exploit maturing technology and field equipment and capabilities that are responsive to evolving changes in the security environment identified by the Combatant Commands (two-to-four year horizon).

- Conduct a realistic annual experiment exercise, cosponsored by the Director Defense Research and Engineering and the Joint Staff, to evaluate technology, innovative concepts and capabilities and to validate emerging requirements and technology maturity, beginning in Fiscal Year 2007.

Requirements – Managing Operational Testing

Performance Assessment

The current Operational Test and Evaluation process is creating program instability by introducing new requirements through the testing process. Instability of requirements is also introduced by policy mandates and changes in acquisition rules.

Major Findings

The length of the program development cycle provides many opportunities for requirement growth that result in instability in the requirement process.

In addition, we observed many instances in which programs formerly declared to be Not Operationally Effective by the Director of Operational Test and Evaluation were actually fielded in combat situations and proved to be operationally useful. The Joint Surveillance Target Attack Radar System, Joint Direct Attack Munitions, Predator - Medium Altitude Endurance Unmanned Aerial Vehicle, and the F-15E Long-Range Interdiction Fighter are examples.

There is an inclination for the test community to drive increased requirements that are not otherwise identified in program baselines or by the Combatant Commanders.

Changes in acquisition instructions, policies and mandates are applied to programs that are already baselined, without consideration for cost or schedule impact. The LINK-16 and Joint Tactical Radio System programs and the interoperability Key Performance Parameter are examples of this problem.

Between Fiscal Years 2002 and 2005, the Test and Evaluation workforce grew by over 40 percent while the program management workforce declined by 5 percent, production engineering declined by 12 percent and financial managers declined by 20 percent. This imbalance creates an environment in which requirements can be created and grow through the test and evaluation process, outside of the ability of the acquisition process to manage or control them.

Performance Improvement

Make operational testing more realistic, time and resource constrained, and limited in its ability to create additional performance requirements.

Create a new category for Initial Operational Test and Evaluation results that allows Combatant Commanders to accept useful capabilities for deployment which the Director of Operational Test and Evaluation would otherwise determine to be Not Operationally Effective.

Require that test planning and criteria development for Operational Test and Evaluation reflect testing in environments and against the range of threats that are identified by the Combatant Commander -- not by the test community.

Give Program Managers explicit authority to defer non-Key Performance Parameter related requirements to later acquisition "spirals" or "block upgrades" to meet time-certain standards, after Milestone B.

Require Joint Requirement Oversight Council approval of all test plans that require operational testing in environments other than those established in the Test and Evaluation Master Plan, the Initial Operational Test and Evaluation Plan, and placed under contract at Milestone B. If such testing is approved, require that remediation of any deficiencies noted during testing in changed environments will be corrected in future upgrades rather than prior to first article delivery and require that additional program budgets be allocated accordingly.

Implementation Criteria

Enhance requirements stability by modifying Initial Operational Test and Evaluation processes and procedures and establishing realistic testing based upon needs and threat environments defined by the Combatant Commanders.

- Submit legislation and provide new instructions to establish a third category, Operationally Acceptable, for Initial Operational Test and Evaluation test results by Spring 2006. Systems would be evaluated as Operationally Acceptable when the system performance is not fully adequate when tested against criteria established by the Director of Operational Test and Evaluation, but when the Combatant Commander has determined that the system, as tested, provides a useful capability and the Combatant Commander desires immediate fielding of the capability as tested. This will limit the addition of requirements during tests for system performance that go beyond the levels established at System Design and Development contract award.
- Review and modify applicable regulations relative to Program Manager Authority to empower the Program Manager, after Milestone B, to defer requirements other than those established as Key Performance Parameters to later blocks or spirals meet Time Certain Development standards, by early Spring 2006.

- Review and modify applicable regulations to require Joint Requirements Oversight Council approval to conduct Initial Operational Test and Evaluation in an environment other than that defined and documented in the Test and Evaluation Master Plan and the Initial Operational Test and Evaluation Plan at the Milestone B decision, by early Spring 2006.
- Revise Joint Requirement Oversight Council procedures, by early Spring 2006. Remediation of any deficiencies resulting from testing at the Initial Operational Test and Evaluation in an environment other than the specified decision documented at that the time of the Test and Evaluation Master Plan decision will be a candidate for future system upgrades only at the Milestone B juncture, rather than prior to first article delivery.
- Increase the size of the test and evaluation workforce to reflect an appropriate balance with the size of other Acquisition System workforce, by Fall 2006.

Acquisition – The Process

Performance Assessment

Successful acquisition processes need the stability that results from a successful acquisition strategy and best value to the government. Our assessment is that current acquisition strategies encourage a "Conspiracy of Hope" that introduces instability at the very beginning of acquisition programs. The "Conspiracy of Hope" occurs when industry is encouraged to propose unrealistic cost, optimistic performance and understate technical risk estimates during the acquisition solicitation process and the Department is encouraged to accept these proposals as the foundation for program baselines. The "Conspiracy of Hope" is reinforced by the cost-plus environment in our current acquisition strategies that encourages industry to be overly optimistic in their bids by imposing little or no financial risk to those who submit such bids.

Major Findings

The government starts fewer "new" programs which in turn produces a "must win" environment for industry on programs now being competed.

Defense industry consolidation results in fewer bidders. This makes it harder for the government to obtain the advantages of competition.

Proposed cost is a significant factor in source selections. Many awards go to the lowest bidder, even in best value determinations, when cost is weighted as the least important evaluation factor for award.

The current process for development of solicitations and subsequent contract structures does not adequately incentivize desired contractor performance, either during competition or after contract award.

The Center for Strategic and International Studies observed that because of the Department's culture of "cost rather than value," it would rather pay $10 billion and 4 percent margins than $500 million and 20 percent margins for a system.

Performance Improvement

A risk-based source selection process must be adopted. For development contracts, proposal cost should be replaced by industry and government agreements on a high confidence cost estimate for the desired capability and a subsequent determination, by Source Selection Authorities, of a competitive range based upon which high confidence costs of these proposals are considered to be affordable.

Following this determination, Source Selection Authorities should evaluate technical and management proposals and base their source selection decisions on technical and management risk of the proposal as well as the ability to achieve cost and schedule targets. At contract award, the agreed high confidence cost should be set as the contract target cost and industry should be incentivized aggressively to deliver at or below that cost.

Implementation Criteria

Create acquisition strategies for each program prior to Milestone A that reflect restructuring source selection competitions for Acquisition Category I and II programs to significantly shorten their length and base their results on system risk and management performance instead of cost.

- Establish streamlined procurement and milestone review processes to substantially reduce time-to-market.
- Establish source selection evaluation criteria to emphasize effective program management, subcontract management and low program risk.
- Create contract terms and conditions that require formal subcontractor level competition instead of internal make-or-buy assessments by the prime.
- Encourage use of both positive and negative incentive structures to promote desired contractor performance.
- Tie award fees to Contractor Performance Assessment Reporting system ratings.

- Change existing source selection guidance to include the following, as a minimum:
  - Create an environment of open communication to ensure that industry understands government requirements and government understands industry capabilities and limitations.
  - Include industry in development of program acquisition strategies for each phase of the process, and the acquisition and source selection plans for each competitive source selection.
  - Ensure traceability of requirements from program to the acquisition strategy to the acquisition plan, to the instructions to offerors, to the evaluation factors for award, to the contract incentive provisions and program control and to the performance evaluation metric selection.
  - Standardize the content of the Concept Development and Demonstration phase competitive prototype contracts to include conducting initial baseline review and preliminary design review for the contractor's proposed System Design and Development program.
  - Eliminate the requirement to share all questions or information submitted and eliminate answers provided to a single competitor with all competitors prior to issuance of the final request for proposals.
  - Incorporate existing scheduled contractor technical or program reviews as proposal elements, to the maximum extent possible.
  - Require oral presentations of proposals during source selection and encourage open exchanges between evaluators and industry, not limited to clarification only, during these presentations.
  - Use an affordability assessment based upon industry and government-agreed high confidence costs as the principal factor in competitive range determination during source selection. Once a competitor's government and industry agreed-to development cost is determined to be affordable, and thus the competitor is determined to be within the competitive range, no other consideration will be given to the development cost, other than cost realism, during subsequent competitive source selection evaluations for Concept Development and Demonstration and System Design and Development contracts.
  - Stress the critical nature of risk mitigation and completeness of data supporting offerors' claims as a heavily weighted evaluation factor for award.
  - Establish performance and schedule confidence as well as management confidence including subcontractor selection and management as primary evaluation factors

for award of Concept Development and Demonstration and System Design and Development contracts.

- Set target cost for cost-type concept development and system design and development contracts at the Cost Analysis Improvement Group estimate, identifying the difference between proposed and target cost as management reserve, aggressively incentivizing cost performance, and penalizing cost growth over target.

- Publish an instruction from the Under Secretary of Defense for Acquisition, Technology and Logistics codifying this recommendation.
  - Create an implementation plan for these recommendations, developed jointly by industry and government.
  - Publish the announcement of these proposed changes to the Federal Acquisition Regulation in the Federal Register, by Spring 2006.

Acquisition - Time Certain Development

Performance Assessment

Acquisition programs need to deliver timely products. Our assessment is that the culture of the Department is to strive initially for the 100 percent solution in the first article delivered to the field. Further, the "Conspiracy of Hope" causes the Department to consistently underestimate what it would cost to get the 100 percent solution. Therefore, products take tens of years to deliver and cost far more than originally estimated.

The acquisition process is slow, overly complex and incompatible with meeting the needs of multiple, competing, departmental demands, in a diverse marketplace. The Department does not adequately consider many significant issues, such as impacts on the industrial and vendor base, the competitive pressure to win, and the willingness to take risks when creating the initial acquisition strategies for programs. This results in programs being structured without due consideration for the implications of technology maturity, and in setting unrealistic scheduling for program success.

The Department of Defense's "one size fits all" acquisition program structure does not meet the diverse capability and rapid time of delivery needs that are typical of a rapidly changing security environment.

Major Findings

The Department of Defense 5000 series Directives set Milestone B in advance of System Requirements Review and before technology and system design are sufficiently mature to establish high confidence regular cost, schedule and performance thresholds.

The greatest trade space for programs and the largest risk reduction opportunities exist between Milestone A and Milestone B. The Department places most program focus on Milestone B. The balancing and integration of technology maturity, system capability, cost and program risk is not being achieved and agreed to prior to Milestone B, thereby engendering excessive cost, schedule and performance risk.

Technology maturity or "knowledge-based" development has been a subject of considerable discussion between the Department and the Congress. However, although there is agreement concerning the advantages of ensuring that technology is mature prior to proceeding to development and production, there are no clearly definable measures of technology readiness. This inability to define and thus measure technology readiness facilitates decisions to incorporate immature technology in system design at Milestone B which subsequently leads to technical problems during System Design and Development. This, in turn, begins a long cycle of instability, budget and requirements changes, costly delays and repeated re-baselining.

Repeated re-baselining masks cost increases and lengthens schedules. The increased costs are aggregated in Selected Acquisition Reports and erode confidence in the Acquisition System. There is no coherent, standardized tracking system and accountability is lost.

When lengthy development nears completion, changes in threat definition and test scenarios cause systems to fail Initial Operational Test and Evaluation. The rework required to accommodate the changes prior to first article delivery drives cost and schedule growth.

The vulnerability of programs to these changes increases as schedule lengthens. New mandates, changes in acquisition rules, and new policies are applied to programs already baselined, thereby driving costs up and lengthening schedules.

While the former Department of Defense Directive 5000.2R has been reissued as a "guidebook", it effectively remains a compliance document, forcing all programs to adopt a similar architecture and comply with a similar set of processes.

Performance Improvement

There is a need to shift to Time Certain Development and make "schedule" a Key Performance Parameter. Developmental programs must change their focus to deliver useful military capability within a specified time (nominally no more than six years for major platforms) from Milestone A.

Time Certain Development enforces evolutionary acquisition by making time the focus of the up front requirement statement. Capabilities should be upgraded over time as technologies mature and operational requirements become clearer. Time Certain Development differs from prior attempts at valuing time to market, such as evolutionary acquisition and spiral development in that a maximum number of years is mandated, the start and end dates are defined, and the driving processes (requirements, budget, source selection, etc.) are revamped to support it.

At Milestone B, when technology maturity and system design are sufficiently mature to set high confidence cost, schedule, and performance thresholds, program baselines should be established to meet a specified time (nominal six year timeline) from Milestone A to delivery of the first Operationally Acceptable capability to the operating force. Time Certain Development adds "time" as a factor critical to the discussion of the need to balance cost and performance. (Figure 26)

DEFENSE ACQUISITION MODEL

"While we would model defense acquisition after the practices of the best industrial companies, we recognize the unique problems DoD faces. Management of the acquisition of military equipment requires a unique blend of flexibility and judgement. The contributions of innovative scientists and engineers, necessary for equipment to achieve maximum performance, must be matched by those of military personnel who will use and maintain the equipment. Overlaying these complexities is the need for an informed tradeoff between quantity and quality. At some point, more weapons of lower performance can overcome fewer weapons of higher performance. Hence it is necessary to achieve a critical balance between high military capability and low life cycle cost. In these and other respects, defense acquisition is one of the most difficult management jobs."

"President's Blue Ribbon Commission on Defense Management"
The Packard Commission. April 1986

We must add "time" as a factor to the Packard Commission discussion of the need to balance cost and performance (Figure 26)

Program Managers should be empowered with accountability and authority to manage their program. This includes empowerment to defer to future upgrades non-Key Performance Parameter requirements that cannot be satisfied within the time established to deliver an operational capability. Unity of effort in the acquisition community is critical across the Department once the baseline is set.

Today's Acquisition System should be replaced with one that recognizes both the importance of time-to-need and the critical role that technology maturity plays in achieving program success. At Milestone 0, a realistic capability delivery date, the definition of an initial operationally useful capability and the level of acceptable technology risk, based on the current level of technology readiness of major potential subsystems components, should be established.

Once the time-to-need and the current technology risk level are determined, the program should be time-constrained. We recommend no more than six years from Milestone A to fielding of the first operational article. Also, technical performance should be traded off to maintain this schedule. Subsequent system or platform improvements, to enhance performance initially, above the agreed upon useful capability level, can be made in block or spiral upgrades. This approach gets weapon systems fielded more quickly and at lower risk with acceptable operational capability.

Implementation Criteria

- Issue an amendment to Department of Defense 5000 series Directives, to endorse Time Certain Development as the preferred acquisition strategy for major weapons systems development programs, by Spring 2006.
- Require delivery of the first unit to operational forces within approximately six years of the Milestone A decision. Set fixed durations for program phases based on integrating technology with maturity appropriate to the program phase, defined risk reduction horizons and mutually agreed (acquisition, requirements, budget and industry) Program Execution Criteria and establish the Acquisition Category for each program at Milestone A. The established durations will not be adjusted to accommodate new requirements or capability enhancements prior to fielding the useful military capability. Evolutionary acquisition, spiral development or block upgrades will be used to allow for the inclusion of enhancements and increased requirements.
- Establish technology readiness levels for the system design to support the fielding of the capability in the specific time frame.
- Use early fielding of a basic capability to allow operational users to gain a clear understanding of the requirements to be incorporated during future block or spiral upgrades and the technologies that are sufficiently mature to enable producers to satisfy those requirements.
- Time Certain Development and improved program management will substantially reduce time in development for systems, reducing pressure on investment accounts and increasing funding stability for all development programs. Include the following provisions in the directive update.

- Require Joint Requirement Oversight Council revalidation for any program that fails to meet a specific time constraint.
- Reposition the Milestone B decision to occur at Preliminary Design Review, when designs are mature and realistic cost determination is possible.
- Require the Test and Evaluation Master Plan and the Initial Operational Test and Evaluation Plan be completed and signed before the program is baselined at Milestone B. Include the Program Manager as a signatory on both test plans.
- Appoint certified professional acquisition Program Managers accountable for each baseline with tenure beginning prior to the appropriate Milestone B approval and ending with completion of the Beyond-Low Rate Initial Production (LRIP) Report.
- Direct each newly appointed Four-Star Acquisition Systems Commanders to implement these changes, no later than Fall 2006.
- Task the Director, Defense Research and Engineering to establish rigorous, demonstrable definitions for technology maturity at the component, subsystem and system level, by early Summer 2006.

Industry

Performance Assessment

Successful acquisition requires a stable environment of trust and confidence between government and an industrial base that is responsive and healthy. This fosters competition for ideas and solutions to efficiently and effectively provide required capabilities and guaranteed best value for the government. Our assessment is that the consolidation of the industrial base, caused by unstable defense demand, has reduced the benefits of competition, introduced industrial organizational conflict of interest issues, and made every defense contract a "must win" situation for the prime contractors. The net result is that the U.S. industrial base is fragile. It will re-learn very expensive lessons with every program and will require the re-building of infrastructure, tailored to each new program.

Major Findings

Goldwater-Nichols reforms were designed in a different world of 20 more than prime contractors, multiple new starts and huge annual production run (585 aircraft, 2,031 vehicles, 24 ships, 32,714 missiles). Today there are six primes that the Department cannot live without, few new starts and low rates of production (188 aircraft, 190 combat vehicles, 8 ships/subs, 5,702 missiles) plus a need to respond quickly to urgent operational needs. This reduced demand has had major consequences.

The consolidation of the U.S. defense industry to just six major suppliers over the last 19 years, coupled with the volatility in Department investment accounts and weighted profit and fee guidelines has both limited the competitive landscape (making the idea of cost competition less meaningful) and removed industry's incentive to invest in capital equipment and research and development.

The Department does not have adequate access to emerging commercial innovations and technology from both large and small commercial businesses. While we did not have sufficient time to consider this growing issue in detail, it poses a serious impediment to the Department's ability to strategically exploit emerging technology and to obtain the goods and services required by the Department at the lowest possible cost.

Consolidation of the defense industrial base, vertical integration of a limited number of suppliers, and erosion of the supplier base at the second and lower tiers have reduced the benefits of competition and increased acquisition instability. Department of Defense acquisition strategies that consolidate multiple capability needs into "single weapon system procurement" force industry into "must win" cost competitions. In these competitions, industry typically proposes contract costs with a 20 percent confidence that the resources (dollars and time) are sufficient to deliver the proposed technical solutions. Although independent cost analysis and technical assessments conducted by the Department routinely establish most probable costs and schedules for these proposals at appropriate levels, contracts are awarded at the proposed cost and baselined against proposed schedule. Department requirements to budget programs to the most probable cost are routinely interpreted to apply only to the budget years. This "Conspiracy of Hope" almost guarantees that programs will encounter significant cost and schedule upsets during development. Further, given that development contracts are required to be cost type arrangements, this calls into question the validity of assumptions underlying the advantages of cost competition. Acquisition strategies that drive "must win" situations ensure that industry will continue to pursue this behavior. Traditional cost competitions conducted in this environment that result in contract award at proposed contract prices ensure that the Department's history of cost and schedule in development programs upsets will continue.

The Department has not adequately addressed the globalization of the defense industry. Provisions of the export control regimes do not acknowledge the dynamics of a global market place and are having a substantial impact on international competitiveness for American businesses. In some cases, these controls and conditions are providing strong disincentives to businesses to make their products or technologies available to the defense industry. The Department should review and make specific determinations to identify critical military technologies and to refine the export control process. (Figure 27)

EXPORT CONTROLS

While the defining measurement of the Cold War was weight, particularly the throw weight of missiles, the defining measurement of the globalization system is speed; speed of commerce, travel, communication and innovation. Globalization tends to revolve around Moore's Law which states that the computing power of silicon chips will double every 18 to 24 months, while the price will halve.

In the Cold War, the most frequently asked question was:
Whose side are you on?

In globalization, the most frequently asked question is:
To what extent are you connected to everyone?

In the Cold War, the second most frequently asked question was:
How big is your missile?

In globalization, the second most frequently asked question is:
How fast is your modem?

"The Lexus and the Olive Tree"
Thomas L. Friedman. Page 10.

The Department must acknowledge and deal with the dynamics of globalization (Figure 27)

Performance Improvement

The acquisition community can overcome the consequences of reduced demand by sharing long-range plans and restructuring competitions for new programs with the goals of motivating industry investments in future technology and improving performance on current programs.

Aside from these specific recommendations, we propose that the Department and Congress initiate an evaluation of the impact of industrial consolidations and their unintended effects. Such a review should be conducted with a view toward our current security environment and the nature of our fundamental assumptions about the industry upon which our policy, laws and regulations are based.

Implementation Criteria

- Establish a Defense and Industry roundtable hosted by the Deputy Secretary of Defense, by early Spring 2006. The roundtable sessions should be scheduled frequently with the Chief Executive Officers of the defense industry prime contractors and first tier subcontractors to share the Joint Capabilities Acquisition and Divestment Plans and align industry and defense strategic planning. This will encourage industrial investment in areas of importance to the Department and ensure that a robust industrial base responds to the Department's needs. (Figure 28)

The Department and industry must operate in close partnership to ensure that the Department remains able to obtain dominant warfighting capabilities (Figure 28)

- Establish a Blue Ribbon panel comprised of owners of large and small businesses that are not traditional Department of Defense suppliers to create an aggressive set of recommendations with accompanying implementation plans to eliminate the barriers to do business with the government.
- Require government insight and favor formal competition over make or buy decisions for major subsystems, particularly where a Lead System Integrator acquisition strategy is in place. The trend toward Lead System Integrator acquisition strategies is reducing subcontractor opportunities to compete and impacting the viability of the vendor base, thereby increasing the risk that the Department cannot achieve its required capabilities.

The Panel aggressively sought corrective actions necessary to improve the Acquisition System as reflected in the issues described above. The structure of the Panel and the expertise of the Panel's members and advisors provided a solid foundation to create "bold new ideas."

Section IV

The Project

The Panel

Panel members and advisors were selected for their expertise, diversity and long records of success in the field of defense acquisition and related disciplines. They are official members of a Federal Advisory Committee functioning as independent reviewers and advisors to the Department of Defense. (Figure 29)

PANEL MEMBERSHIP

PANEL MEMBERS

Chairman - Lieutenant General Ronald T. Kadish, USAF (Ret)
Partner and Vice President of Aerospace Market Group, Booz Allen Hamilton

Dr. Gerald W. Abbott
Professor and Director Emeritus Industry Studies, Industrial College of the Armed Forces

Frank J. Cappuccio
Executive Vice President and General Manager of Advanced Development Programs, Lockheed Martin Aeronautics

General Richard E. Hawley, USAF (Ret)
Independent Defense Industry Consultant

General Paul J. Kern, USA (Ret)
Executive Advisor and Senior Counselor, The Cohen Group

Donald R. Kozlowski
Former Vice President, McDonnel Douglas Aircraft Corporation, Aerospace Consultant

ADVISORS

Dr. Francis W. A'Hearn
Professor of Acquisition, Industrial College of the Armed Forces

Dr. Linda S. Brandt
Professor of Acquisition, National Defense University

Dr. Judy A. Stokley
Deputy for Acquisition, Air Armament Center

Mr. Alfred G. Hutchins, Jr.
President, Hutchins & Associates, Inc.

Panel members represented government, industry and academia (Figure 29)

Executive Director's Staff

The Deputy Secretary of Defense Gordon England assigned the task of conducting the Defense Acquisition Performance Assessment to the Executive Director, Mr. J. David Patterson, formerly the Special Assistant to then Deputy Secretary of Defense Paul Wolfowitz. Mr. Patterson was assisted by an executive staff of military and federal service personnel. (Figure 30)

DAPA SUPPORT

OFFICE OF THE EXECUTIVE DIRECTOR

J. David Patterson, Executive Director

K. Eileen Giglio, Deputy Director

Col Alan J. Boykin, USAF
Designated Federal Official and Director of Staff

Lt Col Rene Bergeron, USAF

Lt Col Annette Foster, USAF

Mr. Stephen Hayes

Ms. Maggie Souleyret

Ms. Annette Atoigue

REPORT EDITOR

Ms. Juli R. Branson

GRAPHICS SUPPORT

Ms. Protean Gibril, Project Manager

Ms. Colleen Wiatt, Graphics Designer

Mr. Carl Berry, Graphics Designer

The Executive Director and his staff were responsible for completing the Defense Acquisition Performance Assessment (Figure 30)

External Review Teams

The senior domain experts from government and the private sector generously agreed to contribute their time to advise us as we developed our assessment and performance improvement recommendations. Two separate teams met on three different occasions. With the assistance of a facilitator, provided by the Defense Acquisition Performance Assessment Project, they independently discussed the issues and provided their inputs and observations to the Chairman at the end of each session. Their views were extremely helpful and many were incorporated in these final assessments and major findings. Their participation, however, does not necessarily indicate their agreement with our final report or the assessments and improvements that are suggested. (Figure 31)

EXTERNAL REVIEW TEAMS

SENIOR REVIEW TEAM

Ms. Carolyn Becraft
President, Becraft Associates

Dr. Lawrence Delaney
Executive Vice President of Operations, The Titan Corporation

Mr. John Douglass
President and CEO, Aerospace Industries Association

Lieutenant General Lawrence P. Farrell, USAF (Ret)
President, National Defense Industrial Association

Dr. Jacques Gansler
Vice President for Research, Director (Robert C. Lipitz Chair),
Center for Public Policy & Private Enterprise, University of Maryland

Dr. John Hamre
President and CEO, Center for Strategic & International Studies

General Lester Lyles, USAF (Ret)
President, The Lyles Group

Maj General Darryl Scott, USAF
Commander, Defense Contract Management Agency

Mr. David Van Buren
Chairman, NovaSol

Review teams provided valuable independent, highly experienced views to the Panel (Figure 31)

EXTERNAL REVIEW TEAMS
INTERMEDIATE REVIEW TEAM
Mr. Paul Brinkley Deputy Under Secretary of Defense for Business Transformation
Mr. Pierre Chao Senior Advisor, International Security Program, Center for Strategic and International Studies
Lt Col Sarah B. Cliatt, USAF Deputy Director, Programs Support and Planning, Space and Missile Center, Financial Management Programs Support and Planning
Ms. Lisa Davis Principal Director, Innovation and Leadership, Advanced Systems & Concepts, Office of the Under Secretary of Defense
Mr. Joseph Diamond Director, Air Force Office of Small and Disadvantaged Business
Mr. Jon Etherton Vice President of Legislative Affairs, Aerospace Industries Association
Mr. Tom Heinsheimer Managing Director, Colbaugh & Heinsheimer Consulting, Incorporated
Mr. Bill Sain Deputy Director, Acquisition Regulation Systems, Federal Acquisition Regulation Council
Ms. Joanne Schoonover Senior Manager, Advanced Solutions Team, Raytheon

(Figure 31) Continued

Air Force Support

Deputy Secretary England requested that the Air Force sponsor this effort. The Air Force acquisition team provided exceptional support to us throughout the proceedings. Significantly, Mr. Blaise Durante, Deputy Assistant Secretary of the Air Force for Acquisition Integration, provided staff and arranged for contracting support as well as facilities. Without his assistance, we would not have met our milestones and objectives.

A facility was provided at 1560 Wilson Boulevard, Arlington Virginia where the Federal Advisory Committee Panel was able to hold open and closed sessions in an environment that provided support for the numerous meeting, preparation and analysis efforts. A special room was designated as a library and resource center for use by the Panel and staff.

Through the sponsorship of the Air Force, the support of the faculty and administration at the University of Tennessee College of Business Administration is particularly noteworthy. The University recognizes the need for acquisition professional development and has established a Masters of Business Administration with emphasis on defense and aerospace acquisition.

Senior Acquisition Executive Working Group

The Project Executive Director established the Senior Acquisition Executive Working Group to provide a communication link between the Panel and the Department's acquisition community. (Figure 32)

INTERNAL ACQUISITION COMMUNITY

SENIOR ACQUISITION EXECUTIVE WORKING GROUP

Ms. Deidre Lee
Director of Defense Procurement & Acquisition Policy, Office of the Secretary of Defense

The Honorable Claude Bolton
Assistant Secretary of Army (Acquisition, Logistics & Technology)

Mr. Blaise Durante
Deputy Assistant Secretary of the Air Force (Acquisition Integration),
Office of the Assistant Secretary of the Air Force for Acquisition

The Honorable John Young, Jr.
Assistant Secretary of the Navy for Research, Development and Acquisition

Mr. Frank Anderson
President, Defense Acquisition University

Service Acquisition Executives participated in frequent reviews and status of assessments (Figure 32)

Defense Acquisition University

The Defense Acquisition University contributed significantly to this assessment and provided excellent support to the Panel. Their efforts included obtaining reference materials for the DAPA Reference Library, and providing information briefings, and dedicated researchers to respond to our inquiries. Additionally, the Defense Acquisition University participated in the interview process, the survey data distillation and analysis process, and preparation of survey results. They will become the repository for all the data assembled by the Panel.

Panel Liaison Support Staff

The Army, Navy, Air Force and Under Secretary of Defense for Acquisition, Technology and Logistics provided staff to support the Project. The Project staff managed meeting logistics, provided administrative support, conducted analyses and research and reviewed documentation for our consideration.

Industry, Trade Association and Labor Union Participants

Industry, trade associations and labor unions contributed the time and talent of their senior personnel to develop and present briefings and reports to the Panel. (Figure 33)

DAPA SUPPORT

INDUSTRY

- Anteon Corporation
- BAE Systems, Incorporated
- Bechtel Group, Incorporated
- The Boeing Company
- Booz-Allen Hamilton
- Computer Sciences Corporation
- Flight Safety International
- The General Dynamics
- L-3 Communications Corporation
- Lockeed Martin Corporation
- Northrup Grumman Corporation
- Pratt & Whitney, A United Technologies Company
- RAND Corporation
- Raytheon Company
- Rockwell Collins

ASSOCIATIONS

- The Association of Scientists and Professional Engineering Personnel
- Aerospace Industries Association
- National Defense Industrial Association
- Salaried Employees Association
- Society of Professional Engineering Employees in Aerospace
- Business Executives for National Security
- Center for Strategic and International Studies
- Potomac Advocates
- The Potomac Institute for Policy Studies

OTHERS

- Defense Acquisition University
- National Defense University Foundation
- National Academy of Sciences

Active, voluntary participation by industry, trade associations, and labor unions was vital to the Project (Figure 33)

DAPA SUPPORT
LABOR UNIONS
International Association of Machinists and Aerospace Workers
International Brotherhood of Electrical Workers
International Federation of Professional and Technical Engineers (AFL-CIO & CLC)
United Automobile, Aerospace and Agricultual Implement Workers of America (UAW)
United Steelworkers of America
Independent Steelworkers Union

(Figure 33) Continued

Other Support

We are pleased by and appreciative of the participation of an extraordinary number of individuals and organizations that expressed interest in the Project and significantly contributed to the Panel's assessments. (Appendix A)

Section V

The Process

Study Approach

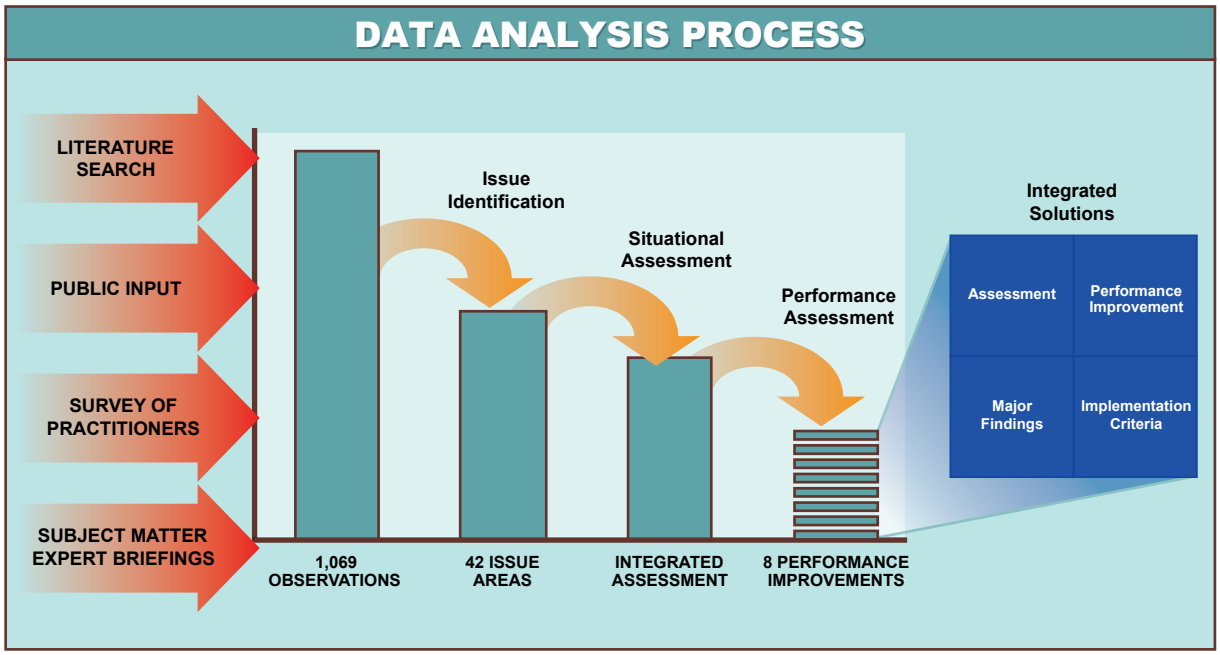
Our approach to this study is different from previous efforts in that it considers the totality of the acquisition processes and provides an implementation plan with time-definite implementation criteria. We embraced the "simple" and "timely" approach but sought the maximum resources available to us in a limited period of time in order to validate our findings. The comprehensive study approach and the diverse expertise on the panel led us to form significant assessments of the information that we had at our disposal. The stovepipes in the organizations and processes that we encountered led us to conclude that the only way to capture solutions is to integrate all the factors. Consultations with public and private experts, to test our observations as they evolved, were also part of the process. We held the Panel's activities as open and transparent as possible for the public while gathering as much input as practical from multiple sources in a four-to-five-month period.

During the course the Panel's work, new concepts, terms and definitions were created and were added to the glossary of terms. (Appendix B)

The Panel employed a qualitative assessment process to support their work.

- Gathering data
- Capturing observations
- Defining issue areas
- Developing assessments
- Identifying performance improvements
- Creating an implementation plan -- with performance improvement criteria

Conducting the data analysis process in this systematic manner provided a disciplined approach to identify acquisition process impediments and permitted the formulation of a set of performance improvement efforts linking all the major elements of the Acquisition System. (Figure 34)



Our qualitative assessment process allowed integration of inputs from diverse sources (Figure 34)

Data Gathering

We collected data from diverse sources.

- Baseline search and review of the historical literature and reform initiatives
- Subject Matter Expert briefings covering the entire spectrum of the defense acquisition community (Appendix C)
- Surveys and interviews of current industry and government acquisition practitioners, trade association executives and labor union leaders
- Public input through open panel meetings, external presentations, office visits and the Defense Acquisition Performance Assessment Project public website for public comments.

Developing a Baseline of Historical Acquisition Reform Efforts

The project began by conducting a comprehensive baseline review of all defense acquisition reform initiatives and recommendations since the Goldwater-Nichols Department of Defense Reorganization Act of 1986 (PL 99-433). As an integral part of the baseline review of historical acquisition reform efforts, the Defense Acquisition Performance Assessment staff engaged Monitor Venture Services, LLC (Monitor) to do a literature search and review of all pertinent documents that discussed the shortfalls of the Acquisition System and reform initiatives from

1985 to the present. (Appendix E) The review also considered initiatives that focused on the Planning Programming Budgeting and Execution System, the Joint Capabilities Integration Development System and other relevant Department of Defense enterprise systems.

In the course of their review, Monitor identified approximately 1500 relevant commentaries or recommended reforms. Approximately 750 relevant documents were identified as significant to the project's study. Documents that were identified as relevant to our work were synopsized and then prioritized based on the degree of relevance to the objectives of the task. Significant past acquisition initiatives were identified and analyzed to determine the effectiveness of each in achieving desired outcomes.

The Monitor report included statistical information, findings and analytical results, as well as a summary set of conclusions and recommendations that provided options for the Panel's consideration.

General Observations from Past Reviews

The overall Acquisition System is significantly inter-related with the requirements and budget processes -- although it is not always apparent. The requirements and budget processes strongly influence the ability of the Acquisition System to deliver predictable results. Further, the workforce, industry and oversight organizations each exhibit unique values and behaviors that distort the ability of these processes to interact and integrate effectively. Focusing on isolated problems within one process, for example, the requirements process, often results in unintended consequences in either or both the budget or acquisition processes. The leaders and managers that operate within each process may neither be aware of nor concerned with the impact that they have on the other processes. These leaders and managers, in fact, are interdependent. Decisions made outside procurement activities generally influence the day-to-day acquisition behavior. Understanding the wider context of how the inter-related processes affect individual motivation and behavior is an important task that few past reformers have attempted.

Specific Observations

Despite many reform efforts and initiatives, the Acquisition System continues to under-perform relative to expectations, even though the Acquisition System eventually delivers needed capabilities to the warfighter.

The overall Acquisition System is slow and cumbersome -- from identification of need to the delivery of systems for the warfighter. The large body of laws, regulations, policies and procedures increase the complexity of the Acquisition System. A major consequence of the current System is that the time to field new weapons systems does not keep pace with both the changing threats and the rapid pace of technology evolution.

The Panel concluded that acquisition reform requires an effective implementation plan with clear goals and metrics for success -- and follow-through. More disciplined and conservative management of requirements and technology risk is required if acquisition program outcomes are to improve significantly as measured by cost, schedule and performance. The Department of Defense must make its objectives explicit and innovate ways for decision makers to assess progress. Efforts to reform any system in an organization as large and complex as the Department of Defense must consider and address the root causes of organizational and individual behaviors in order to be successful. The following are examples of these root causes.

- Lack of budget stability during the period of program performance has a negative impact on program execution.
- The Department of Defense must carefully manage the quality of the acquisition workforce, from the assignment of the most senior political appointee to the hiring of the most junior member and then focus on retention and training.
- Changes in the defense industrial base and competition in a global market place is every bit as dramatic as the changes in the security environment. Therefore, the Department of Defense acquisition strategy and planning must take this into account if it is to preserve its industrial base.

Subject Matter Experts

At the first meeting of the Defense Acquisition Performance Assessment Panel, we outlined an outreach plan to identify a broad spectrum of experts to ensure that all aspects of the acquisition processes would be addressed. We invited senior officials from each acquisition process discipline to provide briefings and reference material. As we conducted our work and identified the need for access to additional information, relevant experts were invited to respond and provide their insights. Involving these Subject Matter Experts in the process also ensured that we heard the viewpoints and considered the equities of the stakeholders and practitioners. The Panel defined Subject Matter Experts as executives who are accountable for a portion of the operation, performance or oversight of the Department's acquisition processes. They also include nationally recognized leaders, commentators or critics who possess substantial domain knowledge and expertise.

These experts shared in-depth knowledge concerning all aspects of acquisition including assessments of current system performance, identification of persistent systemic problems and suggestions for process improvement.

Subject Matter Expert Briefings

The Panel heard from 107 experts and received more than 170 hours of briefings. When an expert wished to discuss proprietary or other sensitive information with the Panel, they were given the opportunity to present their material at meetings that were closed to the public. Office visits with the Defense Acquisition Performance Assessment Executive Director were arranged for experts whose schedules could not accommodate participation in our meetings.

Subject Matter Expert Observations

The "top five" issue areas that were identified by these Subject Matter Experts are categorized into acquisition strategy, program structure, program oversight, workforce development, and leadership.

According to these experts, current acquisition strategies are optimistic and do not adequately address the critical issues. For example, they observed that the unintended consequences of cost competition, technology maturity, risk mitigation, etc., are the fundamental causes of the problems. They do not adequately consider the means of creating and encouraging competition other than "cost." This has the downside of causing "must-win" or "buy-in" behavior by industry. This consequently results in awarding contracts on a "most probable cost" basis which adds significant program execution risk. Many strategies do not consider manufacturing and production base issues or alternative approaches to manufacturing that may lower unit costs. The strategies do not provide adequate time for competitive technology maturation and risk reduction, and they ignore the technical risks associated with the system integration aspects of complex weapon systems. As a result, programs do not establish "off-ramps" to identify and close-in on risk and technical readiness.

In the area of program execution structure, the experts observed that on many major acquisition programs, the decision to proceed is made with inadequate data, relative to both technical maturity and stability of requirements. The experts observed that many programs also go forward with unsubstantiated designs, immature technologies, unstable production processes and overly optimistic cost estimates. The net result is that the linkage to requirements, technical readiness, risk mitigation plans, schedules and cost occurs late in the program, typically at the Critical Design Review. Subject Matter Experts suggest more aggressive use of a "baseline with ceiling" as a mechanism to limit government exposure to unrealistic schedules and costs.

Concerning the issue of oversight, the Subject Matter Experts were nearly unanimous in stating that the current oversight process is not effective and adds little value. Excessive numbers of reviews and of oversight personnel captured the attention of more than 50 percent of the observations. Another 25 percent of comments added to this finding suggest that the oversight provided by these groups is burdensome and serves to dilute or eliminate accountability for

program performance. The Acquisition, Technology and Logistics Acquisition Integrated Product Teams seriously affect programs because layers of review divert the Program Manager from the real responsibilities of program execution.

A number of the experts observed that acquisition programs are often very complex and present unique and time consuming management and leadership challenges. As a result, these experts indicate that the Acquisition System must be augmented by effective personnel policies and training programs to provide highly qualified Program Managers, contracting officials, scientists and engineers with all the skills necessary to manage the development and production of weapon systems and other equipment. In fact, they note that acquisition workforce cuts were made over the past ten years without consideration of their impact on the system. The consequences of these cuts have affected recruitment, training and career building. As a result, the experience level and technical depth of government acquisition personnel have decreased. Many of the continuing acquisition program problems in high-risk areas are attributed to the continued loss of workforce expertise and inadequate human capital planning. The Office of Acquisition, Technology and Logistics Administration has recognized this deficiency and is devoted to enhancing the career path of those working in the acquisition fields. Over the years, personnel cuts in the acquisition workforce are compounded by the fact that acquisition is not considered a "core function" in the Services and acquisition community. This lack of talent and expertise contributes significantly to acquisition program cost and schedule overruns. Holding personnel accountable is also an issue for improving the productivity of the workforce. Individuals respond to expectations and often are not empowered to accomplish their responsibilities. The Panel observed that the National Security Personnel Act will be very effective in enhancing performance across the Department.

In regard to performance and accountability, a former Department of Defense executive observed that overruns are not only tolerated, but are anticipated and, worse still, expected as standard procedure with little or no consequences given the cost-plus nature of most contracts. A senior industry executive stated that the government system, although armed with the common knowledge about program costs and schedule overruns that are caused by budget instability and requirements creep, continues to practice and endorse both policies. He continued by noting that the Department not only does not terminate non-performing programs but also fails to match the number of programs being pursued to the resources available. In fact, just the opposite course of action is practiced. A senior Department of Defense official stated during discussions with the Panel that the Department's policy was to "fit 80 programs into a 50 program budget."

Congressional staffers expressed concern about the state of leadership in the acquisition community. They stated that accountability is lacking in the process and that decision-makers neither know how to interface with industry nor know how to relate to the business culture that drives industry. The staffers concluded that without leadership at the "top" and consistent

direction, the government will continue to experience the kind of problems that generated the need for the formation of this Panel. (Figure 35)

UNLEASHING CHANGE

"You have many people who resist change, but there's also likely to be an important group who welcomes and even is eager to try to change and improve the organization. The task of a leader is to unleash those people and give them a feeling that if they go ahead and try to make the changes, they won't be shot down."

"Unleashing Change – A Study of Organizational Renewal in Government"
Steven Kelman. Brookings Institution Press 2005

Change Management is the only way to "fix" the System (Figure 35)

In conjunction with the "top five" areas discussed above, the next seven most frequently mentioned areas (in order of frequency) are the requirements process; process discipline; industrial motivation and behavior; joint requirements development; disconnects between requirements, acquisition and budgeting; Program Manager expertise; and the persistence of acquisition reform issues.

Interviews and Surveys

We gained insight into the views of current Department of Defense acquisition practitioners through independent interviews and surveys. Of particular note is the broad spectrum of individuals that were interviewed. Government and industry Program Managers were contacted to ensure their views were considered. In addition, an unprecedented outreach was made to labor union officials and trade associations. The Panel Director contacted 14 local labor union senior executives and four trade associations to have them participate in the interview process. These individuals eagerly provided a unique perspective on the impact of the Defense Acquisition System. They indicated that they are uniquely affected by the benefits and deficiencies in acquisition, therefore, it was important to capture their experience when evaluating the system.

Questionnaire Construct

Since the briefing schedule was time consuming, we expanded our search for information and created a questionnaire. This process enhanced and expanded the opportunity to solicit ideas

for our review to add to the database of observations.

A two-part, 76 item questionnaire gathered views from relevant government executives, government and industry Program Managers, requirements developers, labor union leadership industry, and trade association executives.

Part I consisted of 8 open-ended questions that were addressed during face-to-face interviews. These questions were constructed to gather data through dialogue between the respondent and the interviewer.

Part II consisted of 68 closed-ended multiple-choice selections that comprised the survey portion of the questionnaire. The respondents circled their selection based on levels of agreement or disagreement with each survey statement.

Survey Teams

Interviewers and recorders from Office of the Secretary of Defense, the Air Force, Army and Navy led the teams to conduct these interviews. All interview team members were provided formal training to include interview "best practices," mock interviews and feedback sessions from a certified professional facilitator.

Analysis Process

Each survey team extracted data from interviews and transcribed it to electronic media coded by demographic group. Then data was transferred to a central database for consolidation and analysis by the government analyst team. Personal data regarding the respondents was not entered into the central database to preserve anonymity.

Part I interview questions were mapped to the survey objectives and were used to gain qualitative insights and support for the key themes that emerged from the survey.

Part II survey questions provided the basis for quantitative analysis and key theme development. The survey questions were mapped to 12 acquisition process study areas.

Part III of the Survey Team used a four-phased analysis process:

First - The survey data was sorted into each relevant study area to quantitatively identify the top three study areas that the respondents believed could change the system or have the most positive impact on this assessment.

Second - Survey responses were categorized demographically and compared and

contrasted to identify areas of divergence among the groups in order to isolate especially noteworthy observations.

Third - Interview data was reviewed to determine why the top three study areas were selected by the majority of respondents and to identify key study areas not included among the questionnaire's 12 study areas.

Fourth - Summaries were written to capture observations of all the data provided to the Panel in each of the key study areas where respondents believed change or restructure would have the most positive impact on the acquisition process.

Survey and Interview Results

Analysis of the data concludes that the majority of respondents believed the "top five" areas affecting the Acquisition System are requirements management, budget and funding instability, technology maturity, organization, responsibility, authority and accountability, and regulation and policy interpretation, and should be considered for change or restructuring.

When respondents were asked to identify why Department of Defense acquisition programs have significant cost growth and schedule extensions, requirements instability was the most mentioned problem area, followed by funding instability and high-risk systems. Of the respondents, 96 percent agreed that program stability and predictability -- to include requirements stability, funding stability and technology maturity -- are crucial to maintaining cost, schedule and performance.

Requirements Management

Managing the requirements process was identified as the number one area that, if restructured or changed, would have the most positive influence on the overall Acquisition System. While 96 percent of respondents agree that changes in requirements adversely impact programs, there is not a common agreement on what drives those changes. For example, 68 percent of government respondents believe budget or other funding issues drive these changes, but 65 percent of those interviewed in industry disagree. Neither the government nor industry participants feel that requirement changes are driven by technology, and or changes in the threat.

The recent move to a capability-based Joint Capabilities Integration and Development System process is cumbersome, overly complex and takes too long to complete according to 73 percent of respondents. The capability-based requirements cycle is still significantly longer than most technology cycles, which makes it difficult to field a technologically

current weapon system, as well as increasing the probability of further requirement creep. Additionally, parochial Service requirement interests sub-optimize joint efforts.

With poorly defined requirements early in an acquisition process, the government runs the risk of selecting a contractor who ultimately may not have the capability to satisfy the needs of the warfighter.

Industry feels so strongly about the requirements issue that 82 percent of the industry representatives recommended that they should be involved more in the requirements process, but only 55 percent of government respondents indicated the need for increased industry involvement. When difficulties arise in a program, the dynamics that force industry partnerships are less than satisfactory. Of the government and industry respondents, 72 percent believe that program requirements are not well-defined, communicated or understood at program initiation.

According to 87 percent of the people interviewed, there is insufficient training for government personnel involved in the requirements process. The absence of systems engineering thinking in the requirements development process results in poor conversion of capability needs into measurable requirements.

Additionally, 73 percent of all respondents believe the "stakeholders" and their accountability roles in the requirements process are not clearly understood by everyone involved. This situation encourages requirements changes after the fact by senior officials in the Department of Defense, who have the authority to influence changes without being accountable for the cost and schedule impacts to the program. It is critical that the requirements, test, and acquisition communities agree on the baseline requirements and the verification test plan prior to contract award.

Budget and Funding Instability

When the respondents were asked to identify areas that are not addressed in the Panel's initial 12 acquisition process study areas of the survey, the area most identified, by a factor of three to one, was "budget and funding instability."

Further, respondents named "funding instability" as one of the top three specific problems with the Acquisition System that, if corrected, would result in significant improvement. Again, this was mentioned second only to the requirements management process.

The respondents indicated that the government starts with inaccurate "should costs" and "unrealistic cost" expectations. Industry follows this trend and concluded that they compete for business with overly optimistic cost and schedule estimates. This phenomenon increases the risk for program execution on cost, schedule and performance. In fact, 73 percent of all respondents believe that industry cost estimates are inaccurate, and yet the

"system" contracts to proposed prices based upon these estimates. This is a major part of the "Conspiracy of Hope." Over 95 percent of the respondents agree that program budget stability and predictability are crucial to maintaining cost, schedule and performance.

Our conclusion from the data is that the Planning, Programming, Budgeting and Execution system causes the Program Manager to baseline program estimates before system design requirements are fully defined, and or understood. In addition, funding delays, cuts, and "taxes" directly impact the ability of the Program Manager to execute the program as originally planned. This results in schedule slippage accompanied by cost growth. The programs become unstable and unpredictable to manage well into the life of a program.

Some respondents indicated that affordability is not emphasized enough in strategy development or is "dropped" as a major consideration when programs experience difficulties or requirements creep. There seems to be no monitoring of unit price and cost ultimately takes a back seat to "better" performance. Capabilities are routinely added to systems without any forethought of the impact on life-cycle costs. On the other hand, some respondents expressed concern about life-cycle management. They noted that the desire to field systems quickly and operate within constrained budgets causes planners to overlook developmental risks and build in too much concurrency. Containment planning and funding for logistics is often overridden by the need to get the program fielded quickly.

Possible solutions to these funding issues offered by the respondents include establishing a single Program Element at the Program Executive Officer level and allowing Program Executive Officers to fund and manage all of the programs within their purview under this single Program Element. Another potential solution is to allow the use of management reserve within government programs and to institutionalize the use of multi-year funding for procurement contracts.

Funding instability was an issue of concern for defense industry union executives. Turbulence in funding and downward changes in production rates translates into turbulence in the work flow with layoffs or moving workers to different jobs, workforce reclassification problems and unattainable learning curve expectations. Predictable production rates translate to job security, which is a very high objective of the aerospace and defense workforce.

Technology Maturity

Incorporating high-risk technology in systems generally leads to significant cost and schedule impacts. Yet most respondents believe that we embark on major programs at technology readiness levels that are too low. In this regard, the government could learn from commercial industry.

A major Department of Defense contractor indicated that in their commercial business,

they follow a ten-step process in the development of a new product. Progressing beyond Step 6, which equates to the Department's System Development and Demonstration Phase, cannot occur until requirements are fixed, development and or production costs are known, and technology is mature. The key to this industry development model is that only modest resources are expended up through Step 6. We should emulate this process.

From this analysis, we determined that defense acquisitions are highly complex and they do not carry management reserves to accommodate the "unknown unknowns" associated with technical immaturity. Defense strives to field state-of-the-art technology. System Development and Demonstration is often driving technology -- but with few balancing or alternative solutions. Technical contingency and "fall back" to an acceptable capability is not established. Contingency plans, technology assessment and exit opportunities must be developed in cases where technologies do not mature as anticipated. If technologies do not mature as expected, then flexible strategies with multiple paths for capability development would provide Program Managers with opportunities to take alternative action or stop efforts altogether, if warranted.

Possible pre-System Development and Demonstration solutions, offered by the respondents, include contractor cost and schedule incentives and fully funded risk mitigation plans for high-risk technologies.

Organization, Responsibility, Authority and Accountability

Respondents stated that Program Manager effectiveness is constrained by influences from people involved in the review and oversight process who do not share responsibility or accountability for success of a program. This is illustrated by a respondent's quote: "...each stakeholder has a 'yes' or 'no' vote. One 'no' vote can stop a program from moving forward." Because the Program Manager does not have enough authority to proceed after these people have had an opportunity to provide their input, a program can be held hostage until an individual "yes" vote can be obtained.

It appears that the acquisition, Integrated Product Teams are not working as intended. In the Office of the Secretary of Defense, staff are not seen to have decision-making authority or timely access to the principal decision makers. Lack of continuity of membership or attendance on these Integrated Product Teams usually results in the re-emergence of issues previously thought resolved and unnecessarily revisiting decisions. A typical example of this is the doubling of the testing effort in a program over what was originally agreed.

Over 80 percent of government respondents and 57 percent of industry respondents felt Program Managers were held accountable for program performance. However, only a minimal number of respondents from industry and government agree that

senior government officials above Program Managers are held accountable for program performance.

Regulation and Policy Interpretation

The matter of legislative regulation is another issue where the respondents believed that restructuring would have the most positive influence on the acquisition processes. Of industry and government respondents, 81 percent agree that some policy and guidance from the Department and the Services hinders efficient program execution.

During the survey, three dominant themes emerged.

Legislative and Regulatory Funding Issues

There was widespread dissatisfaction among respondents with year-to-year congressional appropriations and the inability of Program Managers to quickly reallocate resources within their programs. Furthermore, 75 percent of government and industry respondents indicate that current legislative and regulatory requirements governing profit do not provide the best value for the taxpayer. Nearly 60 percent of respondents asserted that budgetary authority is not aligned with program execution responsibility, authority and execution. The Planning, Programming, Budgeting and Execution System causes the Program Manager to baseline program estimates before the system design requirements are fully understood. Funding delays, cuts and "taxes" directly impact the ability of the Program Manager to execute the program as originally planned.

In addition, it is common for new requirements to be levied by the Office of the Secretary of Defense outside of the Joint Capabilities Integration and Development System process. This causes program cost and schedule upsets. The example most cited was an interoperability Key Performance Parameter for which there is no method of testing.

Socioeconomic Programs

Of government and industry respondents, 87 percent agreed that compliance with socioeconomic programs had a negative effect on program execution and the Acquisition System.

Legislative initiatives such as the Buy American Act, the Berry Amendment and various small business requirements often limit the Program Manager's ability to make decisions that are in the best interest of the program and that reduce competitive options.

Interpretation/Waiver of Regulations

Dissatisfaction was expressed about the sheer volume of laws, regulations, and policies

that apply to the Acquisition System. Forced to comply with an often conflicting array of policy and guidance, Program Managers either ignore them or seek legal advice that results in loss of valuable time.

Respondents felt that the regulations written to implement policy are sometimes more stringent than the statutes upon which they are based and sometimes interpreted more narrowly than originally intended.

Although Department of Defense Directive 5000.1 specifically calls for the tailoring of regulations to each program's particular situation, respondents felt there was an institutional bias against waiving or tailoring regulations or recommending change even when it would be in the best interests of the program. Related to this concern is the tendency by the Office of the Secretary of Defense to standardize the application of policy in contravention of the Department of Defense Directive 5000.1 prescription to tailor policy, documentation, and decision reviews "to fit the particular conditions of the program."

The above survey results were included into the Panel's deliberations and are consistent with the views of the subject matter experts. It is particularly noteworthy that all of the defense industry local union executives expressed gratitude for being included in the survey and commented that this was the first time they had been included in a Department of Defense review of the Acquisition System. The local workforce provided constructive perspectives on the effect of the acquisition processes on the unions' work efforts.

Congressional, Media and Public Communication

The Defense Acquisition Performance Assessment Office Staff scheduled regular consultations with the professional staff in the House and Senate to keep them apprised of developments during the course of the Panel's deliberations and responded to individual inquiries by Members of Congress about the Project. The Chairman briefed Staffers and Industry Representatives on Capitol Hill at a breakfast prior to release of the Executive Summary, in early November. The Staff also responded to media inquiries and hosted a round table interview event with defense journalists.

We established two major venues to communicate with the public and to receive comments and recommendations. The panel announced meetings open to the public in the Federal Register in accordance with Federal Advisory Committee rules (attendance was usually between 50 and 100). In addition, a public comment website was created and maintained with the updated information from the Panel's proceedings. The website will be transferred to Defense Link to maintain the data for the acquisition community.

Open Meetings

Panel meetings were announced to accommodate the public's interest in this assessment review. They had the opportunity to listen to the deliberations of the panel and to hear the experts' briefings. Starting on July 15, 2005, six meetings were open to the public. About 41 percent of the attendees represented the general public. Congressional staffers, General Accountability Office representatives and the media also attended the sessions. Each person attending an open meeting was invited to submit questions and to interact with the Panel. They were also encouraged to provide comment for the Panel's consideration or to request a follow-up office visit with the Executive Director. Observations derived from public comments in open meetings were incorporated into the observation database.

Assessment Website

A public comment website became operational on July 20, 2005. Its purpose was to inform the public concerning Defense Acquisition Performance Assessment Project operations and to obtain public comment. During the course of the Project's work, 119 members of the public provided input to the panel through the website. The home page of the website provided two methods for obtaining input. The Defense Acquisition Performance Assessment website is available at ***www.acq.osd.mil/dapaproject.***

Survey and Comment Section

This section of the website contained a seven-question survey for each visitor. The first question offered visitors the opportunity to identify their community of interest. Civilian and military members of the Department of Defense comprised the largest segment of respondents. Industry and small businesses represented approximately 40 percent of the responding population. The remaining 6 questions asked the public to either agree or disagree with broad observations that had been made in earlier reports and studies concerning defense acquisition.

Responses to two questions were particularly significant. That is, 58 percent agreed that the Acquisition System is inherently flawed resulting in cost overruns, schedule slippages and poor performance, and 63 percent asserted that "Government Program Managers are not as well trained, competent and skilled in the acquisition business as their industry counterparts."

This section of the web page also gave visitors the opportunity to provide additional information concerning their own background, expertise and to upload a file containing any additional detailed comments. Visitors electing to provide comments were prompted to consent to have their comments published. If the visitor answered "yes," these observations were entered into the Panel's observation database. Specific observations were entered

into the database and they were only identified as a "public submission." No personal information was included in the database.

"Contact Us" Section

If a visitor to the website clicked on the "Contact Us" button, an email form appeared and prompted them to enter a question for the Panel. A total of 43 questions were submitted via the webpage. The Panel considered these issues during working sessions and answers were provided to the inquirer.

These questions resulted in offers to brief the Panel, questions about the schedule, location, agenda of open Panel meetings and submission of specific information for the Panel's consideration. In response to these requests, the Panel scheduled meetings during open or closed sessions or arranged office visits with the Panel's Executive Director. Requests for specific information concerning open meetings were answered by return email from the Panel's support staff.

There were 119 public comments on the website that resulted in entry of 206 observations into the database. The acquisition process was the focus of 44 percent of public inputs that ranged from recommendations to make the process "more flexible and easier for small business to compete," to suggestions to "keep the current process, but do things better." Requirements issues and the process garnered 15 percent of the public's inputs. The majority of these comments addressed recommendations for changing the process and instability in the Acquisition System.

Conclusion

The methodology of our assessment project allowed us to reach out to a broad spectrum of experts, stakeholders and customers. All the participants in this review were keenly dedicated to help us to identify issues and propose solutions. Office visits were extremely beneficial in maintaining openness and transparency throughout the review. As a panel, we were able to deliberate over timely and first-hand information and analyze the perspectives gleaned from actual experiences. The contributions brought all the factors into a manageable focus and we benefited from the opportunity to hear supportive and conflicting views. The Panel achieved consensus regarding this assessment and we are confident of the validity of our findings. The conclusions are based on the research, observations, experts' presentations and consultations, interview surveys and public contacts through the website and the public meetings and office visits.

Section VI

Next Steps

Implementation and Integration

We have concluded that the present system needs "bold new ideas" and we are recommending sweeping changes to the Acquisition System and all of its processes. These conclusions are based on the actual identification of problems presented by the stakeholders and validated and documented by internal and external recommendations from key players in the Acquisition System. The assessments and major findings of the Defense Acquisition Performance Assessment Panel will not come as a surprise to the acquisition community. However, some of the recommendations will be new and dynamic because they are all comprehensive, integrated and focused. It is clear from our review of historical records that the acquisition community continuously struggles to "get it right." The customer is the warfighter and as a great nation we pride ourselves on delivering the right equipment, in the right time, to the best and the brightest military personnel in the world. We must meet the challenge of the future -- a future with new significant security challenges. Today there is consensus in the acquisition community, as well as throughout the legislative and executive branches of government, that we need a new roadmap. The time is ripe for meaningful and substantial change to the established acquisition processes -- not marginal improvement -- or change for the sake of change. (Figure 36)

THE PROCESS OF CHANGE

"Simply tinkering with the present "acquisition" process will not provide adequate response to future needs. The reluctance to develop bold and innovative concepts is rooted in the risk aversion that is deeply imbedded throughout the process. New, innovative concepts inherently pose many uncertainties of development outcomes (cost and performance of the system) and uncertainties of operation effectiveness. Today's process virtually demands that major uncertainties be resolved before starting major system development, thus essentially denying the start of novel concepts, or at least demanding a long, careful program of demonstration and risk reduction before starting development of the weapon system itself."

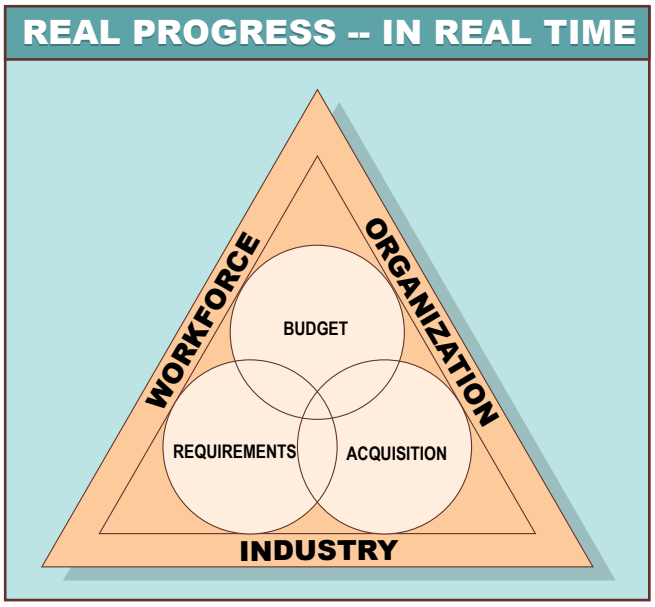
"An Acquisition Strategy, Process, and Organization for Innovative systems"
John Birkler, Giles Smith, Glenn A. Kent and Robert V. Johnson.
National Defense Research Institute, Page xi. RAND 2000

Improvement requires systemic change (Figure 36)

Significant recommendations are included in this report to ignite the change process. We have provided specific implementation criteria and timeframes for the Department to adopt our performance improvement recommendations. We encourage the leadership to view this as a total plan that must integrate all the processes within the Acquisition System in order to be effective. In fact, the detail of the implementation criteria is rich in specifics to explain and direct the "how" of the recommendations. Some of these initiatives will require legislation, new policies and new directives or instructions.

Past practices are replete with examples demonstrating that if you adjust one part of the system with corrective measures, challenging issues surface in other parts of the system. When untested corrective action is taken, over time it can result in unintended consequences.

Our assessment process has reaffirmed that all of the processes in the Acquisition System are interrelated and, therefore, any changes in the acquisition process will affect the entire System. (Figure 37)



Implementation criteria will deliver real performance improvement in the near term (Figure 37)

Each of the elements must be considered. Transformation of these key elements of the Acquisition System will reduce cost, enhance acquisition performance and accelerate key capabilities by years.

It is one thing to establish vision and to recommend change. Is quite another to expect that the stakeholders understand what is actually written and said, not to mention what the Panel "meant to write and say." Effective communication is the key to any successful venture. In particular, the implementation of these initiatives rests initially with communicating the proper message to the decision makers, process owners, stakeholders, our workforce, congress and industry. We tried to be as clear and unambiguous as time and talent allows, recognizing that this subject is extremely complex. There will be a need to clarify, interpret, engage in dialogue and continue to explain our effort to keep the momentum that we have created.

The value of this assessment will be measured by the change it produces. We recognize that change is an extremely difficult process. It is a journey that requires metrics and milestones to identify objectives and goals and to manage implementation. It also requires leadership. We are committed to this assessment and the value it will bring to each of the acquisition processes. In addition, the Panel firmly believes that implementing these recommendations will provide the Department with a high probability of achieving desired capabilities on cost and on schedule. (Figure 38)

DEPARTMENT-WIDE ASSESSMENTS

"Changing the culture of the Department starts with the Secretary and Deputy Secretary of Defense, but leaders at all levels are responsibile for changing the way DoD does business. Transformation requires direction and focus from senior leaders within the Office of the Secretary of Defense and at the Component level to realize transformation objectives."

Department of Defense Business Transformation. Volume I. Page 3. September 30, 2005

The Department must change its culture as well as its processes (Figure 38)

"As we prepare for the future, we must think differently and develop the kinds of forces and capabilities that can adapt quickly to new challenges and to unexpected circumstances."

Donald Rumsfeld
Secretary of Defense

Appendix A

Acknowledgements

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ANDERSON, FRANK, President, Defense Acquisition University – "Training and Certification Processes for the Acquisition Workforce"

ANDREWS, DR. MICHAEL A., Vice-President and Chief Technology Officer, L-3 Communications Corporation – "Industry Views"

AUGUSTINE, NORMAN R., Author, Augustine's Laws – "Acquisition Reforms and History of Reforms"

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BERRY, DR. WILLIAM, Acting Deputy Under Secretary of Defense Laboratories and Basic Science – "The Acquisition Workforce and the Science and Technology Community -- Brain Drain"

BLAKE, TERRY, Rear Admiral, Deputy Director for Resource & Acquisition (J8), Joint Staff – "Acquisition System and Jointness"

BOLTON, HON. CLAUDE M., Assistant Secretary of Army, Acquisition, Logistics and Technology – "Big A, little a, Army Perspective"

BOURJAILY, MONTE R., III, President, Ritter & Bourjaily, Inc. – "Small Business Views and Problems Doing Business with the Department"

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BROWN, MARTIN J., Rear Admiral, Deputy Assistant Secretary of the Navy for Acquisition Management – "Navy perspective on the Acquisition System"

BROWN, MICHAEL G., Acquisition Program Manager, Air Force Acquisition Center of Excellence (DAPA Project Officer) – "Management Expectations by Industry"

BUHRKUHL, ROBERT, Director, Joint Rapid Acquisition Cell – "Joint Requirements Issues"

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Appendix B

Glossary

Acquisition

The conceptualization, initiation, design, development, test, contracting, production, deployment, logistics support, modification, and disposal of weapons and other systems, supplies, or services (including construction) to satisfy DoD needs, intended for use in, or in support of, military missions.

Acquisition Environment

Internal and external factors that impact on, and help shape, every defense acquisition program. Often these factors work at opposite extremes and contradict each other. These factors include political forces, policies, regulations, reactions to unanticipated requirements, and emergencies.

Acquisition Life Cycle

The life of an acquisition program consists of phases, each preceded by a milestone or other decision point, during which a system goes through Research, Development, Test and Evaluation (RDT&E) and production. Currently, the five phases are: 1) Concept Refinement (CR); 2) Technology Development (TD); 3) System Development and Demonstration (SDD); 4) Production and Deployment (P&D); and 5) Operations and Support (O&S).

Acquisition Management

Management of any or all of the activities within the broad spectrum of "acquisition," as defined above. Also includes training of the defense acquisition workforce and activities in support of the Planning, Programming, Budgeting and Execution (PPBE) Process for defense Acquisition Systems and programs. For acquisition programs this term is synonymous with program management.

Acquisition Planning

The process by which the efforts of all personnel responsible for an acquisition are coordinated and integrated through a comprehensive plan for fulfilling the agency need in a timely manner and at a reasonable cost. It is performed throughout the life cycle and includes developing an overall acquisition strategy for managing the acquisition and a written Acquisition Plan (AP).

Acquisition Process (little "a")

The acquisition process that tells us "how to buy." It requires the program to balance cost, schedule and performance. It considers available technology versus performance, cost and the time-to-need. There are multiple career fields to provide expertise in this process. This creates fundamental disconnects in the big "A" acquisition with the budgeting and requirements processes and competing values and objectives. These processes lack acquisition expertise.

Industry, the workforce, leadership and legislators deal with a disconnected community and come to their own conclusions.

Acquisition Program

A directed, funded effort that provides a new, improved, or continuing materiel, weapon, or information system or service capability in response to an approved need. Acquisition programs are divided into categories that are established to facilitate decentralized decision making, execution, and compliance with statutory requirements. (DoDD 5000.1) See Acquisition Category (ACAT).

Acquisition Strategy

A business and technical management approach designed to achieve program objectives within the resource constraints imposed. It is the framework for planning, directing, contracting for, and managing a program. It provides a master schedule for research, development, test, production, fielding, modification, postproduction management, and other activities essential for program success. The acquisition strategy is the basis for formulating functional plans and strategies (e.g., Test and Evaluation Master Plan (TEMP), Acquisition Plan (AP), competition, systems engineering, etc.) See Acquisition Plan.

Acquisition System

Believed to be a simple construct; efficiently integrating the three interdependent processes of budget, acquisition and requirements (termed "Big A").

Acquisition Systems Commands (Four-Star Acquisition)

Responsible for aligning the acquisition workforce to include requirements and acquisition budget personnel, by establishing appropriate certification requirements based on formal training education and practical experience . Provides advocacy for the acquisition workforce and will institute formal and informal mentoring of program managers. Oversees day-to-day integration of the acquisition workforce from program initiation at Milestone 0 up to the end of series production. Directs and manages the preparation of Service Materiel Solution proposals and advocates for the future technology requirements of the Services.

Best Value

The most advantageous trade off between price and performance for the government. Best value is determined through a process that compares strengths, weaknesses, risk, price, and performance, in accordance with selection criteria, to select the most advantageous value to the government.

Beyond-Low Rate Initial Production (BLRIP) Report

The Director, Operational Test and Evaluation submits this report on all oversight systems to congressional committees before the full rage production decision, approving the system to proceed beyond low rate initial production, is made.

Budget

A comprehensive financial plan for the Federal Government, encompassing the totality of federal receipts and outlays (expenditures). Budget documents routinely include the on budget and off budget amounts and combine them to derive a total of federal fiscal activity, with a focus on combined totals. Also a plan of operations for a fiscal period in terms of estimated costs, obligations, and expenditures; source of funds for financing including anticipated reimbursements and other resources; and history and workload data for the projected program and activities.

Budgeting

The process of translating resource requirements into a funding profile.

Capability

The ability to achieve a desired effect under specified standards and conditions through combinations of ways and means to perform a set of tasks. It is defined by an operational user and expressed in broad operational terms in the format of a Joint Capabilities Document or an Initial Capabilities Document (ICD) or a joint Doctrine, Organization, Training, Materiel, Leadership, Personnel, and Facilities (DOTMLPF) change recommendation. In the case of materiel proposals, the definition will progressively evolve to DOTMLPF performance attributes identified in the Capability Development Document (CDD) and the Capability Production Document (CPD). (CJCSI 3170.01E)

Capital Budgeting and Execution

Capital Budgeting and execution is the total process of generating, evaluating, selecting and following-up on capital expenditures that are expected to have a significant impact on financial performance. Capital Budgeting means a budget process that identifies large capital outlays that are expected to be made in future years, together with identification of the proposed means to finance those outlays and the expected benefits of those outlays. Major Acquisition Programs would be fully funded at a level that would cover the program for Milestone A through delivery of low-rate production.

Combat Developer

Command or agency that formulates doctrine, concepts, organization, materiel requirements, and objectives. May be used generically to represent the user community role in the materiel Acquisition Process. (Army and Marine Corps).

Combat Development

Covers research, development, and testing of new doctrines, organizations, and materiel for early integration into the structure. (Army and Marine Corps).

Concept Development and Design

Process of brainstorming sessions, developing new ideas, creating prototypes, and refining presentations.

"Conspiracy of Hope"

Introduces instability at the very beginning of acquisition programs and occurs when industry is encouraged to propose unrealistic cost, optimistic performance and understate technical risk estimates during the acquisition solicitation process and the Department is encouraged to accept these proposals.

Contract Requirements

In addition to specified performance requirements, contract requirements include those defined in the Statement of Work (SOW); specifications, standards, and related documents; the Contract Data Requirements List (CDRL); management systems; and contract terms and conditions.

Contractor Performance Assessment Reporting

Documents contractor performance on systems and non-systems contracts including Services, Information Technology, Operations Support, Systems, Ship Repair & Overhaul.

Cost Analysis Improvement Group (CAIG)

Organization that advises the Defense Acquisition Board on matters concerning the estimation, review, and presentation of cost analysis of future weapon systems.

Defense Acquisition Guidebook

Replaced DoD 5000.2-R. Provides expectations, notional document formats (e.g., Test and Evaluation Master Plan (TEMP)), best practices, and lessons learned.

Defense Acquisition Performance Assessment Project

An integrated assessment of all aspects of the Department of Defense processes and procedures for acquisition directed by Acting Deputy Secretary of Defense Gordon England on June 7, 2005.

Defense Acquisition System

Management process by which DoD provides effective, affordable, and timely systems to the users. (DoDD 5000.1).

Defense Acquisition University (DAU)

Authorized by Title 10, United States Code 1746, and chartered by Department of Defense (DoD) Directive 5000.57, the Defense Acquisition University provides practitioner training, career management, and services to enable the DoD Acquisition, Technology and Logistics community to make smart business decisions and deliver timely and affordable capabilities to the warfighter. DAU provides a full range of basic, intermediate, and advanced curriculum training, as well as assignment-specific and continuous learning courses to support the career goals and professional development of the DoD.

Development

The process of working out and extending the theoretical, practical, and useful applications of a basic design, idea, or scientific discovery. Design, building, modification, or improvement of the prototype of a vehicle, engine, instrument, or the like as determined by the basic idea or concept. Includes all efforts directed toward programs being engineered for Service use but which have not yet been approved for procurement or operation, and all efforts directed toward development engineering and test of systems, support programs, vehicles, and weapons that have been approved for production and Service deployment.

DoD 5000 Series

Refers collectively to DoDD 5000.1 and DoDI 5000.2. See DoD Directive 5000.1 and DoD Instruction 5000.2.

DoD Directive (DoDD) 5000.1, The Defense Acquisition System

The principal DoD directive on acquisition, it states policies applicable to all DoD acquisition programs. These policies fall into five major categories: 1) Flexibility, 2) Responsiveness, 3) Innovation, 4) Discipline, and 5) Streamlined and Effective Management.

DoD Instruction (DoDI) 5000.2, Operation of the Defense Acquisition System

Establishes a simplified and flexible management framework for translating mission needs and technology opportunities, based on approved mission needs and requirements, into stable, affordable, and well-managed acquisition programs. Specifically authorizes the Program Manager (PM) and the Milestone Decision Authority (MDA) to use discretion and business judgment to structure a tailored, responsive, and innovative program.

Export Administration Act (EAA)

The Department of Commerce manages an export control list to identify sensitive U.S. dual-use technologies.

Export Controls

Protect the cutting edge technologies for the warfighter by imposing controls on end-use and end-users of critical technologies. The Department of Defense does not issue licenses, rather the role of the Department is to review and recommend licensing provisions to the Department's of State and Commerce.

Federal Acquisition Regulations (FAR)

The regulation for use by federal executive agencies for acquisition of supplies and services with appropriated funds.

Four-Star Acquisition Commands

A dedicated Four-Star Acquisition Systems Command within each Service, as program execution agent for the Army and Air Force Chiefs of Staff, and the Chief of Naval Operations, prior to Milestone B. The major responsibilities of this command are to integrate decision responsibilities for budget, requirements and acquisition; serve as technology advocates for the future objectives of each Service; advocate and manage the acquisition workforce; and provide day-to-day program execution and oversight.

Goldwater-Nichols

Name given to the Defense Reorganization Act of 1986 that restructured certain aspects of DoD management. Named for co-authors Senator Barry Goldwater and Representative Bill Nichols.

Government-Induced Cycle of Instability

Actions taken without considering the impact the actions will have on the entirety of the system so that senior leaders in the Department of Defense and Congress are unable to anticipate or predict the outcome of programs as measured by cost, schedule, and performance.

Initial Operational Capability (IOC)

In general, attained when some units and/or organizations in the force structure scheduled to receive a system 1) have received it and 2) have the ability to employ and maintain it. The specifics for any particular system IOC are defined in that system's Capability Development Document (CDD) and Capability Production Document (CPD).

Initial Operational Test and Evaluation (IOT&E)

Dedicated Operational Test and Evaluation (OT&E) conducted on production, or production representative articles, to determine whether systems are operationally effective and suitable, and which supports the decision to proceed Beyond Low Rate Initial Production (BLRIP).

Integrated Product/Process Team (IPT)

Team composed of representatives from appropriate functional disciplines working together to build successful programs, identify and resolve issues, and make sound and timely recommendations to facilitate decision making. There are three types of IPTs: Overarching IPTs (OIPTs) that focus on strategic guidance, program assessment, and issue resolution; Working-level IPTs (WIPTs) that identify and resolve program issues, determine program status, and seek opportunities for acquisition reform; and Program-level IPTs (PIPTs) that focus on program execution and may include representatives from both government and industry after contract award.

International Traffic in Arms Regulations (ITAR)

The regulations to control the transfer of firearms, explosives, aircraft and parts, protective equipment (pressure suits, helmets, gas masks, etc.), electronics (including communications or navigation equipment), software and many chemicals is within the jurisdiction of the Department of State. The Department of Defense reviews license applications and recommends disposition of end-use and end-users.

Joint Capabilities Acquisition and Divestment (JCAD)

Identifies CoCom capabilities and requirements gaps with materiel and non-materiel solutions.

Joint Capabilities Integration and Development System (JCIDS)

Supports the Chairman of the Joint Chiefs of Staff, and the Joint Requirements Oversight Council in identifying, assessing, and prioritizing joint military capability needs as required by law.

Joint Requirements Oversight Council (JROC)

Assists the Chairman, Joint Chiefs of Staff, in identifying and assessing the priority of joint military requirements to meet the National Military Strategy.

Key Performance Parameters (KPPs)

Those attributes or characteristics of a system that are considered critical or essential to the development of an effective military capability and those attributes that make a significant contribution to the key characteristics as defined in the Joint Operations Concept. KPPs are validated by the Joint Requirements Oversight Council (JROC) for JROC Interest documents, and by the DoD Component for Joint Integration or Independent documents. The Capability Development Document (CDD) and the Capability Production Document (CPD) KPPs are included verbatim in the Acquisition Program Baseline (APB). (CJCSI 3170.01E)

Low Rate Initial Production Report (LRIP)

The first effort of the Production phase. The purpose of this effort is to establish an initial production base for the system, permit an orderly ramp-up sufficient to lead to a smooth transition to Full Rate Production, and to provide production representative articles for Initial Operational Test and Evaluation and full-up live fire testing.

Make-or-Buy Program

That part of a contractor's written plan for the development or production of an end item that outlines the subsystems, major components, assemblies, subassemblies, and parts the contractor intends to manufacture, test-treat, or assemble (make); and those the contractor intends to purchase from others (buy).

Materiel Solution

Correction of a deficiency, satisfaction of a capability gap, or incorporation of new technology that results in the development, acquisition, procurement, or fielding of a new item (including ships, tanks, self-propelled weapons, aircraft, etc.) and related software, spares repair parts, and support equipment (but excluding real property, installations, and utilities) necessary to equip, operate, maintain, and support military activities without disruption as to their application for administrative or combat purposes. (CJCSI 3170.01E)

Milestone (MS)

The point at which a recommendation is made and approval sought regarding starting or continuing an acquisition program, i.e., proceeding to the next phase. Milestones established by DoDI 5000.2 are: MS A that approves entry into the Technology Development (TD) phase; MS B that approves entry into the System Development and Demonstration (SDD) phase; and MS C that approves entry into the Production and Deployment (P&D) phase. Also of note are the Concept Decision (CD) that approves entry into the Concept Refinement (CR) phase; the Design Readiness Review (DRR) that ends the System Integration (SI) effort and continues the SDD phase into the System Demonstration (SD) effort; and the Full Rate Production Decision Review (FRPDR) at the end of the Low Rate Initial Production (LRIP) effort of the P&D phase that authorizes Full Rate Production (FRP) and approves deployment of the system to the field or fleet.

Militarily Useful Capability

A capability that achieves military objectives through operational effectiveness, suitability, and availability, which is interoperable with related systems and processes, transportable and sustainable when and where needed, and at costs known to be affordable over the long term. (CJCSI 3170.01E)

Military Operational Requirements (MOR)

The formal expression of a military need, responses to which result in development or acquisition of items, equipment, or systems.

New Start

An item or effort appearing in the President's Budget (PB) for the first time; an item or effort that was previously funded in basic or applied research and is transitioned to Advanced Technology Development (ATD) or engineering development; or an item or effort transitioning into procurement appearing in the PB for the first time in the investment area. Often confused with "program initiation," an acquisition term that describes the milestone decision that initiates an acquisition program.

Non-Materiel Solution

Changes in doctrine, organization, training, leadership and education, personnel or facilities, to satisfy identified functional capabilities.

Operational Requirements

User generated validated needs are developed to address mission area deficiencies, evolving threats, emerging technologies, or weapon system cost improvements. Operational requirements form the foundation for weapon system-unique specifications and contract requirements.

Operational Test and Evaluation (OT&E)

The field test, under realistic conditions, of any item (or key component) of weapons, equipment, or munitions for the purpose of determining the effectiveness and suitability of the weapons, equipment, or munitions for use in combat by typical military users; and the evaluation of the results of such tests.

Operational Test Plan (OTP)

Documents specific operational test scenarios, objectives, Measures of Effectiveness (MOE), threat simulation, detailed resources, known test limitations, and the methods for gathering, reducing, and analyzing data.

Operationally Acceptable Test

Systems will be evaluated as Operationally Acceptable when the system performance is not fully adequate when tested against criteria established by the Director of Operational Test and Evaluation but the Combat Commander has determined that the system, as tested, provides an operationally useful capability and the Combatant Command desires immediate fielding of the "as tested" capability.

Packard Commission

The President's 1986 Blue Ribbon Commission on Defense Management. It made a number of significant recommendations on re-organizing the Joint Chiefs of Staff (JCS), the defense command structure, and the defense acquisition process. Many of these recommendations were enacted into law or instituted within DoD.

Planning, Programming, Budgeting and Execution (PPBE) Process

The primary Resource Allocation Process (RAP) of DoD. It is one of three major decision support systems for defense acquisition along with Joint Capabilities Integration and Development System (JCIDS) and the Defense Acquisition System. It is a formal, systematic structure for making decisions on policy, strategy, and the development of forces and capabilities to accomplish anticipated missions. PPBE is a biennial process wherein the On-Year produces a Strategic Planning Guidance (SPG), Joint Programming Guidance (JPG), approved Program Objectives Memoranda (POMs) for the Military Departments and Defense Agencies covering 6 years, and the DoD portion of the President's Budget (PB) covering 2 years. In the Off-Year, adjustments are made to the Future Years Defense Program (FISCAL YEARDP) to take into account "fact of life changes," inflation, new programmatic initiatives, and the result of congressional enactment of the previously submitted PB based on guidance from the Under Secretary of Defense (Comptroller) and the Director, Program Analysis and Evaluation.

Preliminary Design Review (PDR)

A multi-disciplined technical review to ensure that a system is ready to proceed into detailed design and can meet stated performance requirements within cost (program budget), schedule (program schedule), risk, and other system constraints. Generally, this review assesses the system preliminary design as captured in performance specifications for each configuration item in the system (allocated baseline), and ensures that each function in the functional baseline has been allocated to one or more system configuration items. Normally conducted during the System Development and Demonstration (SDD) phase.

Procurement

Act of buying goods and services for the government.

Program

1. A DoD acquisition program. 2. As a verb, program means to schedule funds to meet requirements and plans. 3. A major, independent part of a software system. 4. A combination of Program Elements (PEs) designed to express the accomplishment of a definite objective or plan.

Program (Acquisition)

A defined effort funded by Research, Development, Test and Evaluation (RDT&E) and/or procurement appropriations with the express objective of providing a new or improved capability in response to a stated mission need or deficiency.

Program Executive Officer (PEO)

A military or civilian official who has responsibility for directing several Major Defense Acquisition Programs (MDAPs) and for assigned major system and non-major system acquisition programs. A PEO has no other command or staff responsibilities within the Component, and only reports to and receives guidance and direction from the DoD Component Acquisition Executive (CAE).

Program Initiation

The point at which a program formally enters the Acquisition Process. Under DoDI 5000.2, program initiation normally occurs at Milestone B, but may also occur at other milestones/decision points depending upon technology maturity and risk. At program initiation, a program must be "fully funded" across the Future Years Defense Program (FISCAL YEARDP) as a result of the Program Objectives Memorandum (POM)/budget process, that is, have an approved resource stream across a typical defense program cycle, for example Fiscal Year (FISCAL YEAR) 2006-2011. Concept Refinement (CR) and Technology Development (TD) phases are typically not "fully funded" and thus do not constitute program initiation of a new acquisition program in the sense of DoDI 5000.2. This term is often confused with the financial management term "new start."

Program Instability

The condition imposed on a program due to problems and/or changes in requirements, technology, and funding.

Program Management

The process whereby a single leader exercises centralized authority and responsibility for planning, organizing, staffing, controlling, and leading the combined efforts of participating/assigned civilian and military personnel and organizations, for the management of a specific defense acquisition program or programs, throughout the system life cycle.

Program Manager (PM)

Designated individual with responsibility for and authority to accomplish program objectives for development, production, and sustainment to meet the user's operational needs. The PM shall be accountable for credible cost, schedule, and performance reporting to the Milestone Decision Authority (MDA). (DoDD 5000.1)

Quadrennial Defense Review (QDR)

A comprehensive examination of America's defense needs to include potential threats, strategy, force structure, readiness posture, military modernization programs, defense infrastructure, and information operations and intelligence that is conducted by law every 4 years at the beginning of a new administration. See Quadrennial Defense Report.

Re-baslining

In effect, a new project. All work not done is rescheduled, resource loaded and budgets assigned. What's already done is history.

Requirements

The need or demand for personnel, equipment, facilities, other resources, or services, by specified quantities for specific periods of time or at a specified time. For use in budgeting, item requirements should be screened as to individual priority and approved in the light of total available budget resources.

Requirements Creep

The tendency of the user (or developer) to add to the original mission responsibilities and/or performance requirements for a system while it is still in development.

Requirements Scrub

A review of user/government comments received in response to the announcement of an operational requirement. The scrub is used to validate and prioritize suggested or requested system functions and capabilities before release to industry. Review of a draft requirements document, such as a Capability Development Document (CDD), by the acquisition and user communities to determine adequacy and clarity of performance specified in the document.

Research and Development Costs

Those program costs primarily associated with research and development efforts including the development of a new or improved capability, to the point where it is appropriate for operational use. These costs are funded under the Research, Development, Test and Evaluation appropriation.

Risk

A measure of the inability to achieve program objectives within defined cost and schedule constraints. Risk is associated with all aspects of the program, e.g., threat, technology, design processes, or Work Breakdown Structure (WBS) elements. It has two components: the probability of failing to achieve a particular outcome, and the consequences of failing to achieve that outcome.

Selected Acquisition Report (SAR)

Standard, comprehensive, summary status report of a Major Defense Acquisition Program required for periodic submission to Congress. It includes key cost, schedule, and technical information.

Service Acquisition Executive

Carries out all powers, functions, and duties of the Secretary concerned with respect to the acquisition workforce within the military department concerned and ensures that the policies of the Secretary of Defense are implemented in that department.

Source Selection Authorities (SSA)

The official designated to direct the source selection process, approve the selection plan, select the source(s), and announce contract award.

Stable Program Funding Account

A single account appropriated by the Congress that funds all Acquisition Category I Programs at the beginning of the fiscal year and is managed through a Capital Budgeting process. Capital Budgeting and execution is the total process of generating, evaluating, selecting and following-up on capital expenditures that are expected to have a significant impact on financial performance. Capital Budgeting means a budget process that identifies large capital outlays that are expected to be made in future years, together with identification of the proposed means to finance those outlays and the expected benefits of those outlays. Major Acquisition Programs would be fully funded at a level that would cover the program for Milestone A through delivery of low-rate production.

Subject Matter Expert

Executives who are accountable for a portion of the operation, performance or oversight of the Department's acquisition processes or nationally recognized leaders, commentators or critics who possess substantial domain knowledge and expertise.

System Design and Development (SDD)

1. The third phase of the life cycle beginning after Milestone B and consisting of two efforts, System Integration and System Demonstration. 2. Budget Activity 5 within a Research, Development Test and Evaluation appropriation account.

System Requirements Review (SRR)

A review conducted to ascertain progress in defining system technical requirements. This review determines the direction and progress of the systems engineering effort and the degree of convergence upon a balanced and complete configuration. It is normally held during the

Technology Development phase, but may be repeated after the start of System Development and Demonstration phase to clarify the contractor's understanding of redefined or new user requirements. (Defense Acquisition Guidebook).

Technology System Deployment Budget

Established in the office of the Director, Defense Research and Engineering to expand the current Advanced Concept Technology Demonstration program so that systems deployed will meet Combatant Commanders' emerging needs without having to get a single Service to take ownership under a new or existing program of record.

Technology Transition

Process of inserting critical technology into military systems to provide an effective weapons and support system in the quantity and quality needed by the warfighter to carry out assigned missions.

Test and Evaluation Master Plan (TEMP)

Documents the overall structure and objectives of the Test and Evaluation (T&E) program. It provides a framework within which to generate detailed T&E plans and documents schedule and resource implications associated with the T&E program. The TEMP identifies the necessary Developmental Test and Evaluation (DT&E), Operational Test and Evaluation (OT&E), and Live Fire Test and Evaluation (LFT&E) activities. It relates program schedule, test management strategy and structure, and required resources to: Critical Operational Issues (COIs), Critical Technical Parameters (CTPs), objectives and thresholds documented in the Capability Development Document (CDD), evaluation criteria, and milestone decision points. For multi-Service or joint programs, a single integrated TEMP is required. Component-unique content requirements, particularly evaluation criteria associated with COIs, can be addressed in a Component-prepared annex to the basic TEMP.

Time Certain Development

Development program that is assigned a specific length of time in which milestone events will be accomplished by contract

Under Secretary of Defense (Acquisition, Technology and Logistics) (USD(AT&L))

The USD(AT&L) has policy and procedural authority for the defense Acquisition System, is the principal acquisition official of the Department, and is the acquisition advisor to the Secretary of Defense (SECDEF). In this capacity the USD(AT&L) serves as the Defense Acquisition Executive (DAE), the Defense Senior Procurement Executive, and the National Armaments Director — the last regarding matters of the North Atlantic Treaty Organization (NATO). For acquisition matters, the USD(AT&L) takes precedence over the Secretaries of the Services after the SECDEF and Deputy SECDEF. The USD(AT&L) authority ranges from directing

the Services and Defense agencies on acquisition matters, to establishing the Defense Federal Acquisition Regulation Supplement (DFARS), and chairing the Defense Acquisition Board (DAB) for Major Defense Acquisition Program (MDAP) reviews.

Office of the Under Secretary of Defense (Acquisition, Technology and Logistics (OUSD(AT&L))

The OUSD(AT&L) is organized around services, Research and Development (R&D), and materiel acquisition. Several organizational elements report directly to the USD(AT&L) including the Principal Deputy USD (PDUSD(AT&L)); the Director, Defense Research and Engineering (DDR&E); the Deputy USD (Logistics and Materiel Readiness) (DUSD(L&MR)); and the Director, Missile Defense Agency. Also, reporting to staff elements within OUSD(AT&L) are a number of Defense agencies such as the Defense Logistics Agency (DLA) and the Defense Advanced Research Projects Agency (DARPA).

User

An operational command or agency that receives or will receive benefit from the acquired system. Combatant Commanders (COCOMs) and their Service Component commands are the users. There may be more than one user for a system. Because the Service Components are required to organize, equip, and train forces for the COCOMs, they are seen as users for systems.

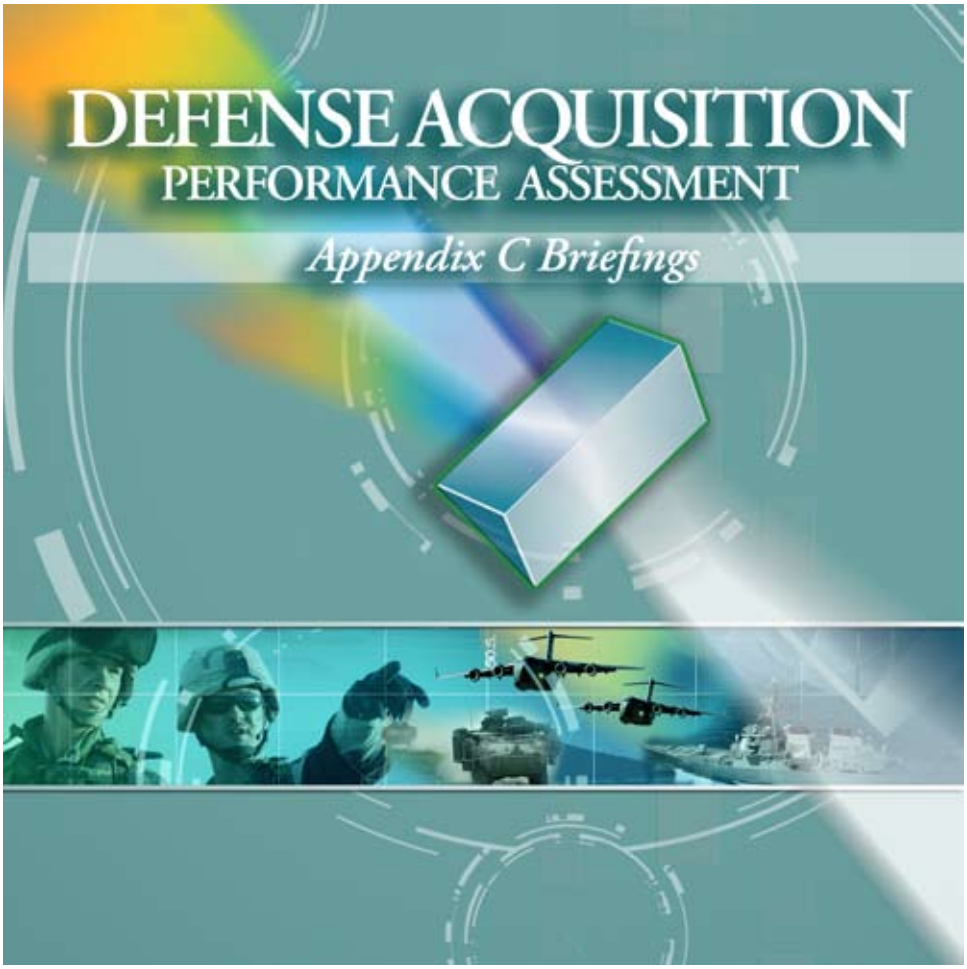
The Chiefs of Services and heads of other DoD Components are validation and approval authorities and are not viewed as users. (CJCSI 3170.01E)

Weapon System

Items that can be used directly by the Armed Forces to carry out combat missions.

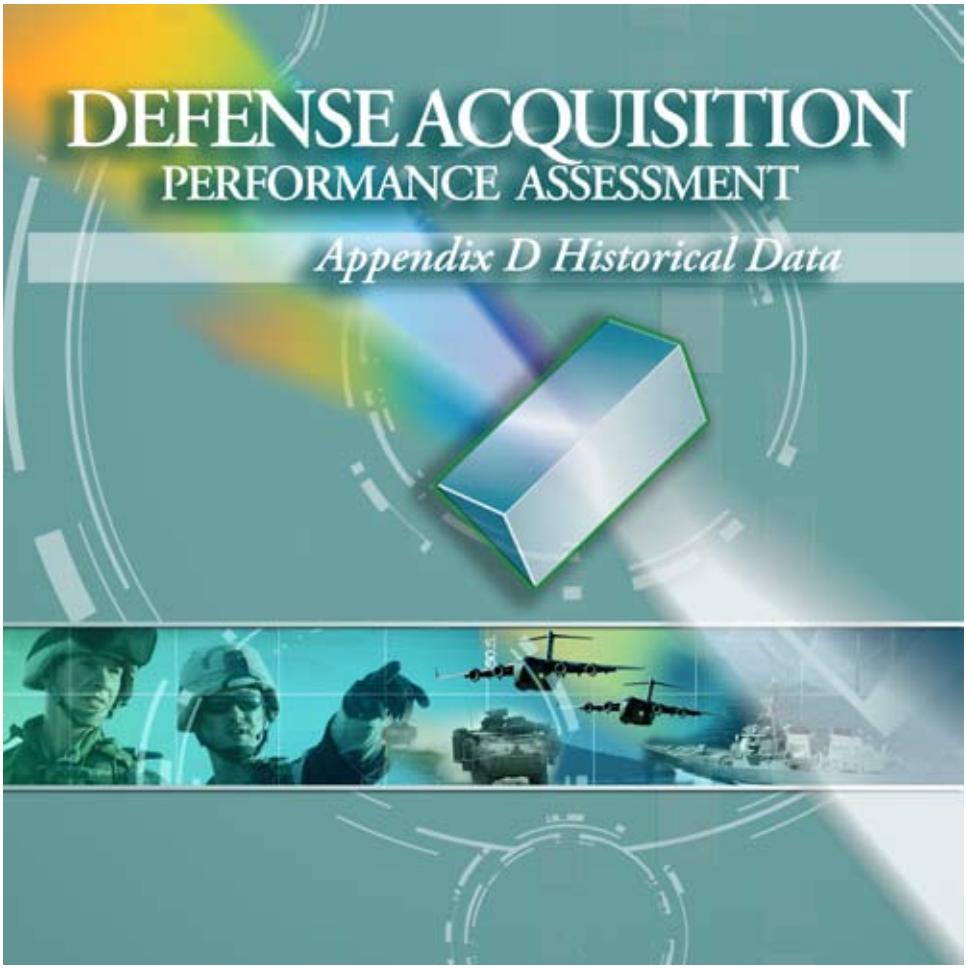
Appendix C

Panel Presentations (link)



Appendix D

Monitor Historical Data (link)



Appendix E

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