



SECRETARY OF DEFENSE REPORT TO CONGRESS

ACTIONS TO ACCELERATE THE MOVEMENT TO THE NEW WORKFORCE VISION



THE SECRETARY OF DEFENSE
WASHINGTON, DC 20301-1000

1 April 1998

Honorable Albert Gore, Jr.
President of the Senate
Washington DC 20510

Dear Mr. President:

Section 912(c) of the National Defense Authorization Act for Fiscal Year 1998 directs the Secretary of Defense to submit to Congress an implementation plan to streamline the acquisition organizations, workforce, and infrastructure. The implementation plan takes into account the review of acquisition organizations and functions done by the Department of Defense in accordance with section 912(d) and an assessment of acquisition organizations by the Task Force on Defense Reform in accordance with section 912(e). As you know, the Task Force on Defense Reform was disestablished when it delivered its report in November 1997. Consequently, the Under Secretary of Defense (Acquisition & Technology), as discussed with your staff, established a Defense Science Board Sub-Task Force on the Acquisition Workforce to conduct an independent assessment similar to that which would have been conducted by the Task Force on Defense Reform. I am forwarding that assessment to you by a separate letter. I have reviewed the Defense Science Board (DSB) report, have fully considered the DSB's conclusions and recommendations, and have incorporated the concepts in the recommendations, as appropriate, into my own report.

Over the last few years, we have witnessed an extraordinary partnership committed to real, long term reform of our acquisition processes and structures. This partnership has comprised the Congress, prominently including you and the members of your Committee; private industry, especially our current suppliers, as well as those who would not (and in many cases, still do not) do business with the U.S. Government; the Administration, including the very top leadership;

REPORT DOCUMENTATION PAGE		
1. REPORT DATE (DD-MM-YYYY) 01-04-1998	2. REPORT TYPE	3. DATES COVERED (FROM - TO) XX-XX-1998 to XX-XX-1998
4. TITLE AND SUBTITLE Secretary of Defense Report to Congress Actions to Accelerate the Movement to the New Workforce Vision Unclassified	5a. CONTRACT NUMBER	
	5b. GRANT NUMBER	
	5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)	5d. PROJECT NUMBER	
	5e. TASK NUMBER	
	5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME AND ADDRESS The Secretary of Defense Washington , DC 20301-1000	8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME AND ADDRESS ,	10. SPONSOR/MONITOR'S ACRONYM(S)	
	11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT A PUBLIC RELEASE ,		
13. SUPPLEMENTARY NOTES		
14. ABSTRACT		

Section 912(c) of the National Defense Authorization Act for Fiscal Year 1998 directs the Secretary of Defense to submit to Congress an implementation plan to streamline the acquisition organizations, workforce, and infrastructure. The implementation plan takes into account the review of acquisition organizations and functions done by the Department of Defense in accordance with section 912(d) and an assessment of acquisition organizations by the Task Force on Defense Reform in accordance with section 912(e). As you know, the Task Force on Defense Reform was disestablished when it delivered its report in November 1997. Consequently, the Under Secretary of Defense (Acquisition & Technology), as discussed with your staff, established a Defense Science Board Sub-Task Force on the Acquisition Workforce to conduct an independent assessment similar to that which would have been conducted by the Task Force on Defense Reform. I am forwarding that assessment to you by a separate letter. I have reviewed the Defense Science Board (DSB) report, have fully considered the DSB's conclusions and recommendations, and have incorporated the concepts in the recommendations, as appropriate, into my own report.

15. SUBJECT TERMS

16. SECURITY CLASSIFICATION OF:

a. REPORT

Unclassified

b. ABSTRACT

Unclassified

c. THIS PAGE

Unclassified

17. LIMITATION OF ABSTRACT
Public
Release

18. NUMBER OF PAGES
17

19a. NAME OF RESPONSIBLE PERSON
Fenster, Lynn
lfenster@dtic.mil

19b. TELEPHONE NUMBER
International Area Code

Area Code Telephone Number
703 767-9007
DSN 427-9007

and our acquisition workforce that has been so eager for real change. As a result, significant progress has been made, and we are now in the process of facing and meeting the challenges of implementing those reforms.

Despite that remarkable progress, the reality is that we have only begun. As I have stated previously, to carry out our defense strategy into the 21st century with military forces capable of meeting the challenges of this new era, we must achieve additional fundamental reform in how the Department of Defense conducts business by implementing a real revolution in business affairs.

The Defense acquisition workforce has produced the finest weapon systems in the world. However, the Department and its workforce continue to labor under an organization, infrastructure, and legal and regulatory morass that was developed over the course of the Cold War, which is incapable of responding to the rapid changes and unpredictability we face today. We continue to spend too much on infrastructure at the expense of equipping our forces. We have lengthy development, production, and support cycles that cannot keep pace with technological change or provide the kind of timely responses that our contemporary forces need. Finally, we have unreliable, aging equipment that causes us to invest in large inventories of spare and repair parts, resulting in enormous maintenance costs. Further, DoD still has much to learn from the dynamic changes in business practices and support systems that characterize the best of American business, which itself has undergone massive reform in recent years. All of this must change.

My vision of the acquisition workforce 10 years from now is one that is smaller and in fewer organizations; is focused on managing suppliers, rather than supplies; and is focused on the total cost of ownership to provide and support high quality goods and services required by our warfighting men and women. It will be a workforce that is engaged primarily in working with the Services to determine affordability of requirements; helping to establish and execute budgets; working to reduce cycle times; establishing contractual vehicles that are easily accessed by our customers within DoD; overseeing contracts to make sure the work gets done on time, within tough performance parameters, and, of course, within budget; and, all the while, ensuring the public's trust and confidence.

The Department has already reengineered a number of processes in a manner that allows us to provide the required best-value goods and services to the warfighter, while reducing the workforce by over 42% from its peak in 1989. Further reductions are planned for this year and beyond. In addition, I am proposing a number of significant new initiatives that will accelerate the attainment of my vision. Those new initiatives are identified in the enclosure, in five categories: 1) restructure research, development, and test; 2) restructure sustainment; 3) increased acquisition workforce education, and training; 4) integrated, paper-less operations; and 5) future focus areas (i.e., a price-based approach to acquisition and more fully integrating our test and evaluation activities into our acquisition process).

While I recognize the need to evaluate the benefits of an enhanced Joint Requirements Oversight Council and the adequacy of the Planning, Programming, and Budgeting System. I intend to take action through the Defense Management Council to evaluate both these areas.

The actions that I am recommending are necessary to enhance the ability of DoD to make acquisition of the best available technology affordable and to keep our armed forces in a position of dominance. I must emphasize that merely cutting people, without some restructuring and other measures, will only result in hollowing out the "guts" of DoD's research, development, test, and support capabilities, retaining only the most senior people regardless of skills and technological knowledge, and preventing DoD from bringing in fresh scientific, engineering, and logistics management talent. That can only lead to diminished technological capability for our operational forces.

I have not included a request for enactment of any statutory changes as part of my report. However, the outcome of the studies that I have proposed may lead to recommendations for legislative changes in the future. In the long run, the benefits of taking the actions indicated in this report may not be as great without legislation, particularly legislation authorizing the two rounds of Base Realignment and Closure (BRAC) that I have proposed. Most of the proposed initiatives can be pursued without BRAC, and I intend to do so, consistent with the limitations of existing authorities. However, the reductions, in the long run, in both manpower and dollars will be smaller and more difficult to achieve, without new BRAC authority.

I ask you to join with me and the Department of Defense workforce to create an acquisition infrastructure that will allow DoD to buy products and services faster, better, and cheaper so that our customer, the warfighter, has what is needed to do the job assigned.

A copy of this report has been sent to the Speaker of the House of Representatives, Chairman of the Senate Armed Services Committee, Chairman of the House National Security Committee, Chairman of the Senate Appropriations Committee, Chairman of the House Appropriations Committee, Chairman of the Senate Appropriations Committee Subcommittee on Defense, and Chairman of the House Appropriations Committee Subcommittee on National Security.

Sincerely,



Enclosure: As Stated



THE SECRETARY OF DEFENSE
WASHINGTON, DC 20301-1000

1 April 1998

Honorable Newt Gingrich
Speaker of the House of Representatives
Washington DC 20515

Dear Mr. Speaker:

Section 912(c) of the National Defense Authorization Act for Fiscal Year 1998 directs the Secretary of Defense to submit to Congress an implementation plan to streamline the acquisition organizations, workforce, and infrastructure. The implementation plan takes into account the review of acquisition organizations and functions done by the Department of Defense in accordance with section 912(d) and an assessment of acquisition organizations by the Task Force on Defense Reform in accordance with section 912(e). As you know, the Task Force on Defense Reform was disestablished when it delivered its report in November 1997. Consequently, the Under Secretary of Defense (Acquisition & Technology), as discussed with your staff, established a Defense Science Board Sub-Task Force on the Acquisition Workforce to conduct an independent assessment similar to that which would have been conducted by the Task Force on Defense Reform. I am forwarding that assessment to you by a separate letter. I have reviewed the Defense Science Board (DSB) report, have fully considered the DSB's conclusions and recommendations, and have incorporated the concepts in the recommendations, as appropriate, into my own report.

Over the last few years, we have witnessed an extraordinary partnership committed to real, long term reform of our acquisition processes and structures. This partnership has comprised the Congress, prominently including you and the members of your Committee; private industry, especially our current suppliers, as well as those who would not (and in many cases, still do not) do business with the U.S. Government; the Administration, including the very top leadership; and our acquisition workforce that has been so eager for real change. As a result, significant progress has been made, and we are now in the process of facing and meeting the challenges of implementing those reforms.

Despite that remarkable progress, the reality is that we have only begun. As I have stated previously, to carry out our defense strategy into the 21st century with military forces capable of meeting the challenges of this new era, we must achieve additional fundamental reform in how the Department of Defense conducts business by implementing a real revolution in business affairs.

The Defense acquisition workforce has produced the finest weapon systems in the world. However, the Department and its workforce continue to labor under an organization, infrastructure, and legal and regulatory morass that was developed over the course of the Cold War, which is incapable of responding to the rapid changes and unpredictability we face

today. We continue to spend too much on infrastructure at the expense of equipping our forces. We have lengthy development, production, and support cycles that cannot keep pace with technological change or provide the kind of timely responses that our contemporary forces need. Finally, we have unreliable, aging equipment that causes us to invest in large inventories of spare and repair parts, resulting in enormous maintenance costs. Further, DoD still has much to learn from the dynamic changes in business practices and support systems that characterize the best of American business, which itself has undergone massive reform in recent years. All of this must change.

My vision of the acquisition workforce 10 years from now is one that is smaller and in fewer organizations; is focused on managing suppliers, rather than supplies; and is focused on the total cost of ownership to provide and support high quality goods and services required by our warfighting men and women. It will be a workforce that is engaged primarily in working with the Services to determine affordability of requirements; helping to establish and execute budgets; working to reduce cycle times; establishing contractual vehicles that are easily accessed by our customers within DoD; overseeing contracts to make sure the work gets done on time, within tough performance parameters, and, of course, within budget; and, all the while, ensuring the public's trust and confidence.

The Department has already reengineered a number of processes in a manner that allows us to provide the required best-value goods and services to the warfighter, while reducing the workforce by over 42% from its peak in 1989. Further reductions are planned for this year and beyond. In addition, I am proposing a number of significant new initiatives that will accelerate the attainment of my vision. Those new initiatives are identified in the enclosure, in five categories: 1) restructure research, development, and test; 2) restructure sustainment; 3) increased acquisition workforce education, and training; 4) integrated, paper-less operations; and 5) future focus areas (i.e., a price-based approach to acquisition and more fully integrating our test and evaluation activities into our acquisition process).

While I recognize the need to evaluate the benefits of an enhanced Joint Requirements Oversight Council and the adequacy of the Planning, Programming, and Budgeting System. I intend to take action through the Defense Management Council to evaluate both these areas.

The actions that I am recommending are necessary to enhance the ability of DoD to make acquisition of the best available technology affordable and to keep our armed forces in a position of dominance. I must emphasize that merely cutting people, without some restructuring and other measures, will only result in hollowing out the "guts" of DoD's research, development, test, and support capabilities, retaining only the most senior people regardless of skills and technological knowledge, and preventing DoD from bringing in fresh scientific, engineering, and logistics management talent. That can only lead to diminished technological capability for our operational forces.

I have not included a request for enactment of any statutory changes as part of my report. However, the outcome of the studies that I have proposed may lead to recommendations for legislative changes in the future. In the long run, the benefits of taking the actions indicated in this report may not be as great without legislation, particularly legislation authorizing the two rounds of Base Realignment and Closure (BRAC) that I have proposed. Most of the proposed initiatives can be pursued without BRAC, and I intend to do so, consistent with the limitations of existing authorities. However, the reductions, in the long run, in both manpower and dollars will be smaller and more difficult to achieve, without new BRAC authority.

I ask you to join with me and the Department of Defense workforce to create an acquisition infrastructure that will allow DoD to buy products and services faster, better, and cheaper so that our customer, the warfighter, has what is needed to do the job assigned.

A copy of this report has been sent to the President of the Senate, Chairman of the Senate Armed Services Committee, Chairman of the House National Security Committee, Chairman of the Senate Appropriations Committee, Chairman of the House Appropriations Committee, Chairman of the Senate Appropriations Committee Subcommittee on Defense, and Chairman of the House Appropriations Committee Subcommittee on National Security.

Sincerely,



Enclosure: As Stated



ENCLOSURE

SECRETARY OF DEFENSE REPORT TO CONGRESS

ACTIONS TO ACCELERATE THE MOVEMENT TO THE NEW WORKFORCE VISION

TABLE OF CONTENTS

1. Restructure Research, Development, and Test

- 1.1 [Streamline the Science and Technology, Engineering, and Test and Evaluation Infrastructure](#)
- 1.2 [Establish a Joint Command, Control, and Communication \(C3\) Integrated System Development Process](#)

2. Restructure Sustainment

- 2.1 [Reengineer the Product Support Process to Use Best Commercial Practices](#)
- 2.2 [Competitively Source Product Support](#)
- 2.3 [Modernize Through Spares](#)
- 2.4 [Establish Program Manager Oversight of Life-Cycle Support](#)
- 2.5 [Greatly Expand Prime Vendor and Virtual Prime Vendor](#)

3. Increase Acquisition Workforce Education and Training

- 3.1 [Establish Training in Contracting for Services](#)
- 3.2 [Institutionalize Continuous Learning for Acquisition Professionals](#)
- 3.3 [Enhance "Commercial Business Environment" Education and Training](#)
- 3.4 [Recruit, Develop, and Retain Technology Leaders](#)
- 3.5 [Identify the Future Acquisition Workforce](#)

4. Move to Integrated, Paper-Less Acquisition

- 4.1 [Achieve Paper-Less Contracting](#)
- 4.2 [Create a Paper-Less Integrated Data Environment](#)

5. Future Focus Areas

5.1 [Price-Based Approach to Acquisition](#)

5.2 [Integrated Test and Evaluation](#)

1. RESTRUCTURE RESEARCH, DEVELOPMENT, AND TEST

(Section 912(d) Questions 1, 2, 3, 5, 8, and 9)

Why Change is Needed

Joint Vision 2010, the Department's conceptual template for achieving the required levels of effectiveness in joint warfighting, depends heavily on DoD's ability to leverage new and emerging technological opportunities. Unfortunately, the rapid rate of technological change is beginning to leave the Department technologically overwhelmed.

The only way for DoD to maintain the technological superiority that is essential for victory on the battlefield is to enhance its business relations with industry, and to rely on competition to provide the preponderance of research, development, and test requirements. DoD spends millions of dollars annually to maintain in-house and defense industry capabilities that duplicate those of other industry or other government agencies. Not only is this unaffordable, but it gives the Department a task it cannot accomplish. In many areas, industry is now demonstrating that it does a far better job of staying on the leading edge of technology, especially in critical information technology areas. DoD must be able to take advantage of this.

The proposed restructuring will result in a more focused research, development, and test structure, doing the things that are inherently governmental in nature or that are demonstrated to be performed in-house more effectively in terms of cost or quality.

What DoD is Already Doing

Using the RDT&E/In-Service Engineering community as an example, the Navy consolidated four Warfare Centers and one Corporate Research Laboratory (two of the Warfare Centers were subsequently further combined directly into existing Systems Commands), closed 13 RDT&E sites, and eliminated 27 other RDT&E organizations that were tenants on host sites. Through this process, facilitated by BRAC, the Navy's technical workforce has been reduced by 50%. The Army has also implemented its Army 21 plan via the BRAC process and consolidated to seven Research, Development and Engineering Centers and one Federated Research Lab. In addition, the Air Force consolidated the electronic warfare test and evaluation mission to fewer locations.

A number of disciplines or functions have been cross-serviced or collocated. Of note is the movement of all jet engine testing from the Navy to the Air Force, and collocation in the area of (1) dental and medical research labs, (2) clothing research labs and (3) training systems RDT&E. The establishment of Joint Program Offices, like the one established for National Missile Defense, reduce overlap, duplication, and redundancy in the acquisition process.

The Military Departments and the Director of Defense Research and Engineering continue to pursue a "Science and Technology Reliance Effort" which began eight years ago. The Military Departments and the Director of Test, Systems Engineering, and Evaluation also continue to pursue a "Test and Evaluation Reliance Effort." Reliance studies have identified areas of possible overlap and duplication in the science and technology and test and evaluation disciplines. Project Reliance has allowed for identification and agreement regarding lead service/agency areas of cooperation and other interdependencies.

However, in all of these areas far more is required if DoD is to achieve a streamlined, responsive, affordable acquisition organization for the early 21st century.

Actions that Must Be Taken

1.1 Streamline the Science and Technology, Engineering, and Test and Evaluation Infrastructure

The Under Secretary of Defense (Acquisition & Technology) will immediately create a study group to evaluate, cross-service and by warfighting technology area, the capabilities of all components of DoD, all non-DoD sectors of the government, industry, and academia to conduct science and technology and engineering (both Product Center engineering and systems engineering). In addition, the study effort will evaluate cross-service capabilities of test and evaluation facilities and test ranges in order to substantially reduce test and evaluation infrastructure costs, as well as achieve greater joint warfighting capability. This portion of the study effort, based on the principle that DoD's critical test resources are national assets, will examine the benefits of bringing the test ranges and test facilities together under one management structure.

This evaluation will specifically enumerate the best place from among the capabilities identified (within DoD, with a non-DoD agency such as NASA or Department of Energy, or in industry) for the work to be accomplished. It will assume that work will be done on a competitive sourcing basis, where market forces can be utilized for maximum innovation as well as cost, schedule, and performance benefits. It will also consider what in-house capability DoD will require in order to remain a "smart acquirer", and how that will be achieved.

1.2 Establish a Joint Command, Control, and Communication (C3) Integrated System Development Process

From Grenada in 1983 to Operation Desert Storm in 1991, joint operations have been hindered by the inability of forces to share critical information at the rate and at the locations demanded by modern warfare.

To attack this problem, I will direct the Under Secretary of Defense (Acquisition & Technology) and the Assistant Secretary of Defense (Command, Control, Communications, and Intelligence) to create a study group that will examine ways to establish a joint command, control, and communication integrated system development process that focuses on developing a joint architecture to guide design and achieve integrated systems development. A model for this new process is the Joint Tactical Radio System.

Impact on Acquisition Workforce

The workforce is defined here as those civilians in Defense Program 6.

At the current time there are approximately 36,400 DoD scientists and engineers in programs funded through RDT&E (out of a total of approximately 78,800 scientists and engineers identified in the Jefferson Solutions report). At present, an 18% reduction is programmed through the Future Years Defense Plan (FYDP) for the RDT&E-funded scientists and engineers. The implementation of the results of the above actions will allow DoD to evaluate the desirability and potential for further decreases in the total number of RDT&E-funded scientists.

Outcome

Besides reduced infrastructure costs, restructuring the research, development, and test functions of DoD will result in faster technology delivery to the warfighter, by more effectively coupling DoD technology with the innovative capabilities of industry; and in lower costs for weapon systems, by using industry capability where better or cheaper and eliminating cross-Service and national laboratory duplicative capability. Most importantly, the changes will result in better performing weapon systems for the 21st century warfighting needs that are defined in *Joint Vision 2010*.

Legislative Changes Under Consideration

No additional legislation is needed to begin the above actions. However, as stated in the transmittal letter to this report, pursuing these actions through the use of the limited, existing authorities will not allow us to achieve the degree of results that could be obtained by use of new BRAC authority.

2. RESTRUCTURE SUSTAINMENT

(Section 912(d) Questions 1, 2, 3, 5, 6, and 9)**Why Change is Needed**

The Department has had great difficulty in providing responsive repair parts support, taking 20-25 days to deliver stocked parts. This difficulty has caused DoD to maintain unnecessarily large inventories, the management of which continues to make GAO's list of "high risk" management areas. At the same time, most operating and support costs are climbing as legacy systems age. Thus, the time is right to re-engineer and modernize product support in DoD in much the same way as firms such as Boeing and Caterpillar now provide support for their products worldwide. Their response times for parts – even under conditions requiring surges -- and their focus on keeping costs under control, forged in conditions of rigorous worldwide competition, are features that DoD badly needs.

Restructuring sustainment will result in fewer personnel in all aspects of product and commodity support, above the military "organizational" level, and in fewer support organizations. The maintenance of inventories will undergo a dramatic change under this proposal, as contractors will retain most inventories except for those in the hands of operational forces. Government-held wholesale stocks will largely disappear. Expanded reliance on competitive sourcing for product support will require the establishment and maintenance of long-term relationships with organizations (public and private) who are properly incentivized to provide dependable delivery at affordable prices and with increasingly reliable equipment. It will also depend on effective interfaces with the command and control structure of strategic distribution systems in theaters of operation, to ensure that the supply system and the transportation system work together to provide for timely delivery to deployed units. All of this (as in world-class commercial operations) depends on modern information systems and rapid transportation and supply – all fully integrated.

What DoD is Already Doing

In the area of sustainment, the Military Departments and Defense Agencies continue to reshape and consolidate organizations and processes to meet lower resourcing levels and to improve the way the DoD supports products and services provided to the warfighter. All of the materiel support centers have reorganized and substantially reduced personnel. As a result of multiple BRAC rounds and other actions the organic maintenance depots within DoD have been reduced from 35 to 19. DoD has reduced its inventory from \$107 billion in FY 1989 to \$63 billion at the end of FY 1997 and plans to reduce the number of inventory control points (ICPs) that manage these stocks from 16 to 5, and distribution facilities from 30 in FY 1991 to 18 in FY 2001.

The Army Materiel Command (AMC) has dramatically reduced its manpower. Since 1989, AMC reduced manpower by over 43,000 (including those in Army depots), bringing down civilian manpower by 37% and military personnel structure by 60%. Most recently the Information Systems Command was disestablished with the Command's mission being consolidated at the Army's Communications-Electronics Command (CECOM). The Soldier Systems Command and the Chemical and Biological Support Command are being consolidated. The consolidation will be fully implemented by October 1, 1998. As a result of its Management Control Initiatives, the Army consolidated its Program Executive Officers (PEOs) from nine to seven, with an additional PEO to be transitioned to AMC in late FY 98. Part of this effort also involved transferring selected programs to appropriate AMC Commodity Commands. AMC is an integral part of the Army's Revolution in Military Logistics (RML). RML was developed in concert with the Joint Staff vision of Focused Logistics. Its objective is to adopt best business practices and trade physical mass for velocity as the Army moves toward distribution-based logistics.

Each of the Navy's System Commands have reorganized and streamlined operations. Notably, the Naval Air Systems Command has closed three of six Naval Aviation Depots and four of nine Product Centers. The depots are now operating at 95% capacity (on a single shift basis). These closings have produced significant savings in overhead. Within the depots the overhead costs will be approximately \$340 million less annually than they were in 1991, down almost 40%. The product center closings will produce similar savings of \$262 million annually.

The Air Force Systems Command was consolidated with the Air Force Logistics Command to form the Air Force Materiel Command (AFMC) in 1992. Recently, AFMC has introduced the Integrated Weapons System Management (IWSM) process to conduct integrated management of acquisition and sustainment for systems and product groups. Under IWSM a single manager for each system and product group is designated to satisfy customer requirements and to manage resources. AFMC has also reorganized the way the Air Logistics Centers (ALC) conduct business. The ALCs were organized along functional lines. They are now organized along product and service lines. Each ALC will now

support products such as aircraft and commodities, along with services such as financial management and contracting, rather than broad functional organizations such as maintenance and distribution.

Within the distribution business area of the Defense Logistics Agency, regional distribution commands were consolidated to form a single Defense Distribution Center. Additionally, a robust management information system, the Distribution Standard System (DSS) is being installed in all DLA and selected service distribution depots, offering real time status for all customer requisitions via the Internet. A national inventory management and materiel distribution plan, *DLA2005*, is being implemented using commercial freight consolidation and shipping practices. Similar initiatives in the supply business area are also embedding commercial practices in DLA acquisition functions across ICP operations. Prime vendor contracts for subsistence products, medical supplies and pharmaceuticals, and clothing and textile items have shown the value of a growing role for industry in future logistics processes. Follow-on initiatives include virtual prime vendor arrangements for depot maintenance production lines. These initiatives generate infrastructure savings by reducing retail stock inventories and associated personnel and storage requirements. Personnel in DLA's distribution system have been reduced from 24,000 in Fiscal Year 1993 to 15,000 in FY 1998 with a further reduction up to 40% expected during the Future Years Defense Plan (FYDP).

DoD spends \$1.2 billion annually to accomplish 650,000 household goods permanent change of station (PCS) moves. Under the current system, DoD pays more than \$100 million annually in claims; 25% of our shipments experience some loss or damage. This damage rate is substantially higher than the industry average of about 10%. This is a critical quality of life and retention issue for our service members. DoD is committed to changing the current personal property program to achieve quality moving service for military families and is pursuing four initiatives to dramatically change the way DoD obtains and utilizes moving services for military families' personal property: use of a commercial relocation service, reengineering the current program, member-arranged moves, and simplifying and streamlining the Do-It-Yourself move program. Our goals are to improve service, simplify the process, and reduce infrastructure and overall costs to the Department. The service will provide: improved on-time pickup and delivery, reduced loss and damage and thus fewer claims, full replacement value for damaged items, claims settlement directly with the carrier, and use of commercial business practices, at best value.

Actions that Must Be Taken

2.1 Reengineer the Product Support Process To Use Best Commercial Practices

Reengineering the way DoD provides product support has been a major recommendation of numerous DoD studies in the last decade. A reengineered process would eliminate large-scale duplication with industry in product support of weapon systems and equipment and in providing supplies such as food, fuel, and common hardware. Reengineering would also allow DoD to take advantage of the dramatic improvements in the last decade or so in harnessing information technology to improve responsiveness, reduce inventories, and make technical assistance quick and easily available.

I will direct the Under Secretary of Defense (Acquisition & Technology) to establish a Task Force charged with identifying ways to change the focus of the Department in product support from managing supplies (i.e., buying for inventory) to managing suppliers. For the workforce, this recommendation would take DoD workers out of the role of middleman for supply and related maintenance systems – unless they are competitively determined to be the best value source. This is an area where competitive industry clearly has the skills that are needed — the skills to buy, sell, upgrade, and repair hardware – effectively and responsively. Thus, selection between public and private sources can be done through competition. There will be, of course, be some remaining work which, for a variety of reasons (e.g., uniqueness, national security, organic "core" capability, etc.) may not be competed.

By having contractors own repair parts inventories, where competition deems this solution preferable, DoD would avoid the capital investment and holding costs associated with inventory. For commercial items, the inventory costs would be shared with other users and not born totally by DoD. With responsibility for carrying these costs, and with better reliability and access to information on reliability, availability, and maintainability issues associated with their products, contractors would have both the incentive and the means to design better reliability and maintainability into their equipment. Industry expertise would result in direct delivery, fast transportation, asset visibility, and other best business practices to minimize inventory costs. Where it is cost effective for legacy systems, DoD can "consign" existing inventory to the contractor, allowing the contractor to manage its gradual reduction.

Time-definite delivery offers DoD many of the benefits of commercial just-in-time inventory practices, but is better suited

to an environment with unpredictable requirements, significant surge demands, and potentially dire consequences for not-quite-in-time delivery performance. Both DoD and commercial providers must strive for time-definite delivery performance. Time-definite delivery reduces uncertainty in replenishment cycle times, allowing users to "lean out" inventory and reduce safety stock levels. It can reduce the mobility footprint for deployed units and reduce inventory costs. Operations and support costs typically account for about 60% of a weapon system's total life cycle cost. Thus, identifying operations and support cost objectives and incentivizing performance can generate significant savings while enhancing readiness and warfighting capability.

2.2 Competitively Source Product Support

I will ask the Under Secretary of Defense (Acquisition & Technology) to create a study group to examine expanding the current DoD policy that calls for maximizing the use of competitively sourced, long-term, total life-cycle logistics support and applying it to both new and legacy systems.

When industry and/or organic sources are properly incentivized to provide sustaining support, they will do so on a timely and effective basis, and, in the process, lower the total cost of ownership to the Department. Of course, operating forces would continue to provide organic support, with the supplier providing repair parts and technical assistance in accordance with a Commander-in-Chief's (CINC's) support concept. Successful implementation of competitively-sourced logistics support must be transparent to the warfighter and responsive to the uniformed logistician.

2.3 Modernize Through Spares

Many DoD weapons systems are being retained and operated well beyond their originally planned life spans. Since we plan to continue using these systems, we must ensure that we incorporate into them the best technological advances available as we maintain them. We must develop a Department-wide program that enables the modernization of our systems through the maintenance process.

To ensure that we modernize our existing systems I will direct the Under Secretary of Defense (Acquisition & Technology) to develop and implement a DoD-wide program that focuses on utilizing modular components and open architectures to allow the introduction of new technology through the spares program. This program will also provide sufficient information so that decisions can be made as to whether the system should be upgraded or when the system should be retired.

2.4 Establish Program Manager Oversight of Life-Cycle Support

In today's environment, most Program Executive Officers (PEOs) and Program Managers (PMs) have direct responsibility and control of funding for development and fielding weapon systems and equipment. Once the system or equipment is fielded, the PM retains overall responsibility for the system or equipment, but loses control of significant portions of the funding required for support. This practice results in much higher life-cycle costs than should be the case, because the PEO and PM have no incentive to take action, during development or modification of the systems, to design into the equipment features that will improve the reliability, availability, and maintainability of the fielded system; and it divides the responsibility for system support among many agencies. Responsibility for operation and support costs is important to incentivize proper trade-offs during development, acquisition, and modification, and to control total ownership cost. Funding control improves program stability and allows PMs to optimize the effectiveness of, and support for, their weapon system.

I will direct the Secretaries of the Military Departments each to designate at least 10 significant (i.e., large operations and support cost) programs for which the PM will be made responsible for ensuring that the product support functions are properly carried out over its entire life cycle. I will also establish a study group, to report to the Under Secretary of Defense (Acquisition & Technology), on what policy changes, if any, are needed to implement fully this initiative.

2.5 Greatly Expand Prime Vendor and Virtual Prime Vendor

As a result of the revolutions in the marketplace -- in terms of transportation, manufacturing and technology -- it is no longer necessary for DoD to manage supplies. What DoD needs to do is manage suppliers through programs such as Prime Vendor; and where Prime Vendor is not a commercial practice in a particular sector, create a Virtual Prime Vendor which accomplishes the same outcome through the use of technology. This initiative will reduce the number of personnel

and the amount of infrastructure we need to support our warfighters. It will also improve the delivery of products and services, but will require the acquisition of new skills by our existing workforce.

I will direct the Under Secretary of Defense (Acquisition & Technology) to establish a team to examine where additional Prime Vendor or Virtual Prime Vendor vehicles can be used and to begin implementation in those areas. Included in this analysis will be a review of the impact of prime vendor or virtual prime vendor vehicles on the local economy.

Impact on Acquisition Workforce

The workforce is defined here as those civilians in Defense Program 7 program elements for DLA Distribution Depots, DLA and Service Supply Management and ICPs, and Maintenance Depots.

Currently, there are about 23,800 inventory managers and 13,700 distribution personnel involved in sustainment. An 11% reduction in that workforce is programmed through the FYDP. Continued reductions in this workforce are possible through the implementation of results from the above actions.

Approximately 82,000 workers are currently employed in depot level maintenance and overhaul (29,500 managers and 52,500 floor workers). The programmed FYDP reduction in that workforce is 11%. As a result of competitive sourcing, this workforce could grow or could shrink; but no matter which way it goes, it would clearly be more efficient.

Outcome

Besides large infrastructure cost savings, restructuring sustainment above the operational level will align DoD with commercial processes and will result in improved warfighting capability; a DoD infrastructure that stays on the leading edge of process technology, and reduced costs – all through the application of competitive market forces.

Legislative Changes Under Consideration

Some of what is being proposed can be achieved without immediate legislative changes. However, in order for the Department to be able to fully capitalize on the opportunities available, the current statutory obstacles to competitive sourcing must be addressed.

3. INCREASE ACQUISITION WORKFORCE, EDUCATION, AND TRAINING

(Section 912(d) Questions 10, 13, and 14)

Why Change is Needed

The civilian and military professionals in the acquisition workforce are the linchpin of the DoD acquisition system. Their efforts ensure that the U.S. Armed Forces have adequate quantities of the most technically advanced and reliable equipment and systems in the world.

The Department continues to strive to transform the acquisition workforce in response to a rapidly changing acquisition environment in which the leading-edge technology is often found in the commercial marketplace; where changing roles are required for government in its interaction with industry; and where the advancement of commercial practices can be used in defense acquisition in order to increase performance of systems while lowering costs and time to field and support the equipment. Members of the DoD acquisition workforce must become:

- More managers and leaders, and less hands-on doers.
- More focused on systems engineering, and less focused on "black box" component design.
- More capable of making "business" judgments based on insightful understanding of industry operations and technological change, and less guided by rule-based thinking.

What DoD is Already Doing

Since 1989 the Department has reduced the acquisition workforce by 42% -- over one quarter million people. DoD has done extensive process reengineering through various Acquisition Reform initiatives in order to operate effectively and efficiently in spite of reductions. However, infrastructure must continue to shrink if DoD is to afford modernization and readiness.

A solid foundation for the education of the workforce has been established under the Defense Acquisition Workforce Improvement Act (DAWIA). The Defense Acquisition University (DAU), using its consortium of schools, has established 81 courses with over 1200 offerings, educating approximately 35,000 members of the workforce per year. The material in these courses is work performance specific and incorporates all of the Department acquisition reform initiatives. While our current system of technical acquisition training is highly effective, its dependence on classroom instruction brings a number of inefficiencies, such as time off the job, travel expense, and delivery delays can be inherent in system design. We must use distributed learning technologies to improve the affordability of our training system. DAU is accelerating its conversion of more than 50% of its curriculum to distributed learning through the use of an innovative web-based learning environment. This environment guides and supports students through the learning process. Instructors can track students' progress and provide individual assistance as needed. Students are able to interact on-line with faculty and other students. This robust environment reduces time needed to acquire knowledge and skills for enhanced job performance. It also provides education and training better, faster, and cheaper to the larger, acquisition-related workforce.

Since 1995, the DoD has conducted training programs through the use of satellite broadcasts. These satellite broadcasts have proven to be an effective means to provide timely and accurate information to the DoD workforce and the Department's industry partners about how DoD is changing the way it acquires needed goods and services. These sessions are video-taped and are available from the Acquisition Reform Communications Center (ARCC) to enable continuous education and training to the expanded acquisition-related workforce in DoD, other Government agencies, and industry.

The first Acquisition Reform Day was held on May 31, 1996 with the objective of communicating the message of acquisition reform. A second event was conducted in March 1997 and emphasized the implementation of acquisition reform initiatives. A third event is planned for the week of May 4, 1998 with the theme of leading and embracing change. These communications, education, and training events have proven to be effective tools in achieving needed cultural change.

On May 29, 1996, the Under Secretary of Defense (Acquisition & Technology) established the Civilian Career Development program. This program is an opportunity for Acquisition & Technology career civilian staff members to seek out and complete developmental assignments in government or industry.

In the Fiscal Year 1996 National Defense Authorization Act, Congress provided for a civilian acquisition workforce demonstration project to determine the feasibility or desirability of proposals for improving the personnel management system. With the advances we have made in reforming the acquisition process, we believe this is an excellent opportunity to focus on reforming the civil service system that manages the people in the process. The workforce demonstration is a significant step in a systematic approach to develop a personnel management system that supports our new way of doing business. Immediately following enactment of the demonstration project authorization, the Department established a Process Action Team, made up of members from the Services and Defense Agencies, to work together with the unions, to develop a new personnel system. The Office of Personnel Management has approved the first of two *Federal Register* notices inviting public comment on the demonstration. The demonstration will begin after the end of the initial publication comment period, a public hearing, and the publication of the final *Federal Register* notice. The demonstration is expected to provide the personnel management tools necessary to conform the workforce to our transformation of acquisition systems and organizations.

Actions that Must Be Taken

3.1 Establish Training in Contracting for Services

Over the course of the last several years DoD has focused its Acquisition Reform efforts on improving the acquisition of goods. As the Department moves into the 21st century, the amount of goods DoD buys will be reduced. DoD will

increasingly adopt the commercial practice of purchasing services instead of things. This will require the Department to change significantly the way it thinks about, and actually acquires, services. To implement effectively these changes, DoD will need to train the entire acquisition workforce, and those who establish requirements, on this new focus. DoD will also have to develop tools to facilitate the change in behavior, and the structuring of the acquisitions themselves.

To implement this change I will direct the Under Secretary of Defense (Acquisition & Technology), the Vice Chairman of the Joint Chiefs of Staffs, and the Service Chiefs to establish a team to develop training and tools which focus on acquiring services. The training and tools will include guidance on purchasing services to meet warfighter needs.

3.2 Institutionalize Continuous Learning for Acquisition Professionals

The smaller acquisition workforce of the future must understand and interact effectively with the commercial sector, leverage best business practices and technological advances for continuing acquisition process improvement, and possess strong management and leadership competencies. Therefore, the Department must strengthen its education and training programs to ensure development of these workforce attributes.

To that end, I will direct the Under Secretary of Defense (Acquisition & Technology) to complete the development of a reform-centered, continuous learning program that will supplement our well-established technical training curriculum for the acquisition workforce. The program should be designed to keep the workforce current with acquisition reforms, functional, and technical advances, and to improve its business knowledge and leadership competencies. Workforce standards should be strengthened to ensure development of a highly qualified, professional cadre of candidates for our most senior leadership positions. Major program elements, such as business education and leadership development, and program administrative elements should be competitively sourced to take advantage of best education and training practices in academic and commercial sectors. To minimize program infrastructure, distance learning delivery methods will be encouraged. The Under Secretary of Defense (Acquisition & Technology) will coordinate the program with the Under Secretary of Defense (Personnel & Readiness).

3.3 Enhance "Commercial Business Environment" Education and Training

DoD has traditionally relied upon in-house institutions, such as the Defense Acquisition University, for the majority of education and training for the acquisition workforce. That education and training has produced practioners skilled in the way DoD has traditionally done business. The above actions will provide for enhancement of both the education and training within DoD institutions and will provide additional educational opportunities through such means as distance learning.

In addition to enhancing the training and educational offerings and opportunities at the Defense Acquisition University, it is also important that DoD recognize that a good portion of what the Department seeks to accomplish involves the introduction, into the DoD acquisition process, of those practices and techniques that, while commonplace in the commercial environment, will be new to the government arena. As such, DoD's education and training efforts must also include access to appropriate courses (either existing or designed specifically for the government acquisition workforce) at top business and other academic institutions, as well as new and innovative partnerships with the private sector, that can avail the acquisition workforce of additional and vital perspectives and training on key commercial practices.

I will direct the Under Secretary of Defense (Acquisition & Technology) to develop a program specifically aimed at providing training on commercial business practices. The program will include market research, commercial pricing, commercial financing, commercial terms and conditions, joint ventures, etc.

3.4 Recruit, Develop, and Retain Technology Leaders

The expertise DoD needs at any point in time might very well reside in industry or academia, particularly in fields where the pace of technology change is rapid. It is often difficult to convince individuals in the private sector with such expertise to accept Government positions primarily because of their resistance to becoming subject to the rules that make it difficult for senior DoD managers to go to work in the commercial sector upon leaving Defense.

In addition to increasing mobility between government and industry jobs, individual employees will be asked to be more geographically mobile in order to build the broad base of skills and experience that will be expected as in-house managers take on their new role, involving less doing and more managing. Most new members of the acquisition

workforce should be given five-year renewable term appointments. This will allow for necessary turnover to refresh continually technology and management skills, and will provide incentives to maintain skills in the smaller workforce.

I will direct the Under Secretary of Defense (Acquisition & Technology) to work with the Under Secretary of Defense (Personnel & Readiness) to analyze the issues involved and to develop a legislative package that will detail ways to open the door between government and industry for high technology skills, loosen the rules governing Intergovernmental Personnel Act employees, and promote the use of innovative hiring approaches that enable the rapid formation of renewable term contracts allowing an individual to return to industry after serving with DoD for four or five years, without impinging on the need for complete integrity in our acquisition and procurement decisions. There must also be an active program to provide the necessary incentives for the DoD to retain the individuals with the specialized skills needed by the government in the future information age.

3.5 Identify the Future Acquisition Workforce

Our experience with acquisition workforce formation and management under the Defense Acquisition Workforce Improvement Act (DAWIA), and our vision of future workforce composition and competency, provide important insights regarding needed improvements in workforce identification. As specified in the Department's report to the Congress in response to section 912(b) of the National Defense Authorization Act for Fiscal Year 1998, the defense acquisition workforce is defined as "the personnel component of the acquisition system".

In light of this definition, the Under Secretary of Defense (Acquisition & Technology) is currently refining a workforce identification methodology that will include all personnel employed in acquisition occupations wherever they are located in DoD, plus those in acquisition support occupations if they are employed in certain organizations*. This approach to workforce identification will better represent the acquisition workforce, recognize degrees of involvement with the acquisition system, and improve workforce management and development. Certain conforming changes to DoD Instruction 5000.58 will need to be made as a result of this workforce identification effort

** There are various measures of the acquisition workforce: 1) DoD Instruction 5000.58, acquisition organizations, 355,299 people; 2) Pub.L. no. 101-50, Defense Acquisition Workforce Improvement Act, 105,544 people; and 3) Jefferson Solutions Report, revised Packard Commission, 177,613 people.*

Impact on Acquisition Workforce

The initiatives described above will not result in major direct reductions in the acquisition workforce. In essence, the initiatives described in this section are "enablers" that will ensure that the future workforce has the experiences and competencies that will be required as we change the nature of the work that they are expected to perform.

Outcome

Improved education and training, and the adoption of new workforce skills, will increase the quality of the acquisition workforce allowing the use of new better, faster, and cheaper practices for acquiring goods and services.

Legislative Changes Under Review

Some of what is outlined above can be accomplished without legislative action. However, as DoD seeks to further its efforts to attract and retain high quality technology and business leaders, a number of statutes will be reviewed, with any recommended changes being forwarded through the Office of Management and Budget to the Congress.

4. MOVE TO INTEGRATED, PAPER-LESS OPERATIONS

(Section 912(d) Question 12)

Why Change is Needed

Today, DoD's business operations are literally awash in paper. Indeed, paper is not only driving the business culture of

DoD, it is choking many essential systems. Paper is costly to complete, print, and maintain. But, paper is not the only problem. Moving information from one data system to another, when that information is paper-based, is also a significant problem because the same data must be entered and reentered. Multiple entry and reentry of data provides multiple opportunities for errors, slows down the process, and is an inefficient use of DoD's workforce. These errors affect the accuracy of every part of the acquisition system from the identification of the goods or services needed, to the payment for those goods or services, to the ultimate disposal of goods.

Electronic commerce and related technologies, including the Internet and World Wide Web, will allow DoD to drastically reduce the amount of paper received, processed, and stored and the number of times data must be entered and reentered.

What DoD is Already Doing

DoD is a pioneer in new uses of electronic commerce and related technologies. From procurement to weapons program management, DoD is making strong progress in moving towards an integrated, paper-less environment for many of our critical business functions.

- The Department has established electronic relationships with its suppliers, reducing the time it takes to communicate requirements to the supplier base and thus improving response time to the warfighter.
- The Department has also designed and selected an electronic data interchange product, the Standard Procurement System (SPS), to standardize the process by which contracts are awarded, and is in the process of fielding that system to all procurement offices within DoD.
- In addition, to eliminate duplication of effort on the part of suppliers, a Centralized Contractor Registration database is being created where suppliers doing business with the government can go to register one time, instead of registering with each individual buying office, to do business with the government.

But more needs to be done. The entire contracting process, from the receipt of a requirement until contract close-out, should be integrated and paper-less. DoD has identified this goal as one of its National Performance Review Goals for the year 2000. The Department also realizes that paper-less operations provide the opportunity for greater efficiencies throughout the entire acquisition process and has established a goal for itself of identifying and beginning the implementation of a entirely paper-less acquisition system by the year 2002.

Actions that Must Be Taken

4.1 Achieve Paper-Less Contracting

As part of the Defense Reform Initiative, I have directed that all DoD contracting will be paper-less by January 1, 2000. This initiative includes all phases of the contracting process, including contractor selection, contract writing, administration, payment and accounting, auditing, and contract reconciliation and close-out. The Department is also expanding its ability to provide on-line access to financial and other information to industry partners and the public. Further, DoD will make full use of the capabilities offered by Electronic Funds Transfer.

4.2 Create a Paper-Less, Integrated Data Environment

The Department has made substantial progress in the acquisition, management, and use of digitized information. However, the Department must take the next step forward to a fully digital environment in all acquisition program and support offices. Industry has already demonstrated that this is not only possible, but preferable to traditional paper-driven systems. On July 2, 1997, the Deputy Secretary of Defense set a corporate goal of digital operations being the method of choice for all acquisition management and life cycle support information. He directed the Under Secretary of Defense (Acquisition & Technology), by the end of 2002, to ensure that the overwhelming majority of DoD acquisition and logistics operations will be based on digital methodologies and products.

The focus of this effort will be at the program office level. Consistent with the architecture established by a joint DoD-level executive steering group, Program Managers will be responsible for establishing a data management system and appropriate digital environment that allows every activity involved with the program throughout its total life-cycle to exchange data digitally.

Impact on Acquisition Workforce

There will be a substantial impact on the acquisition workforce as a result of this initiative. The impact will manifest itself in two ways. First, fewer acquisition personnel will be needed throughout the entire acquisition system as a result of converting to an integrated, paper-less operation because there will be less paper to create and maintain, and data will not need to be entered and reentered. Second, the workforce will need to acquire new skills for operating in a paper-less process. Developing these skills will require both traditional training and the development of just-in-time distance learning capabilities.

Outcome

Besides reducing infrastructure costs, reducing both the amount of paper generated and the number of times data must be entered into data systems will reduce cycle time, reduce errors, reduce the total ownership costs of the items DoD acquires, and will realign the acquisition workforce to focus on initiatives which will improve the quality and the price of the goods and services the Department acquires.

Legislative Changes Under Review

Changes in the Federal Acquisition Computer Network (FACNET) requirements, established in the Federal Acquisition Streamlining Act of 1994, may be necessary to implement the transition to an integrated, paper-less contracting process.

5. FUTURE FOCUS AREAS

(Section 912(d) Questions 4, 6, 7, and 11)

Why Change is Needed

As noted above, improvements must be made in many areas of the acquisition system to streamline acquisition organizations and the workforce. However, improvements may also be needed in other areas in addition to those described. These areas did not receive sufficient study during the course of either the DoD or Defense Science Board reviews to make specific recommendations. Therefore, no actions, other than some additional study, are proposed, at this time.

5.1 Price-Based Approach to Acquisition

In the past, the Department, because of the nature of the marketplace and the fact that in many cases the goods and services the Department purchased were unique, found it necessary to purchase the goods and services it acquired using cost-based contracts built upon the actual or projected cost of an item or service. Both the nature of the Department's requirements and the way in which prices can be determined have changed. Now, DoD is promoting the use of performance-based requirements which talk of needs in terms of the capability required. In many cases this will permit the Department's needs to be satisfied with commercial products. Where commercial products aren't available, DoD needs can often be satisfied through the use of commercial practices and/or commercial facilities in the provision of services or the production of goods (e.g., producing defense-unique items on commercial production lines using flexible tooling).

Today, most consumers and merchants focus on obtaining value. This focus on value allows the competition between differing solutions and provides access to products and services which would not typically have been considered by the Department in the past. The Department needs to change its focus from trying to figure what something costs to acquire, to focusing on the value a thing has over its useful life. This change will allow DoD to compete differing solutions and get the best value. The successful implementation of this change will require both new training and tools. It will also allow the Department to reduce the number of contracting officers, in-plant representatives, and contract auditors.

Study that Must Be Taken

I will ask the Under Secretary of Defense (Acquisition & Technology) to lead a Department-wide effort (including the audit and oversight communities) to identify changes necessary in the Department's basic management systems to create processes that allow for valuing goods and services, and for focusing on the price paid, for the value received. These new processes will focus on getting the best value, which includes the consideration of the total cost of ownership and the performance needed; and will give DoD access to many world-class commercial suppliers who have traditionally avoided the historically cost-based business of DoD.

5.2 Integrated Test and Evaluation

Test and evaluation are essential to the development of high-performing weapon systems. I have outlined five themes to reform and improve the test and evaluation process and better support streamlined acquisition. These themes are:

1. Early tester involvement, especially the operational tester, in the development of a system to identify potential problems early so that they can be addressed as the system is being designed.
1. Combining development test (DT) and operational test (OT) activities to enable more efficient use of test resources.
1. Combining testing with training or field operations to reduce the cost of testing as well as improve its realism.
1. The use of modeling and simulation (M&S) to support resolution of test issues.
1. Greater participation in the ACTD process by test personnel and organizations to assist ACTD planning and evaluation and to support ACTD transitions to acquisition at advanced milestones.

Study that Must Be Taken

I will ask the Under Secretary of Defense (Acquisition & Technology) to work with the Director of Operational Test and Evaluation and the Service Acquisition Executives to determine if further improvements can be made in the testing process to reduce the cycle time for, and the costs of, the development of systems and to accelerate the use of commercial products.