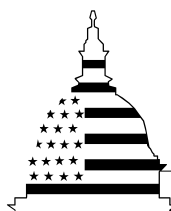


January 2003

Major Management Challenges and Program Risks

Department of Defense



G A O

Accountability * Integrity * Reliability

A Glance at the Agency Covered in This Report

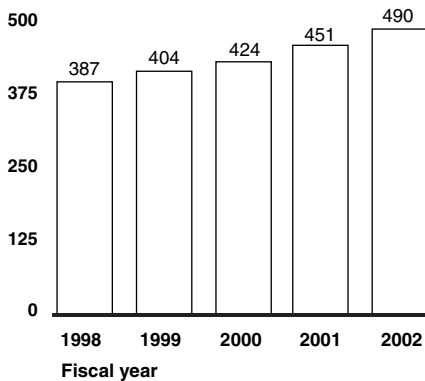
The Department of Defense provides the military forces needed to deter war and to protect the security of our country. U.S. defense strategy seeks to defend the freedom of the United States and its allies and friends, and to secure an international environment of peace that makes other goals possible. The department has developed the following four goals to help achieve its mission:

- assure allies and friends by maintaining an overseas presence;
- dissuade future military competition by maintaining or enhancing U.S. advantage in key areas of military capability;
- deter threats against U.S. interests by having a range of military options, emphasizing peacetime forward deterrence in critical areas of the world, and enhancing the capability of forward deployed and stationed forces; and finally,
- defeat any adversary decisively, if deterrence fails.

The Department of Defense's Budgetary and Personnel Resources

Budgetary Resources ^{a,b}

Dollars in billions



Personnel Resources ^{b,c}

Fiscal year	Active Military Personnel in thousands	Civilian Personnel (FTEs) in thousands
1998	1,422	707
1999	1,387	681
2000	1,381	660
2001	1,387	650
2002	1,386	635

Source: Budget of the United States Government.

^a Budgetary resources include new budget authority (BA) and unobligated balances of previous BA.

^b Budget and staff resources are actuals for FY 1998-2001. FY 2002 are estimates from the FY 2003 budget, which are the latest publicly available figures on a consistent basis as of January 2003. Actuals for FY 2002 will be contained in the President's FY 2004 budget to be released in February 2003.

^c Does not include guard and reserve personnel, which are an all-volunteer force of about 1.3 million (almost half of the total military force), or retired reserve personnel.

This Series

This report is part of a special GAO series, first issued in 1999 and updated in 2001, entitled the *Performance and Accountability Series: Major Management Challenges and Program Risks*. The 2003 Performance and Accountability Series contains separate reports covering each cabinet department, most major independent agencies, and the U.S. Postal Service. The series also includes a governmentwide perspective on transforming the way the government does business in order to meet 21st century challenges and address long-term fiscal needs. The companion 2003 *High-Risk Series: An Update* identifies areas at high risk due to either their greater vulnerabilities to waste, fraud, abuse, and mismanagement or major challenges associated with their economy, efficiency, or effectiveness. A list of all of the reports in this series is included at the end of this report.

Department of Defense



Highlights of [GAO-03-98](#), a report to Congress included as part of GAO's Performance and Accountability Series

Why GAO Did This Report

In its 2001 performance and accountability report on the Department of Defense (DOD), GAO identified systemic and specific problems with management processes related to strategic planning, human capital, support infrastructure, financial and information management, acquisition reform, contracting processes, and logistics reengineering. The information GAO presents in this report is intended to help to sustain congressional attention; facilitate a departmental focus on continuing to make progress in addressing these challenges—and others that have arisen since 2001; and ultimately overcome them. This report is part of a special series of reports on governmentwide and agency-specific issues.

What Remains to Be Done

DOD needs a strategic approach to transition its business processes that includes the

- integrated nature of the department's management challenges and related solutions;
- importance of continuity in leadership to achieve process improvements; and
- agreement between the executive and legislative branches of government on planned actions, time frames, and desired results.

Legislatively establishing a chief management officer may be one option to help achieve these goals.

www.gao.gov/cgi-bin/getrpt?GAO-03-98.

To view the full report, click on the link above. For more information, contact Henry L. Hinton, Jr., at (202) 512-4300 or hintonh@gao.gov.

What GAO Found

DOD is transforming its business operations, and its current leadership places high priority and great attention on transformation. However, significant management problems continue to impact the economy, effectiveness, and efficiency of DOD's business processes. This places mission capabilities at risk by unnecessarily spending funds that could be directed to higher priorities such as modernization and readiness.

- **Strengthen strategic planning and budgeting.** DOD developed a new strategic plan and management framework, but shortcomings in strategic planning and budgeting processes provide little assurance that DOD manages and operates programs effectively or ensures adequate program accountability.
- **Hire, support, and retain military and civilian personnel.** DOD has instituted benefits, but junior officer shortages, retention problems, and civilian workforce reductions and imbalances create a workforce not balanced by age or experience and that puts at risk the orderly transfer of institutional knowledge.
- **Overcome support infrastructure inefficiencies.** DOD emphasizes reform but lacks an overarching business transformation strategy; infrastructure costs continue to consume nearly 44 percent of its budget, detracting from DOD's ability to spend funds on more critical needs such as weapon system modernization and readiness.
- **Confront and transform pervasive, decades-old financial management problems.** DOD has adopted business transformation initiatives, but long-standing financial management problems adversely affect its ability to control costs, ensure basic accountability, anticipate future costs and claims on the budget, measure performance, maintain funds control, prevent fraud, and address pressing management issues.
- **Effectively manage information technology investments.** DOD is investing heavily in modernizing its information technology, but management weaknesses have limited success. At the same time, information security weaknesses limit DOD's ability to ensure that current and future systems are not compromised.
- **Improve DOD's weapons acquisition process.** DOD has undertaken acquisition reforms, but cost increases, schedule delays, and performance shortfalls pervade the acquisition process; reforms have not produced consistent improvements in program outcomes.
- **Improve processes and controls to reduce contract risk.** DOD is trying to reduce contract risk, but problems in service contracting, techniques and approaches, payments, health contract management, and human capital undermine DOD's ability to effectively acquire goods and services.
- **Improve quality of logistics support.** DOD has 400 improvement initiatives ongoing, but longstanding problems in logistics processes, systems, and operations result in decreases in the quality and timeliness of logistics support. This is particularly the case for its high-risk inventory area.

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United States General Accounting Office
Washington, D.C. 20548

January 2003

The President of the Senate and the
Speaker of the House of Representatives

This report addresses the major management challenges and program risks facing the Department of Defense (DOD) as it seeks to support and defend the Constitution of the United States; provide for the common defense of the nation, its citizens, and its allies; and protect and advance U.S. interests around the world.

The report discusses the actions that DOD has taken and that are underway to address the challenges GAO identified in its Performance and Accountability Series 2 years ago. It also discusses major events that significantly influence the environment in which the department carries out its mission. GAO summarizes the challenges that remain, new ones that have emerged, and further actions that it believes are needed.

This analysis is intended to help the new Congress and the administration carry out their responsibility and improve government in order to benefit the American people. For additional information about this report, please contact Henry L. Hinton, Jr., Managing Director, Defense Capabilities and Management, at (202) 512-4300 or at hintonh@gao.gov.

David M. Walker
Comptroller General
of the United States

Major Performance and Accountability Challenges

The United States began the new millennium with military forces second to none. The effectiveness of U.S. forces has been well evidenced by experiences in the Persian Gulf, Bosnia, and Kosovo. However, the Department of Defense (DOD) has reached a pivotal point, with the tragic terrorist attacks of September 11, 2001, permanently changing the defense landscape. These terrorist attacks underlined the importance of change in equipping DOD to meet unconventional threats and asymmetrical warfare. The attacks also resulted in DOD's requirement for additional resources to meet a broad array of needs that support the readiness of U.S. forces. DOD has undertaken a number of initiatives to transform its forces and improve its business operations. However, unless these initiatives are addressed in a unified, integrated fashion, DOD will continue to see billions of dollars consumed to support inefficiencies in its business functions that if reformed, could be directed to other higher priorities such as modernization and readiness. Such opportunities will be achieved only through transformations involving challenges in the following key functions: (1) strategic planning and budgeting, (2) human capital, (3) infrastructure, (4) financial management and accountability, (5) information technology, (6) weapons acquisition process, (7) contracting, and (8) logistics support.

We have reported on many of these challenges for years and highlighted them all in our January 2001 Performance and Accountability Series. As we reported then, and as is the case today, limitations in DOD's strategic planning and budgeting processes led to difficulties in assessing DOD's mission achievements and in planning and executing DOD's budget. We also reported our concerns on human capital challenges in recruiting and retaining military personnel as well as ensuring that the civilian workforce is properly constituted in key areas such as acquisition management. We identified DOD's human capital problems as part of a broader pattern of human capital shortcomings that have eroded mission capabilities across the federal government, and this problem persists. In addition, much of DOD's infrastructure was inadequately funded and maintained, with scarce resources being devoted to inefficient and unneeded facilities. Indeed, aging and substandard housing exacerbates human capital issues. Furthermore, decades-old financial management and accountability problems continued. Such problems also involved ineffectively managed information technology investments and the overbudget, untimely weapons acquisition process. In addition, numerous contract management difficulties were related to payment issues and service acquisitions. DOD revealed that it had not effectively managed even the most basic processes relating to contract payment, resulting in millions of dollars of

overpayments. Such financial management and contracting challenges in turn affected the quality and timeliness of logistics support for the warfighter.

DOD's senior civilian and military leaders appear to be committed to transforming the department and improving its business operations. Since our last report, DOD has emphasized force transformation as necessary to effectively anticipate, counter, and eliminate the emergence of unconventional threats overseas and domestically. DOD believes force transformation will create an environment of greater precautions, heightened intelligence, and greater homeland security, all while DOD is simultaneously fighting the war on terrorism. As part of the transformation process, DOD has committed to adopt a capabilities-based approach to planning based on clear goals and to improve the linkage between strategy and investments. At the same time, DOD has embarked on a series of efforts to improve its business processes, including support infrastructure reforms, the issuance of a new human capital resource plan, and the adoption of a new management approach to balancing risks. Additionally, in acknowledging DOD's numerous ongoing financial difficulties, the Secretary of Defense has laid out an 8-year plan to reform financial management and accountability and instituted new contract management policies and programs aimed at increasing the importance given to these processes. While DOD recognizes the need for internal transformation and budget reform, its goals are challenging, and its strategic plan is currently not set up to allow DOD to implement and measure progress toward achieving its performance goals in an integrated fashion.

As old problems persist for DOD and new problems emerge, the eight areas we identified in January 2001 continue to challenge DOD in its attempts to develop world-class operations and activities to support its forces. Six of the eight are included on our high-risk list. As the security environment shifted from a Cold War structure to one of many and varied threats, DOD did not keep pace with the changing capabilities and productivity of the modern business environment. Indeed, transformation applies not just to what DOD does but also to how DOD does it and who implements it. As we have reported, if these and related support problems are not addressed, inefficiencies will continue to make the cost of carrying out assigned missions unnecessarily high and, more importantly, increase the risk associated with those missions. Each dollar that is spent inefficiently is a dollar that is unavailable for other departmental priorities such as weapon system modernization and readiness.

However, effectuating departmental transformation also requires cultural transformation and business process reengineering that take years to accomplish and a commitment from both the executive and legislative branches of government. Although sound strategic planning is the foundation upon which to build, sustained leadership is needed to maintain continuity. One way to ensure sustained, committed leadership would be to create a full-time position, such as a chief management officer position. Such a position would provide the sustained attention essential for addressing key stewardship responsibilities such as strategic planning, performance management, and financial management in an integrated manner while helping to facilitate the transformation processes within DOD. Equally important is the Congress's responsibility to provide the necessary review and visible leadership to demonstrate its commitment to reform and oversight.

This report summarizes ours and, where appropriate, the DOD Inspector General's findings and recommendations to address DOD's challenges. We continue to consider all or part of six areas relating to support infrastructure, financial management, information technology, acquisitions, contracts, and logistics to be high risk.

The graphic features a background of a stylized American flag with stars and stripes. On the right side, there is a detailed illustration of the United States Capitol building. The title "Performance and Accountability Challenges" is prominently displayed in a large, bold, black font across the top of the graphic area.

Performance and Accountability Challenges

- Strengthen strategic planning and budgeting to achieve desired mission outcomes
- Hire, support, and retain military and civilian personnel with the skills to meet mission needs
- Overcome support infrastructure inefficiencies to reduce costs and improve operations
- Confront and transform pervasive, decades-old financial management problems to improve financial accountability
- Effectively manage information technology investments to transform business functions
- Improve DOD's ability to acquire weapon systems in a cost-effective and timely way
- Improve processes and controls to reduce contract risk
- Provide logistics support that responds to the needs of the warfighter at an affordable cost

Strengthen Strategic Planning and Budgeting to Achieve Desired Mission Outcomes

Strategic planning that clearly lays out DOD's mission and goals and the resources needed, strategies to be followed, assigned responsibilities, and performance measures for tracking goal accomplishments is crucial to fully focusing DOD's activities on achieving desired mission outcomes. However, as we reported in January 2001, limitations in DOD's strategic planning and budgeting processes have led to difficulties in assessing its performance in achieving mission outcomes and in planning and executing the budget. This condition has not changed, and key actions needed to improve planning and budgeting have not been accomplished. Consequently, the same strategic management challenges we previously noted continue to exist. While DOD has developed a new strategic plan, it has not yet updated its mission outcomes or linked those outcomes to the budget. Additionally, shortcomings in the strategic plan's underlying analyses, the absence of performance plans for fiscal years 2002 and 2003, and the failure to link budget resources to mission outcomes provide little assurance to DOD and congressional decision makers that DOD is adequately managing its programs and operations and being held accountable for doing so.

DOD's Strategic Planning Has Limitations

The President's management agenda for fiscal year 2002 emphasizes the need to fully integrate performance measures in the federal budget process so that resource allocation is tied to specific outcomes. The Government Performance and Results Act of 1993 provides a framework for DOD and other federal agencies to accomplish this task and to achieve greater accountability in their programs and operations. Under the Results Act, DOD is to develop a strategic plan and subsequent annual performance plans to establish performance goals and measures covering a given fiscal year and directly link its longer-term strategic goals to day-to-day activities. Annual performance reports are to disclose the degree to which those performance goals were met. At the request of the Congress, DOD conducts the Quadrennial Defense Review, a comprehensive analysis of its defense strategy, every 4 years. The review—DOD's strategic plan—forms the foundation for DOD's mission and vision statements and strategic goals.¹

In January 2001, as DOD was preparing to conduct its next Quadrennial Defense Review, we reported that it must follow results-oriented

¹ The first Quadrennial Defense Review was submitted to the Congress in May 1997.

management principles in performing its next review and that the review should have an explicit strategy for achieving force structure goals. DOD subsequently issued its review report in September 2001, which, as we have reported, has both strengths and weaknesses. On the positive side, sustained involvement of senior DOD officials, including the Secretary of Defense, enhanced the review and led to the adoption of a new defense strategy that underscores the need to transform the force to meet future military threats and adopt more efficient business practices. However, weaknesses in the Quadrennial Defense Review process, analysis, and reporting limited the review's usefulness as a means for fundamentally reassessing U.S. defense plans and programs.

- The Secretary of Defense's decision to delay the Quadrennial Defense Review's start until late spring 2001, when DOD completed a series of strategic reviews led by outside defense experts, imposed additional time constraints on the review's already tight schedule.
- A clear link between the specific legislative reporting requirements² and the issues assigned to study teams for analysis did not always exist because the principal guidance document of the Quadrennial Defense Review was designed to emphasize the Secretary's priorities and not the reporting requirements.
- The varied thoroughness of DOD's analysis and reporting on issues mandated by legislation limited the Quadrennial Defense Review's usefulness, and some significant issues were not addressed or were deferred to follow-on studies. For example, limitations in the assessment of force structure requirements—such as the lack of focus on longer-term threats and requirements for critical support capabilities—provided few insights into how future threats and planned technological advances in U.S. capabilities would affect future force requirements. Additionally, DOD's Quadrennial Defense Review report provided little information on some required issues such as the specific assumptions used in the analysis and deferred analysis of some issues, such as the role of the reserves, for later studies.

² The Congress first mandated the 1997 Quadrennial Defense Review in the National Defense Authorization Act for Fiscal Year 1997, and the National Defense Authorization Act for Fiscal Year 2000 created a permanent requirement for DOD to conduct such a review every 4 years. The legislation requires DOD to report on various topics, including the type of force structure best suited to implement the defense strategy, the effect of new technologies on force structure, and the key assumptions used in the review.

As a result of these shortcomings, the Congress did not receive comprehensive information on all of the legislatively mandated issues, DOD lacks assurance that it has optimized its force structure to balance short- and long-term risks, and the Quadrennial Defense Review resulted in few specific decisions on how existing military forces and weapons modernization programs may need to be changed in response to emerging threats. We recommended that DOD clearly assign responsibility for addressing legislatively required review issues and provide the Congress with more complete information on key assumptions, scenarios, analytical methods, and alternatives used in assessing DOD's force structure requirements.³ DOD partially concurred with our recommendations, indicating that clear assignment of responsibilities is important to the success of the review. However, DOD noted that the Secretary of Defense must be allowed to manage the review in a manner that focuses on issues of primary importance. DOD also stated that, given the scope and timing of the review, it effectively used a combination of analytical tools and professional judgment to reach its conclusions on force structure.

The weaknesses with the Quadrennial Defense Review permeate throughout DOD's planning and budgeting processes—from initial planning, to programming, and to budgeting resources. The review forms the backbone for the development and integration of DOD's missions and strategic priorities, and it also is the foundation from which DOD's results-oriented performance goals flow and from which achievement of those goals is measured. In June 2001, we reported on the need for DOD to have sound strategic planning to guide improvements to DOD's operations and to tie plans to desired mission outcomes. At that time, we noted that

³ U.S. General Accounting Office, *Quadrennial Defense Review: Future Reviews Can Benefit from Better Analysis and Changes in Timing and Scope*, [GAO-03-13](#) (Washington, D.C.: Nov. 4, 2002).

DOD had made efforts to improve its overall reporting.⁴ However, we reported that progress in achieving selected outcomes was unclear⁵ and noted that it was difficult to assess performance shortfalls in DOD's strategies and measures for the outcomes identified at that time. Affected areas included combat readiness, support infrastructure reduction, force structure needs, and matching resources to program spending plans. We also pointed out that DOD's fiscal year 2002 performance plan—which has yet to be developed and finalized—could have provided DOD with an opportunity to address these shortfalls and that the conduct of the review could have provided DOD with another opportunity to include the necessary qualitative and quantitative information that could contribute to providing a clearer picture of performance.

However, to date, DOD has not issued performance plans for fiscal years 2002 and 2003 or reported on fiscal year 2001 results.⁶ According to the Deputy Secretary of Defense, DOD has not finalized performance plans and reports because it introduced a new management framework and has undertaken a fundamental restructuring of defense priorities and programs. According to the Deputy Secretary, most of the performance targets established in 2000 have been replaced by new or revised standards derived from the September 2001 Quadrennial Defense Review. Thus, while DOD is taking actions to improve its performance planning and reporting, it does not have a strong basis to optimize decision making in an integrated manner across diverse activities and programs.

Currently, DOD is formulating new performance goals and metrics to align with outcomes described in the September 2001 Quadrennial Defense Review. DOD hopes that its new goals and measures will meet or exceed the intent of the Results Act and, when available, provide the President and

⁴ We reported that DOD discussed the importance of human resources in achieving DOD's performance objectives; summarized how DOD's performance metrics responded to each of the eight management challenges; and more effectively presented information data verification, presentation, and content in the fiscal year 2000 performance report.

⁵ At the time of our report, the selected outcomes were as follows: (1) technological superiority is maintained in key warfighting capabilities; (2) U.S. military forces are adequate in number, well qualified, and highly motivated; (3) combat readiness is maintained at desired levels; (4) infrastructure and operating procedures are more efficient and cost-effective; (5) availability and/or use of illegal drugs are reduced; and (6) fewer erroneous payments are made to contractors.

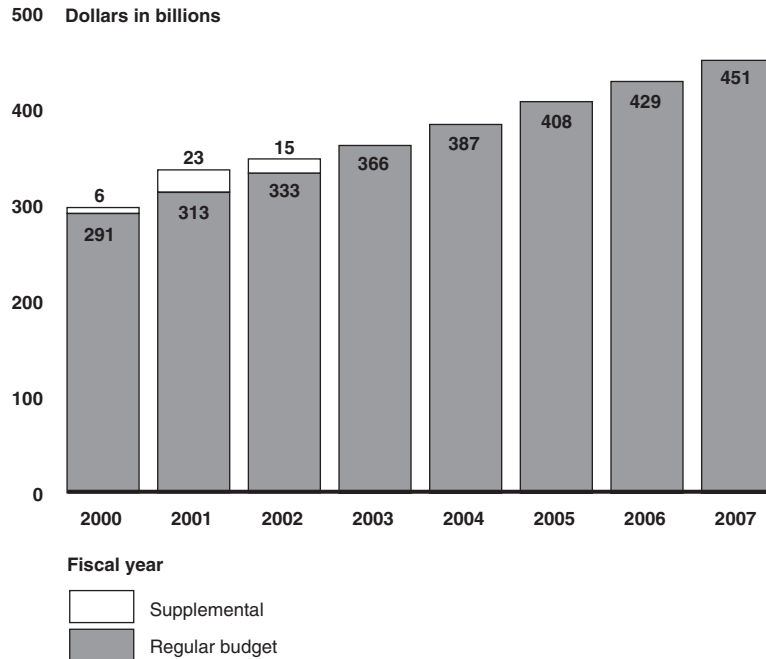
⁶ Results for fiscal year 2001 were to use standards established by a February 2000 performance plan submitted to the Congress with the Clinton administration's last budget.

the Congress with up-to-date, useful information with which to assess its performance. DOD had hoped to submit a new performance plan for fiscal years 2002 to 2003 and a report for fiscal year 2001 by the end of August 2002, but DOD did not meet its target. It expects to publish its next performance plan in February 2003.

**Budget Formulation
and Execution Have
Continuing Weaknesses**

We previously reported that DOD employs overly optimistic planning assumptions in its budget formulation. Figure 1 illustrates that DOD's budget has increased significantly over the last few years and shows plans for continued growth. Nevertheless, DOD still plans more programs than it can fund, and costs for functions such as health care could possibly put additional pressure on DOD's budget. Also, in some cases, DOD has limited ability to track expenditures from operating and supplemental appropriations to ensure that funds are expended as intended. Moreover, DOD has not always effectively managed and monitored its use of appropriated funds. These system weaknesses, which DOD has recognized, limit the information available to DOD and congressional decision makers in planning and overseeing DOD's budget.

Figure 1: DOD's Budget from Fiscal Year 2000 through Fiscal Year 2007



Source: DOD.

Notes: GAO's analysis of DOD's data.

Data for fiscal years 2000-2003 are appropriated funds; data for fiscal years 2004-2007 are projected funds.

Since the mid-1980s, we have reported that DOD employs overly optimistic planning assumptions in its budget formulation. As a result, DOD has too many programs for the available dollars, which often leads to program instability, costly program stretch-outs, and program termination. In 2000, we reported that because the fiscal year 2001 program's projected cost was about \$16 billion more than the cost projected for the same elements in the fiscal year 2000 program, DOD could not implement its operation and maintenance and procurement programs as planned. Over the past few years, the mismatch between programs and budgets has continued, especially in the area of weapon systems acquisition. For example, as discussed in more detail later, the estimated cost of developing eight major weapon systems has increased from about \$47 billion in fiscal year 1998 to about \$72 billion by fiscal year 2003.

In executing the budget, DOD's ability to effectively manage and track expenditures from operating and supplemental appropriations is limited. The net effect of DOD's problems in this area is that it does not know with certainty the amount of funding available. Such information is essential for DOD and the Congress to determine if funds are available that could be reprogrammed or transferred to meet other critical program needs.

While DOD has some flexibility in how to use its annual operating appropriation and often transfers funds among its operating accounts, it has not developed systems that can sufficiently track the movement of funds. For example, DOD does not have reports to show how it used much of \$47 billion appropriated from fiscal years 1999 through 2001 that it moved among or into its operation and maintenance accounts. While it does track the movement of some high-priority readiness accounts, it has frequently used some of these funds for purposes other than intended. For example, we reported that over a 4-year period—fiscal year 1997 to fiscal year 2000—one service moved almost \$1 billion (about 21 percent) of the nearly \$4.8 billion that the Congress had provided for training to finance other expenses such as base operations and real property maintenance.

Moreover, DOD does not always effectively use its funds from its operating appropriations. For example, in 2002, we reported that DOD had to return an annual average of \$1 billion in unexpended balances from its operation and maintenance accounts to the Department of Treasury for fiscal years 1992 through 1996. We reported that in one service, fund managers had failed to make required reviews that could have freed up funds no longer needed for their original purpose and could have been used for other appropriate purposes.

DOD has similar problems in tracking and managing funds from supplemental appropriations. From February 1991 to May 2002, DOD reported \$44 billion in incremental costs for overseas contingency operations and the war on terrorism. In May 2002, we reported that DOD had not provided adequate guidance and monitoring for some of these funds. We recommended that DOD provide better guidance for contingency fund use and improve oversight of contingency fund expenditures. In its written response, DOD recognized the need to make these improvements and stated that it would more closely monitor the execution of funds to avoid the situations discussed in our report.⁷

For contingency operations in the Balkans and Southwest Asia, we reported that DOD spent as much as \$101 million of \$2.2 billion in fiscal years 2000 and 2001 on questionable expenditures. Some expenses did not appear to be specifically for the contingency, other expenditures were for items already in the theater, and some expenditures were for seemingly unneeded items such as cappuccino machines, golf memberships, and decorator furniture.

In addition, a continuing inability to capture and report the full cost of its programs represents one of the most significant impediments facing DOD. DOD does not have the systems and processes in place to capture the required cost information from hundreds of millions of transactions it processes each year. Lacking complete and accurate overall life-cycle cost information for weapon systems impairs DOD's and congressional decision makers' ability to make fully informed judgments on funding comparable weapon systems. DOD has acknowledged that the lack of a cost accounting system is the largest impediment to controlling and managing weapon system costs. Further, an April 2001 report on the results of an independent study of DOD's financial operations commissioned by the Secretary of Defense concluded that DOD lacked the ability to routinely generate cost-based metrics needed to link financial management to DOD's goals.⁸

⁷ U.S. General Accounting Office, *Defense Budget: Need to Strengthen Guidance and Oversight of Contingency Operation Costs*, [GAO-02-450](#) (Washington, D.C.: May 21, 2002).

⁸ Department of Defense, *Transforming Department of Defense Financial Management: A Strategy for Change* (Washington, D.C.: Apr. 13, 2001). Recognizing the need for improved financial data to effectively manage DOD's vast operations, the Secretary of Defense commissioned an independent study to recommend a strategy for financial management improvements.

The Secretary of Defense, in the most recent Quadrennial Defense Review report (September 2001), acknowledged that DOD's financial systems are outdated and incompatible with one another. The report also noted that many of DOD's business processes must be modernized and simplified, including the planning, programming, and budgeting system. According to the report, over the next several years, DOD will explore options to redesign the way it plans and budgets.

Key Actions Needed

DOD is taking a number of actions to better align its planning, budgeting, and execution functions. However, to help overcome inefficiencies in its strategic planning processes and to promote more realistic budgeting, DOD must follow results-oriented management principles, beginning with improvements to the Quadrennial Defense Review process.

A number of options are available to enhance the usefulness of future quadrennial defense reviews. In November 2002, we recommended that the Secretary of Defense clearly assign responsibility for addressing all legislative requirements and provide the Congress with more complete information on DOD's analyses to meet legislative reporting requirements, particularly DOD's examination of force structure requirements. In addition, we suggested that the Congress consider extending the time frame for the review, reassessing and focusing the legislative requirements on a clear set of high-priority issues, and establishing an advisory panel to identify the critical issues that the next review should address.

As previously discussed, DOD believes that clear assignment of responsibilities is important to the success of the Quadrennial Defense Review and that its briefings to the Congress provide sufficient visibility into its decisions. With regard to the timing of the review, DOD proposed extending the time frame for the review. The Bob Stump National Defense Authorization Act for Fiscal Year 2003 included language that extended the time frame.⁹

As we have reported, sound plans linked to DOD's overall strategic goals are critical to achieving needed reforms and to holding DOD accountable for achieving intended results. To ensure that DOD has a strong basis to make sound decisions about its activities and programs, it is imperative

⁹ Public Law 107-314, December 2, 2002.

that DOD's future performance plans be linked directly to the Quadrennial Defense Review's goals and outcomes.

DOD has a critical need for funds for weapon systems, readiness, and other operations. Failure to accurately account for what it spends has enormous implications for DOD and could prevent the effective allocations of funds to those programs most in need. To promote more realistic budgeting and execution, DOD needs to incorporate more realistic assumptions into its planning processes and enhance the reporting and monitoring of its expenditures. The implementation of such actions may put DOD in a better position to more realistically and effectively allocate resources to those key needs for weapon systems, readiness, and other operations.

Hire, Support, and Retain Military and Civilian Personnel with the Skills to Meet Mission Needs

Effective human capital management is key to enabling DOD to have the right number of military and civilian personnel with the right knowledge, skills, and abilities to accomplish its mission. In January 2001, we reported that human capital management represented a huge challenge that affected virtually every DOD activity. The department was dealing with military personnel issues such as shortages of junior officers for the career force, problems in retaining certain skills, and the military services' failure to meet recruiting goals. DOD also faced significant challenges in managing its civilian workforce. With the exception of recruiting and retention, this situation remains, in general, unchanged. In fiscal year 2001, all of the active and reserve components—except the Air National Guard—met their numeric goals for recruitment and retention. However, retention challenges continued for those personnel holding technical and scientific skills that are in demand in the private sector. Also of significance, is DOD's issuance, in 2002, of a three-component human capital strategic plan addressing military and civilian personnel management and policies and quality of life issues affecting servicemembers and their families.

DOD uses pay and benefits as tools to recruit and retain military personnel.¹⁰ In fiscal year 2002, the Congress appropriated more than \$100 billion in compensation for military personnel.¹¹ Although DOD provides a wide array of benefits to its people, its benefit package was developed piecemeal in the absence of a strategic approach to human capital management. DOD has faced many challenges in providing an employee benefit package to servicemembers that responds to their changing needs and is competitive with private-sector companies. However, DOD may face increased competition for qualified people over the next few years because of continued increases in the number of high school graduates going on to college and labor shortages projected through at least 2010. In addition, the recent war on terrorism has added to the operational tempos in all the reserve components, and on March 19, 2002, more than 95,000 reservists were on duty. Many of these reservists had been mobilized for 6 months or more. In contrast, only about 35,000 reservists were on duty supporting worldwide military operations during an average day in fiscal year 2000. Furthermore, significant challenges are emerging related to supporting the reserves. For example, maintaining employers' continued support for their reservist employees is critical in order to retain experienced reservists in these times of longer and more frequent deployments. The expanded use of reserve forces has raised questions concerning the adequacy and equity of compensation and support programs for reservists. Given these concerns and the potential for even greater use of the reserve components, now may well be an appropriate time to assess the components' management practices and policies as well as future roles and missions. Also, significant challenges exist for the management of DOD's civilian workforce that has undergone a sizeable reduction since the end of the Cold War. Additional reductions in DOD's civilian workforce are expected at least through fiscal year 2007.

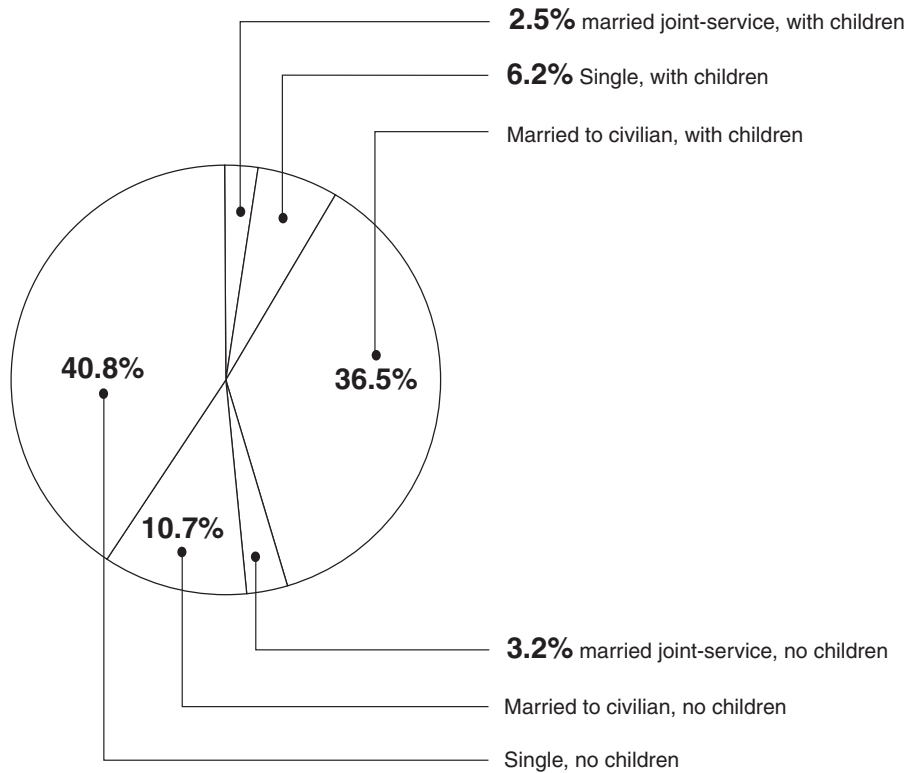
¹⁰ Benefits represent the indirect compensation above and beyond a servicemember's basic pay. The U.S. Bureau of Labor Statistics defines a benefit as "non-wage compensation provided to employees." We use the term to include such benefits as retirement, health care, and educational assistance, as well as certain programs and services that support servicemembers and their families, including child care, spousal employment assistance, and relocation assistance.

¹¹ Our estimate may understate the total amount appropriated for military compensation because funds for certain benefits are aggregated into higher-level budget categories and therefore are not visible in the budget.

**DOD and the Congress Have
Acted to Improve Military
Personnel Benefits**

Although developed piecemeal in the absence of a strategic approach to human capital management, DOD has instituted a number of benefits in response to demographic changes in the active duty force since the military became an all-volunteer force in 1973. Many of these benefits address one of the most significant demographic changes—an increase in servicemembers with family obligations. For each year between 1980 and 2000, at least half of the active duty force consisted of married servicemembers, and active duty servicemembers had about 1.23 million children in 2000. Many servicemembers are in dual-income households, with spouses contributing on average about 25 percent of the family's income. Figure 2 shows the composition of the active duty force, by family status, in 2000.

Figure 2: Composition of Active Duty Force by Family Status (as of Sept. 2000)



Source: DOD.

Notes: Data taken from DOD's *Profile of the Military Community 2000 Demographics Report*.

"Joint-service" refers to a marriage where an active duty member is married to another active duty member or to a reservist.

Percentages do not add up to 100 due to rounding.

A second major demographic change in the active military has been the growing proportion of servicemembers who are women. In 2000, women comprised about 15 percent of the active duty force, compared with 4 percent in 1974. Up to 10 percent of women in the military become pregnant each year. We previously reported that of the 28,353 women without prior military service who enlisted in fiscal year 1993, 2,074 separated because of pregnancy between the 7th and 48th month of enlistment. Another 706 separated because of parenthood. These separations accounted for more than one-third of the attrition for female enlistees who joined the services in 1993. Replacing trained, experienced personnel who leave is expensive. DOD estimated for fiscal year 1998 that it had spent \$35,000 per enlistee by the time each enlistee had been recruited and trained for 6 months.¹²

In September 2002, we reported that DOD has responded positively to most demographic changes by incorporating a number of family-friendly benefits; however, opportunities exist to improve current benefits in this area. For example, although DOD has several planned initiatives to assist the hundreds of thousands of military servicemembers' spouses who seek employment largely due to the frequent moves (on average every 2 years) servicemembers make, it has not systematically tracked and assessed the effectiveness of the employment assistance that services offered at military installations. DOD also has not assessed the feasibility, costs, and benefits of offering extended time off to new parents as a way to increase retention of trained, experienced personnel.

¹² This figure includes enlistee's pay and allowances as well as the cost of the services' recruiting and training infrastructure.

All the core benefits offered by most private-sector firms—retirement pay, health care, life insurance, and paid time off—are offered by the military. In fact, military benefits in some cases exceed those offered by the private sector. These benefits include free health care for members, free housing or housing allowances, and discount shopping at commissaries and exchanges. During the 1990s, some servicemembers expressed concerns that their benefits were eroding, particularly their health care and retirement benefits. In response to such concerns, the military benefit package has been enhanced. In recent years, for example, the Congress restored retirement benefits that had previously been reduced for some servicemembers and significantly expanded health benefits.¹³

**Strategic Human Capital
Approach for Military
Personnel Compensation Is
Not Fully Developed**

A well-developed human capital strategy would provide a means for aligning all elements of DOD's human capital management, including pay and benefits, with DOD's broader organizational objectives. Pay and benefits are tools that an organization can use to shape its workforce, fill gaps, and meet future requirements.

In prior reports and testimony, we have identified strategic human capital management planning as a governmentwide high-risk area and a key challenge. We have stated that agencies, including DOD, need to improve the development of integrated human capital strategies that support the organization's strategic and programmatic goals. In March 2002, we issued an exposure draft of our model for strategic human capital management to help federal agency leaders effectively lead and manage their people. We also testified on how strategic human capital management can contribute to transforming the cultures of federal agencies.

Several DOD studies also have identified the need for a more strategic approach to human capital planning within DOD. The 8th Quadrennial Review of Military Compensation, completed in 1997, strongly advocated that DOD adopt a strategic human capital planning approach. The review found that DOD lacked an institutionwide process for systematically examining human capital needs or translating needs into a coherent strategy. Subsequent DOD and service studies, including the Defense Science Board Task Force on Human Resources Strategy, the Naval

¹³ Pub. L. 106-65, sec. 641, Oct. 5, 1999; Pub. L. 106-398, sec. 752, Oct. 30, 2000.

Personnel Task Force, and the DOD Study on Morale and Quality of Life, endorsed the concept of human capital strategic planning.

DOD officials have acknowledged the need for a more strategic approach and in April 2002 issued the first of a three-component human capital plan to establish personnel priorities for the next 3 to 5 years. The strategic plan identifies more than 30 initiatives that are organized into five “lines of operation,” or goals. These five goals are (1) increase the willingness of the American public to recommend military service to young Americans; (2) recruit the right number and quality of personnel; (3) develop, sustain, and retain the force; (4) transition members from active status; and (5) sustain the process of strategic planning and maintain its viability. A majority of the initiatives are studies addressing various military personnel issues. Some of the issues that DOD will study—such as the lateral entry of civilians into the military workforce, the ramifications of variable career lengths for officers, and the appropriate grade structure for the manpower needs of future weapon systems—could lead to proposed changes that have far-reaching impacts. The strategy does not call for any near-term changes to pay and benefits. However, DOD plans to study several pay and benefit issues, such as nonmonetary incentives that support retention.

Since the military personnel strategy is intended to be a dynamic document that will be assessed and refined periodically, DOD will have opportunities to incorporate additional elements of human capital strategic planning in future iterations of the strategy. We recently testified that while DOD has recognized the need for a strategic approach to managing its human capital, the military personnel strategy is missing elements that would be found in a fully realized human capital strategic plan. For example, with the increased reliance on the 1.3 million reservists that comprise almost half of the total military force, this opportunity would include also incorporating the needs of the reservists into DOD’s strategic planning. One area that DOD plans to study is how to increase employer awareness of the importance of supporting reserve members.

Increased Use of Reservists Can Have Implications for Retention

Since the end of the Cold War, a shift has occurred in the way DOD uses the reserve forces.¹⁴ Previously, reservists were viewed primarily as an expansion force that would supplement active forces during a major war. Today, no significant operation can be conducted without reserve involvement. Reservists not only supplement but also replace active forces in military operations and exercises. The current mobilization for the war on terrorism is adding to this increased operational tempo¹⁵ and is expected to last a long time. Good relations between reservists and their employers are important, because deployments can be disruptive to employers and difficulties, if not resolved, could lead some reservists to abandon military service.

In June 2002, we reported that despite increases in operations since 1992, the average operational tempo of reserves throughout DOD increased only slightly between 1992 and 2001—from 43 to 46 days a year. Normal required training periods accounted for the bulk of this total. Average operational tempos fluctuated for all components over the period but did not appreciably increase, with the exception of the Air Reserve components whose tempos have historically been the highest. Tempos increased from 54 to 65 days in the Air National Guard and from 55 to 65 days in the Air Force Reserve.

Although component averages have not increased appreciably, all the components contain some individual reservists who are in units or occupations that have been disproportionately affected. For example, during the past 3 years, operational tempos within the Army National Guard averaged between 40 and 44 days a year, but hundreds of National Guard members from units in Texas, Georgia, and Virginia were deployed to Bosnia for 6 months or more. Hundreds more from other units are scheduled to participate in future 6-month deployments. Moreover, reservists in the fields of aviation, special forces, security, intelligence, psychological operations, and civil affairs have experienced operational tempos two to seven times higher than those of the average reservists in

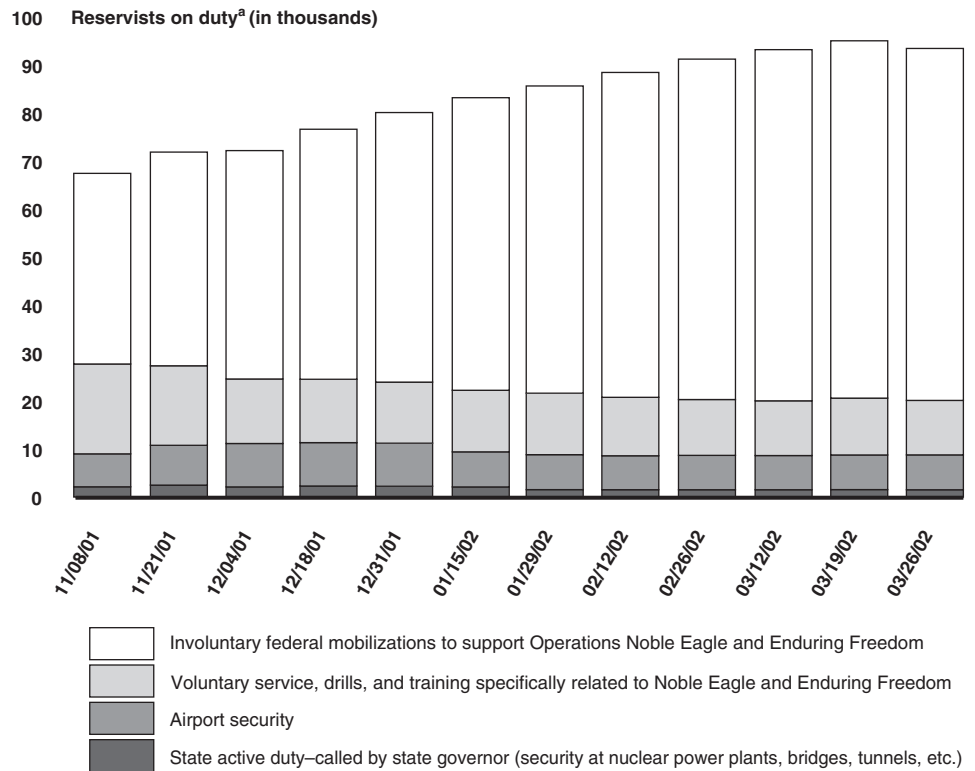
¹⁴ “Reserve forces” or “reservists” refers to the collective forces of the Army National Guard, the Air National Guard, the Army Reserve, the Naval Reserve, the Marine Corps Reserve, the Air Force Reserve, and the Coast Guard.

¹⁵ We use the term “operational tempo” to mean the total days reservists spend participating in normal drills, training, and exercises, as well as domestic and overseas operational missions.

their services. As discussed earlier, the war on terrorism has added to the operational tempos in all the reserve components.

Figure 3 shows that the majority of reservists supporting operations related to the war on terrorism have been involuntarily called to duty under the partial mobilization that went into effect in September 2001. Even if the mobilized force declines in size, the mobilization could have considerable long-term effects on reserve operational tempos because it allows DOD to activate reservists involuntarily for as long as 2 years.

Figure 3: Reserve Buildup to Support the War on Terrorism



Source: DOD.

^aIncludes Coast Guard Reserves.

We reported that several factors hamper DOD's outreach efforts to both employers and reservists.

- DOD lacks complete information on who the reservists' employers are, and it has viewed the Privacy Act¹⁶ as a constraint that prevents it from requiring reservists to provide this information. Because information is incomplete, DOD cannot (1) inform all employers of their rights and obligations, (2) identify all exemplary employers for recognition, and (3) carry out effective outreach activities.
- DOD relies on volunteers in the field to carry out many of its outreach activities. However, these volunteers do not always report their contacts with reservists and employers; as a result, DOD does not know the full extent of problems that arise and has no assurance that its outreach activities are being implemented consistently.
- Although DOD has an active program to address problems that arise between reservists and their civilian employers, no such program is in place to deal systematically with issues that arise between students and their educational institutions. Because students make up an estimated one-third of all reservists, it is important that such issues as lost tuition, credits, and educational standing be addressed more directly.
- DOD has not fully analyzed data on reservists' operational tempo and recruiting and retention trends on an ongoing basis to determine how deployments might be affecting reservists and their employers. More analyses of such data would enable DOD to better identify emerging problems and formulate outreach activities to address the problems.

DOD's activities to enhance reserve-employer relations are not as effective as they could be. DOD has conducted hundreds of briefings each year for both reservists and employers. However, we reported that a sizable number of the employers and reservists indicated that they were unsure of their rights and responsibilities under the Uniformed Services Employment and Reemployment Rights Act of 1994¹⁷ and that some had never been briefed on their rights and responsibilities. While the majority

¹⁶ 5 U.S.C. §552a.

¹⁷ Pub. L. 103-353, Oct. 13, 1994, 38 U.S.C. §§4301-4333 grants servicemembers reemployment rights following military duty and addresses the rights and responsibilities of both reservists and their employers.

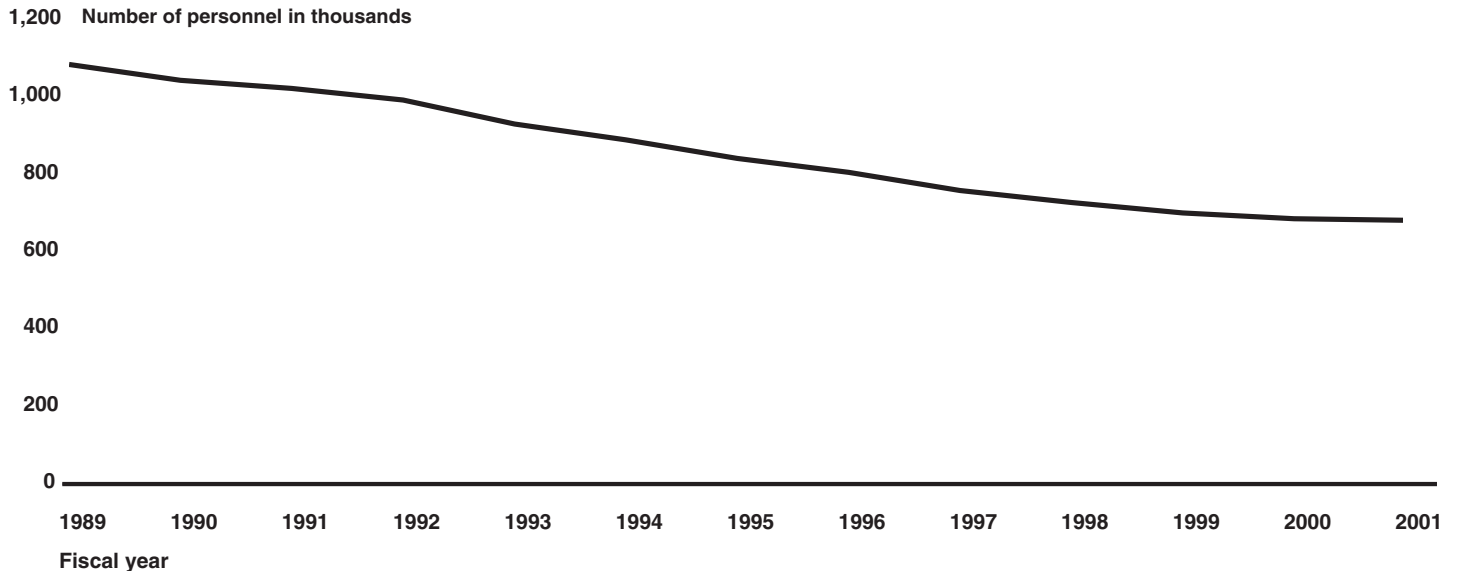
of reservists believed their employers complied with legal requirements, some reservists alleged that their rights had been violated. Both employers and reservists claimed that frequently they were not given 30 days' advance notice of deployments, and some employers wanted the right to verify reserve duty under 30 days on a case-by-case basis. These findings suggest that some changes may be needed in the management of reservist-employer relations to forestall reservists from leaving military service.

Significant Civilian Workforce Management Issues Exist

DOD employs about 700,000 civilians—some 37 percent of all nonpostal civilian federal workers. Because it is the largest employer of federal employees in the competitive civil service, how DOD approaches human capital management sends important signals about trends and expectations for federal employment across government. Moreover, the role that DOD's civilian workforce plays in support of U.S. national security makes DOD's approach to managing its people a matter of fundamental public interest.

As shown in figure 4, DOD has undergone a sizable reduction in its civilian workforce since the end of the Cold War, and additional reductions are expected at least through fiscal year 2007. Between fiscal year 1989 and 2001, DOD reduced its civilian workforce by about 400,000 positions (excluding foreign national employees), from approximately 1,075,000 to 672,000—a 37 percent reduction. The President's fiscal year 2003 budget request projected additional reductions in DOD's civilian workforce, to a level of 614,865 by fiscal year 2007—a cumulative reduction of nearly 43 percent from the fiscal year 1989 level.

Figure 4: DOD Civilian Workforce Trends (fiscal years 1989-2001)



Source: DOD.

Notes: GAO's analysis of DOD's data

Figure does not include indirect hire employees, for example, persons rendering service to the federal government under agreements or contracts with a foreign government.

Without an integrated strategic view, DOD's approach to civilian downsizing in the early 1990s relied primarily on voluntary turnover and retirements and varying freezes on hiring authority. DOD also used existing authority for early retirements to encourage voluntary separations at activities facing major reductions in force. The fiscal year 1993 National Defense Authorization Act authorized a number of transition assistance programs for civilian employees, including financial separation incentives, or "buyouts," to induce the voluntary separation of civilian employees and reduce authorized positions. DOD has credited the use of separation incentives, early retirement authority, and various job placement opportunities as ways to avoid nearly 200,000 involuntary demotions and separations.

While the tools available to DOD to manage its civilian downsizing helped mitigate the adverse effects of force reductions, DOD's approach to the reductions was not oriented toward shaping the makeup of the workforce. During our work on the early phases of the DOD downsizing, some DOD

officials voiced concerns about what was perceived to be a lack of attention to identifying and maintaining a balanced basic level of skills needed to maintain in-house capabilities as part of the defense industrial base. Career civilians possess “institutional memory,” which is particularly important in DOD because of the frequent rotation of military personnel and the short tenure of the average political appointee.

The consequences of the lack of attention to force shaping can be seen in the current age distribution of the civilian workforce in comparison to the distribution at the start of the drawdown. Today’s workforce is older and more experienced; but not surprisingly, 58 percent of the workforce will be eligible for early or regular retirement in the next 3 years. Since 1989, there has been a 69 percent drop in the number of civilians with 11 to 30 years of service.

The net effect is a workforce that is not balanced by age or experience and that puts at risk the orderly transfer of institutional knowledge. The continuing increase in the number of retirement-age employees could make it difficult for DOD to infuse its workforce with new and creative ideas and develop the skilled civilian workers, managers, and leaders it will need to meet future mission requirements. With senior management attention, strategic leadership, and results-oriented performance management, however, DOD can rebuild its civilian workforce to meet future requirements for specific skills and experience.

These human capital challenges are even more severe in certain areas, such as acquisition and financial management (see “Confront and Transform Pervasive, Decades-Old Financial Management Problems to Improve Financial Accountability” and “Improve DOD’s Ability to Acquire Weapon Systems in a Cost-Effective and Timely Way”). The acquisition area is a part of the workforce that the United States has relied upon to maintain the technological superiority that plays an essential role in the national security strategy. According to DOD’s Acquisition 2005 task force report, the rate of reduction in the civilian acquisition workforce has substantially exceeded that of the rest of the DOD workforce. In the past decade, DOD has downsized its acquisition workforce by almost half. More than 50 percent of the remaining acquisition workforce will be eligible to retire by 2005; and in some occupations, DOD projects that half of the current employees will have retired by 2006.

The 2005 task force report made a series of recommendations to DOD in October 2000. In April 2002, we reported on DOD’s plans to implement

these recommendations. We noted that DOD has made progress in laying a foundation for reshaping its acquisition workforce. However, DOD recognizes that it will be challenging to implement a strategic approach. Consequently, DOD views implementation of the recommendations as long-term efforts with specific outcomes taking years to achieve.

In addition, many of DOD's financial management shortcomings are attributable in part to human capital issues. While DOD's financial management personnel are struggling to carry out routine day-to-day transaction processing, personnel in world-class financial management organizations are providing value-added analyses and insights about the financial implications of program decisions on their organizations, performance goals, and objectives. DOD has a number of initiatives underway that are directed at improving the competencies and professionalism of its financial management workforce. However, although it concurred with our August 2001 recommendation, DOD has not yet developed a strategic approach to addressing its financial management human capital challenges.¹⁸ Lacking such a strategy, DOD will be unable to meet the challenges presented by the increasing number of employees that will be eligible to retire over the next few years.

Key Actions Needed

DOD and the Congress have worked successfully to enhance the military personnel benefit package. To help keep pace with changing demographics and to be competitive with the private sector, we have recommended that DOD (1) develop measures for tracking and assessing the effectiveness of installation-level services offered through its spousal employment assistance program and (2) assess the feasibility, costs, and benefits of offering extended time off to parents of newborn or adopted children as one way to increase retention of trained, experienced personnel. DOD is working to achieve these actions. However, to provide continued focus to meet future challenges, DOD needs to take a strategic approach.

Taking an integrated, strategic view of DOD's approach to human capital and using a measurement tool will be important for DOD to align all elements of its human capital management, including pay and benefits, with its broader organizational objectives. Such measurement tools include

¹⁸ U.S. General Accounting Office, *Financial Management: DOD Improvement Plan Needs Strategic Focus*, [GAO-01-764](#) (Washington, D.C.: Aug. 17, 2001).

our human capital self-assessment checklist and the exposure draft of our model for strategic human capital management for agency leaders. We testified that since the DOD military personnel strategy is intended to be a dynamic document that periodically will be assessed and refined, DOD will have opportunities to incorporate additional elements of human capital strategic planning in future iterations of the strategy. Specifically, DOD needs to

- link human capital goals with its mission and programmatic goals;
- include adequate performance measures for assessing the effectiveness of human capital approaches;
- address military workforce requirements or gaps, especially for mission-critical skills;
- demonstrate a clear linkage between benefits and its ability to recruit and retain a high-quality workforce; and
- address the dissatisfaction that servicemembers have expressed about their work conditions.

We have also made several recommendations to enhance DOD's management of its reserve forces. Our recommendations are designed to (1) increase the scope and effectiveness of DOD's outreach programs, (2) promote good relations between reservists and their employers or schools, and (3) increase an understanding of the effects of high¹⁹ operational tempos on reservists. The recommendations would achieve these goals by increasing DOD's information on reservists' civilian employers, specifically addressing the unique needs of student reservists, enhancing the effectiveness of volunteer members of the Employer Support to Guard and Reserve organization, and making improved use of available deployment and retention data. DOD generally concurred with the recommendations. Some of its planned initiatives include establishment of a policy requiring that orders be issued 30 days in advance of deployment, unless operational requirements dictate otherwise, and

¹⁹ U.S. General Accounting Office, *Reserve Forces: DOD Actions Needed to Better Manage Relations between Reservists and Their Employers*, GAO-02-608 (Washington, D.C.: June 13, 2002).

studying reasons why the reserve components sometimes miss the 30-day goal.

Overcome Support Infrastructure Inefficiencies to Reduce Costs and Improve Operations

DOD's infrastructure categories include force installations, communications and information infrastructure, science and technology programs, acquisition infrastructure, central logistics, Defense Health Program, central personnel administration and benefits programs, central training, departmental management, and other selected infrastructure programs such as support of DOD's intelligence and air traffic control activities.²⁰ DOD has been concerned for a number of years over the amount of funding devoted to its support infrastructure and the impact on its ability to devote more funding to weapon system modernization and other critical needs. Our analysis of DOD data contained in its fiscal year 2002 annual report²¹ and fiscal year 2003 Future Years Defense Plan (FYDP)²² showed that approximately \$151 billion (44 percent)²³ of the \$345 billion allocated to mission and support activities was spent on infrastructure in fiscal year 2002. Of the reported \$151 billion spent on infrastructure, approximately \$25 billion was spent for military installations, including programs to protect the environment, house and support the daily operations of combat units, and sustain, restore, and modernize facilities. In our 2001 performance and accountability series, we reported that regarding specific operations challenges, DOD needed to address inefficiencies in its support infrastructure. Infrastructure management, which we first identified as

²⁰ DOD defines infrastructure as those activities that provide support services to mission programs, such as combat units.

²¹ U.S. Department of Defense, *Annual Report to the President and the Congress for Fiscal Year 2002* (Washington, D.C.: Aug. 15, 2002).

²² The Future Years Defense Plan, or FYDP, is the official document that summarizes the force levels and funding associated with specific programs that the Secretary of Defense would like the Congress to approve. It presents estimated appropriation needs for the budget year for which funds are being requested from the Congress and at least the 4 years following it.

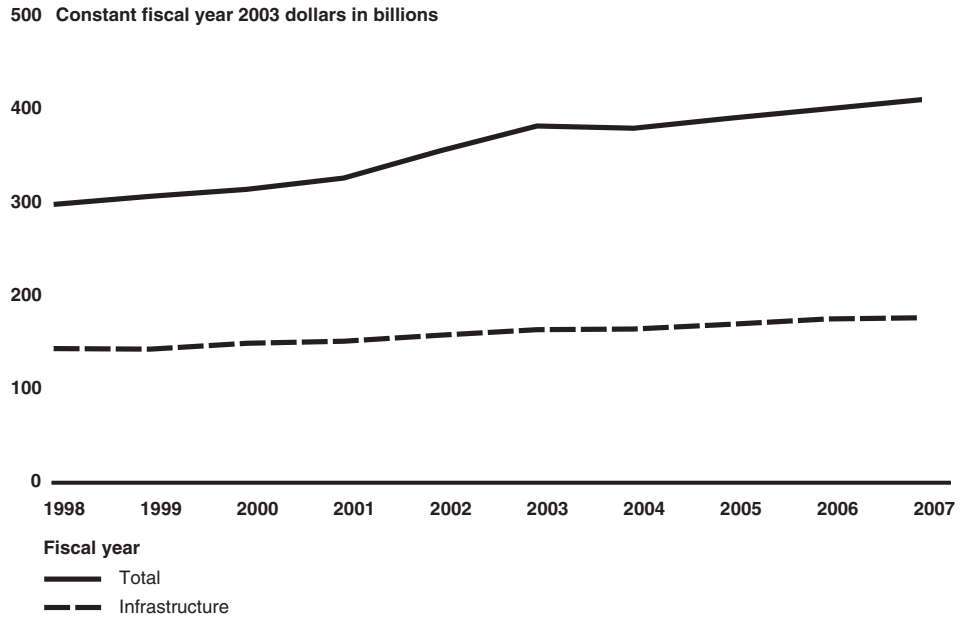
²³ Forty-four percent is significantly less than the proportion of planned infrastructure funding reported by DOD in our high-risk series issued in January 2001. Since then, DOD has adjusted its cost data for definitional or accounting changes. The principal adjustments were required by the Army and Air Force reclassifications that moved significant resources from infrastructure to mission categories. These readjustments would have the effect of decreasing the percentage of funding for infrastructure.

a high-risk area in 1997, remains on our high-risk list and continues to present major challenges to DOD.

Infrastructure Costs Remain a Concern

According to DOD, infrastructure costs continue to consume a larger than desired portion of its budget—nearly 46 and 44 percent, respectively, in fiscal years 2001 and 2002, with some growth projected in its future spending plans (see fig. 5). Recently, DOD reported that many of its business processes and much of the infrastructure are outdated and must be modernized. While America's businesses have streamlined and adopted new business models to react to fast-moving changes in markets and technologies, DOD has lagged behind without an overarching strategy to improve its business practices. Left alone, the current organizational arrangements, processes, and systems will continue to drain scarce resources. DOD has also realized that high-priority readiness needs such as weapons modernization can be fulfilled only with a large influx from infrastructure savings.

Figure 5: Direct Infrastructure Funding Versus the Total Funding Allocated to Mission and Support Activities (fiscal years 1998 through 2007)



Source: DOD.

Note: GAO's analysis of DOD's data.

Transforming DOD's Support Infrastructure Remains a Long-term Challenge

To its credit, DOD has given high-level emphasis to reforming its support infrastructure, including an emphasis on transforming its associated business processes in recent years. However, many key reforms that may have the greatest impact on managing the support infrastructure and reducing costs are long term in nature and will require many years to be fully implemented.

The Defense Reform Initiative, started in 1997, was intended to improve the effectiveness and efficiency of DOD's business processes and support infrastructure. To varying degrees, some of the former programs are being continued under the current administration's business transformation

program, which was created in 2001 under the auspices of a Senior Executive Council, a Business Initiative Council, and an Executive Steering Committee.²⁴ These groups have focused on launching new initiatives. Many of the initiatives, such as eliminating unnecessary reports, streamlining the general and flag officer nomination process, and implementing cell phone subsidies, have been fairly limited in scope. However, many others, including efforts to identify noncore functions for potential transfer to the private sector and a review of defense agencies' missions, have been broader. Furthermore, the charter for the Business Initiative Council specifically indicates that the new business transformation program will address broader reform efforts over time.

Some highly visible, major reform efforts that have been underway include acquisition and financial management reform, logistics reengineering, public-private competitions under the Office of Management and Budget's Circular A-76 process,²⁵ and elimination of unneeded facilities infrastructure. The latter includes such actions as demolition of unneeded buildings, privatization of housing and utilities on military facilities, and passage of legislation for additional base realignments and closures. Financial management and acquisition and logistics reform are more fully discussed in separate sections of this report. These reform efforts offer the potential for significant improvements in the efficiency and effectiveness of operations, including savings in terms of reductions in program costs or cost avoidances.

While it is difficult to quantify the savings precisely, two initiatives that have yielded the greatest savings over time are the public-private competitions under the A-76 program and the congressionally approved defense base realignment and closure actions. While further opportunities

²⁴ Membership on the Senior Executive Council includes the Secretary of Defense (chair); the Deputy Secretary of Defense; the Under Secretary of Defense for Acquisition, Technology, and Logistics; and the Secretaries of the Army, Navy, and Air Force. Membership on the Business Initiative Council is similar to the Senior Executive Council and includes the Under Secretary of Defense for Acquisition, Technology, and Logistics; the Secretaries of the Army, Navy, and Air Force; and the Vice Chairman of the Joint Chiefs of Staff. The Comptroller and the Under Secretary for Personnel and Readiness were recently added. The Executive Steering Committee is composed of designated service three-star flag and general officers, selected executives from the Office of the Secretary of Defense, and a Joint Chiefs warfighter liaison.

²⁵ Under the A-76 process, agencies conduct competitions to determine whether the public or private sector will perform selected commercial activities and functions.

exist for savings through these initiatives, both are not without controversy because of their potential impact on affected workforces and communities.

DOD has been the most aggressive of all federal agencies in pursuing A-76 cost studies in recent years, completing studies on nearly 117,000 positions between fiscal year 1997 and 2001. Our work has shown that DOD has achieved significant savings through this program, even though it has been difficult to determine precisely the magnitude of those savings. Savings may be limited in the short term because up-front investment costs associated with conducting and implementing the results of the studies must be absorbed before long-term savings begin to accrue. Several of our reports in recent years have highlighted these issues. The number of A-76 studies to be completed in the future is somewhat uncertain as DOD examines other alternatives, such as reengineering, divestiture, public/private partnering, and privatization, for achieving greater operating efficiencies. Although largely outside DOD's control, the work and recent report of the congressionally mandated Commercial Activities Panel, chaired by the Comptroller General, have recommended actions to improve the sourcing decisions of DOD and other federal agencies and to stimulate the creation of high-performing organizations.²⁶

Currently, the Office of Management and Budget is considering the panel's recommendations as it revises A-76 policy.²⁷ Successful implementation of the recommendations offers the potential for improved decision tools to facilitate improved operating efficiencies within DOD as well as other federal agencies. DOD completed four rounds of base realignment and closures between 1988 and 1995 and has congressional authorization for another round of base realignments and closures scheduled for 2005. DOD officials have testified the 2005 round could achieve a 20 to 25 percent reduction in military infrastructure, with annual savings of about \$6 billion. Our reviews have found that estimated savings from the first four rounds, while imprecise, are nonetheless substantial in the long term. In addition, DOD reports that the savings accrued from removing this excess infrastructure can be better applied to maintaining and revitalizing the facilities it plans to keep as well as to improving military readiness.

²⁶ Commercial Activities Panel, *Improving the Sourcing Decisions of the Government*, CAP-02-01 (Washington, D.C.: Apr. 30, 2002).

²⁷ On November 19, 2002, the Office of Management and Budget issued a proposed revision of Circular A-76.

With or without future base closures, DOD faces the challenge of adequately maintaining and revitalizing the facilities it plans to retain. Available information indicates that DOD's facilities continue to deteriorate because of insufficient funding for their sustainment, restoration, and modernization. According to DOD, its facilities have been neglected and modernization efforts have been postponed for far too long. Our recent review of the physical condition of recruit barracks confirmed DOD's assertion that its facilities have been long neglected and underfunded. We found that, to varying degrees, most barracks were in need of significant repair. The most prevalent problems across the services included the lack of, or inadequate, heating and air conditioning; inadequate ventilation, particularly in bathing areas; and plumbing-related deficiencies, such as leaks and clogged drains. Inspection of a parking ramp in January 2002 revealed water damage that affects where a C-130 aircraft can park (see fig. 6). With limited funds to repair the ramp at an estimated \$40,000, base officials concentrate on higher-priority items, leaving the ramp problem unresolved, as shown at the time of our visit in August 2002. DOD officials stated they hope to repair the ramp in February 2003 with fiscal year 2002 end-of-year funds.

Figure 6: Parking Runway Ramp at Dobbins Air Reserve Base, Georgia
(August 2002)



Source: GAO.

Similar deteriorated conditions exist across the range of DOD's infrastructure categories. In DOD's recent *Installations' Readiness Report*, the military services cited numerous examples of such conditions affecting their facilities by selected categories:

- **Operations and training** (includes airfields, piers and wharves, training ranges and classrooms, recruit facilities, armories, aircraft operations' parking and hangars, refueling hydrants, and flight simulators): According to the Navy, the age, high usage, and overloading of runways, taxiways, and aprons are causing rapid deterioration at all air stations, resulting in significant foreign object damage, unacceptable risks to safety of personnel and damage to aircraft, and restricted air operations.

- **Mobility** (includes facilities directly related to mobilization of forces, including staging areas and transportation systems): According to the Air Force, several of its facilities used for mobility purposes do not have adequate ventilation systems, lighting, communications support, restrooms, or passenger or cargo processing areas. This results in inefficient, time-consuming operations and degrades readiness capability.
- **Maintenance and production** (includes vehicle and avionics maintenance shops, tactical equipment shops, aircraft maintenance hangars, foundries, and ammunition demilitarization facilities): According to the Navy, several maintenance hangars and aircraft intermediate-maintenance facilities have extensive structural, roof, and mechanical and electrical system deterioration due mainly to age, environment, and normal wear. In some cases, hangar-bay coatings, separating from ceilings and walls, are falling onto exposed equipment, personnel, and aircraft.
- **Research, development, testing, and evaluation** (includes test chambers, laboratories, and research buildings): According to the Army, many of its research, development, testing, and evaluation facilities are deteriorating at an increasingly accelerated rate. As maintenance funding for these facilities is scarce, little or no routine or preventive maintenance is performed on these facilities.
- **Supply** (includes warehouses, hazardous material storage, and ammunition storage): According to the Navy, many of its deteriorated weapons magazines do not meet explosive safety requirements. Some magazines and explosive production buildings are operating under waivers and exemptions.
- **Medical** (includes hospitals and medical and dental clinics): According to the Army, several of its medical facilities do not meet standards. For example, the main health-care delivery facility at Walter Reed Army Medical Center, Washington, D.C., has aging mechanical systems that must be repaired or replaced. At other Army installations, medical facilities also do not meet quality standards due to the poor condition of bathrooms, utilities, and heating and air-conditioning systems.
- **Administrative** (includes office space and computer facilities): According to the Navy, the majority of the Atlantic Fleet's administrative facility inventory consists of inefficient temporary and semipermanent

structures. Typical deficiencies include inadequate plumbing, air-conditioning, fire protection, and electrical systems and general deterioration of finishes due to age and wear.

- **Utilities and ground improvements** (includes power production, distribution and conservation systems, water and sewage systems, roads and bridges, water pollution abatement, wastewater treatment facilities, and fuel storage tanks and containment areas): According to the Navy, the utilities at its Pacific Missile Range Facility, Hawaii, only minimally support multiple missile launch operations. To improve operations, it needs to upgrade an existing generator; replace the control, power, grounding, and lightning protection systems; install voltage regulators to correct stability problems; replace the communication, video, and surveillance systems; and add an intrusion detection system.

Key Actions Needed

Much work remains for DOD to rationalize and transform its support infrastructure to improve operations, achieve efficiencies, and allow it to concentrate its resources on the most critical needs. DOD organizations throughout the department need to continue reengineering their business processes and striving for greater administrative efficiency. As we have previously recommended, DOD needs to develop a plan to better integrate, guide, and sustain the implementation of its diverse business transformation initiatives in an integrated fashion.²⁸ Although DOD issued a strategic plan for facilities in August 2001, the plan provides only a framework for improving facilities and does not address all facility-related issues that DOD faces.

Infrastructure problems are not that much different in civilian agencies than they are in the military. The infrastructure problems in civilian agencies also suggest the possible relevance of a civilian facility closure and realignment process. Issues related to civilian facilities will be covered under a new high-risk, governmentwide designation called “Federal Property.”

²⁸ U.S. General Accounting Office, *Major Management Challenges and Program Risks: Department of Defense*, GAO-01-244 (Washington, D.C.: Jan. 2001).

Confront and Transform Pervasive, Decades-Old Financial Management Problems to Improve Financial Accountability

In the summer of 2001, the President emphasized the need for improved financial accountability throughout the entire federal government. Additionally, the Secretary of Defense has recently included improving DOD's financial management as one of his top 10 priorities.²⁹ As we have previously reported, accurate financial information is crucial to making sound decisions and controlling assets so that DOD's mission and goals are efficiently and effectively accomplished. However, DOD continues to face financial management problems that are pervasive, complex, long-standing, and deeply rooted in virtually all its business operations. DOD's financial management deficiencies adversely affect DOD's ability to control costs, ensure basic accountability, anticipate future costs and claims on the budget (such as for health care, weapons systems, and environmental liabilities), measure performance, maintain control of funds, help prevent fraud, and address pressing management issues. For example, we recently reported on fundamental flaws in DOD's systems, processes, and overall internal control environment related to

- government travel card delinquency rates for the Army and the Navy that nearly doubled those of federal civilian agencies;
- pervasive purchase and travel card breakdowns that resulted in numerous instances of potentially fraudulent, improper, and abusive transactions and increased DOD's vulnerability to theft and misuse of government property;
- adjustments to DOD's closed appropriations that resulted in about \$615 million in adjustments that should not have been made, including \$146 million that was illegal;
- tracking and reporting on the status of earmarked funds that resulted in DOD being unable to ensure the Congress that the \$1.1 billion in funds it received for spare parts was used for, and only for, that purpose;

²⁹ Financial management systems are to enable agencies to prepare, execute, and report on their budgets in accordance with the requirements of Office of Management and Budget Circular No. A-11 (*Preparation and Submission of Budget Estimates*), Office of Management and Budget Circular No. A-34 (*Instructions on Budget Execution*), and other applicable Office of Management and Budget circulars and bulletins.

- managing and reporting on the funding associated with the Air Force's contracted depot maintenance that resulted in understating the dollar value of year-end carryover work by tens of millions of dollars; and
- accountability over critical items, such as chemical and biological protective garments, that resulted in DOD's excessing and selling unused garment sets for about \$3 each, while simultaneously procuring hundreds of thousands of similar garment sets for over \$200 per set.

Taken together, DOD's financial management deficiencies represent the single largest obstacle to achieving an unqualified opinion on the U.S. government's consolidated financial statements. To date, none of the military services or major DOD components have passed the test of an independent financial audit.

Overhauling DOD's financial management operations represents a major management challenge that goes far beyond financial accounting to the very fiber of the department's range of business operations and management culture. Administrations over the past 12 years have attempted to address these problems in various ways but have largely been unsuccessful despite good intentions and significant effort. Since 1995, DOD's financial management has been on our list of high-risk areas vulnerable to waste, fraud, abuse, and mismanagement. With the events of September 11, 2001, and the federal government's short- and long-term budget challenges, it is more important than ever that DOD effectively transform its deficient business operations to ensure that it gets the most from every dollar spent.

Underlying Causes of Financial Management Reform Create Challenges

As we testified in March 2002 and highlighted in our more recent reports, four underlying causes of problems have impeded past reform efforts at DOD.

- The lack of accountability and sustained top-level leadership hinders DOD's ability to meet its performance goals. Major improvement initiatives must have the direct, active support and involvement of the Secretary and Deputy Secretary of Defense to ensure that daily activities throughout the department remain focused on achieving shared, agencywide outcomes and success. Furthermore, sustaining top leadership's commitment to performance goals is a particular challenge for DOD because the average tenure of DOD's top political appointees is only 1.7 years. Based upon our survey of best practices of world-class

financial management organizations, it is clear that strong executive leadership is essential to (1) making financial management an entitywide priority, (2) redefining the role of finance, (3) providing meaningful information to decision makers, and (4) building a team of people that delivers results.

- Cultural resistance to change and stovepiped operations have impeded DOD's ability to implement broad-based management reforms. We found the effectiveness of the Defense Management Council, established in 1997, was impaired because members were not able to put aside their particular military services' or DOD agencies' interests to focus on departmentwide approaches. The results of DOD's past stovepiped approaches to financial management reforms are perhaps most evident in its current business systems environment. DOD's recent estimate includes 1,700 systems and system development projects—many of which were developed in piecemeal fashion and evolved to accommodate different organizations, each with its own policies and procedures.
- Lack of clear, linked goals and performance measures impedes DOD's ability to attain strategic goals with the risk that units are operating autonomously, rather than collectively. In our assessment of DOD's fiscal year 2000 Financial Management Improvement Plan—its most recent plan—we found that the plan presented the military services' and DOD components' individual improvement initiatives but did not clearly articulate how their individual efforts would result in a collective, integrated DOD-wide approach to financial management improvement. In addition, the plan did not include performance measures to assess DOD's progress in resolving financial management problems. Furthermore, while DOD plans to invest billions of dollars in modernizing its financial management systems, it is in the initial stages of developing an overall blueprint, or enterprise architecture, to guide and direct these investments.
- Lack of incentives to change existing “business-as-usual” processes, systems, and structures contributes to DOD's inability to carry out needed fundamental reform. Traditionally, DOD has focused more on justifying its need for more funding and moving programs and operations through the process than on achieving better program outcomes. It does not (1) reward behaviors that contribute to DOD-wide and congressional goals, (2) develop motivational incentives for decision makers to guide them toward better program outcomes, or

(3) provide congressional focus on more results-oriented and resource-allocation decisions.

Key Actions Needed

On September 10, 2001, the Secretary of Defense recognized the far-reaching nature of DOD's financial management problems and announced a broad initiative intended to "transform the way the department works and what it works on." This new broad-based business transformation initiative, led by the Senior Executive Council and the Business Initiative Council, incorporates a number of defense reform initiatives begun under previous administrations but also encompasses additional fundamental business reform proposals. The goals of DOD's current transformation initiatives are more far-reaching, comprehensive, and have more long-term application than any such efforts in the past. In announcing his initiative, the Secretary recognized that transformation would be difficult and expected the needed changes would take 8 or more years to complete. The Secretary's initiative is consistent with the findings of an independent study he commissioned that concluded DOD would have to undergo "a radical financial management transformation" and that it would take more than a decade to achieve.

Our experience has shown that several key elements, collectively, would enable DOD to effectively address the underlying causes of its long-standing financial management problems. These elements include

- addressing the financial management challenges as part of a comprehensive, integrated, DOD-wide business process reform;
- providing for sustained leadership by the Secretary of Defense and resource control to implement needed financial management reforms;
- establishing clear lines of responsibility, authority, and accountability for such reform tied to the Secretary;
- incorporating results-oriented performance measures and monitoring tied to financial management reforms;
- establishing an enterprise system architecture to guide and direct financial management modernization investments;

- ensuring effective oversight and monitoring; and
- providing appropriate incentives or consequences for action or inaction.

Beginning with the Secretary's recognition of a need for a fundamental transformation of DOD's business processes, and building on some of the work begun under past administrations, DOD has taken a number of positive actions in many of these key areas. One ongoing action is the current effort to develop a DOD enterprise architecture that is intended to prescribe a blueprint for operational and technological changes in its financial and related business system operations. At the same time, the challenges remaining in each of these key areas are daunting.

Effectively Manage Information Technology Investments to Transform Business Functions

To help transform its business functions, DOD has invested heavily in modernizing its information technology environment, and its plans call for continued heavy investments. However, its success to date has been limited, and its future is fraught with risk because of long-standing and pervasive information technology modernization management weaknesses. As we have reported, these weaknesses include a lack of (1) integrated enterprise architectures to effectively promote interoperability and avoid duplication among systems; (2) institutional information technology investment management practices to effectively minimize the inherent risk in very large, multiyear projects and to provide DOD executives with the information needed to make informed investment choices; and (3) institutionalized systems acquisition processes to allow consistent delivery of promised capabilities, on time and within budget. Compounding these modernization management weaknesses are information security weaknesses that limit DOD's ability to ensure that current and future systems are not compromised. We have made a series of recommendations to strengthen DOD's ability to successfully modernize and secure its information technology assets.

DOD acknowledges that it needs to improve its management of information technology and has agreed to implement most of the recommendations we have made over the last 2 years. However, progress has been inconsistent, and it is unlikely that sufficient management reform of information technology will occur in time to ensure that DOD's planned information technology investment of \$26 billion in fiscal year 2003 will be spent effectively and efficiently. For these reasons, we are again designating DOD's systems modernization efforts as high risk. Further, the state of

DOD's information security continues to be a major reason for us to again designate information security as a governmentwide high-risk area.

Effective Management of Systems Modernization Is a Continuing Challenge

Since the 1990s, DOD has spent billions of dollars each year attempting to leverage the vast power of modern technology to replace outdated ways of doing business. While we recognize that modernization of information technology is a crucial enabler of such organizational transformation, successful modernization requires a level of information technology management capability that the department has yet to achieve. This capability is embodied in the best information technology management practices of successful public- and private-sector organizations, as well as information technology management guidance issued by GAO, the Chief Information Officers Council, and the Office of Management and Budget.

DOD has made some progress in implementing the recommendations that we have made aimed at improving information technology management practices. Nevertheless, DOD remains far from where it needs to be in order to effectively and efficiently manage something of the size and significance of its systems modernization. Since January 2001, when we last reported on DOD management challenges, both we and the DOD Inspector General have continued to report on a variety of long-standing management problems in modernizing information technology. Because of these problems, three of which we briefly describe here, we first designated DOD's management of information technology modernization as high risk in 1995. It remains so today.

First, DOD's lack of an integrated enterprise architecture for its financial and related business functions continues to be a major obstacle. As we reported in 2001, without such a blueprint to guide and constrain DOD's investments in revamped business operations and modernized systems, the military services and defense agencies find themselves with duplicative processes and systems that are unnecessarily costly to maintain and do not optimize mission performance. Further, DOD lacks a corporate focus for controlling its information technology budget and making informed decisions about services' and agencies' ongoing and planned modernization projects. We also reported that certain DOD components, such as the Defense Logistics Agency and the Defense Information Systems Agency, were investing billions of dollars in information technology modernization projects with no agency-specific architectures aligned with a departmental architecture to guide and constrain the components' respective investments.

Moreover, we reported that DOD did not have programs in place for creating this needed set of integrated architectures. Accordingly, we made a series of recommendations to (1) assist DOD and its components in developing and maintaining enterprise architectures in support of their modernization efforts and (2) control spending on information technology projects throughout the department. In particular, we recommended that DOD centralize the responsibility and authority for its project investments and, until a financial management architecture is developed, limit its components' investments to

- deployment of systems that involve no additional development or acquisition cost,
- stay-in-business maintenance needed to keep existing systems operational,
- management controls needed to effectively invest in modernized systems, and
- new systems or existing system changes that are congressionally directed or are relatively small, cost-effective, and low risk.

In its written comments, DOD stated that it would consider our recommendations as part of its efforts to improve financial management.³⁰

³⁰ U.S. General Accounting Office, *Information Technology: Architecture Needed to Guide Modernization of DOD's Financial Operations*, [GAO-01-525](#) (Washington, D.C.: May 17, 2001); *Information Technology: DLA Should Strengthen Business Systems Modernization Architecture and Investment Activities*, [GAO-01-631](#) (Washington, D.C.: June 29, 2001); *Information Technology: Defense Information Systems Agency Can Improve Investment Planning and Management Controls*, [GAO-02-50](#) (Washington, D.C.: June 29, 2001).

A second major hurdle in DOD's quest to modernize its information technology systems is its lack of effective investment management practices, both institutional and project-specific. For example, we reported that while the Defense Logistics Agency had made progress in adopting a portfolio-based approach to making informed decisions among competing agency investment options, critical investment management activities that are practiced by leading public and private organizations, and are embodied in federal guidance, were missing. Similarly, we reported that the Defense Information Systems Agency had not yet established most of these investment management best practices. At the same time, our reviews of specific billion-dollar DOD system acquisition projects, including the Defense Logistic Agency's Business Systems Modernization, DOD's Standard Procurement System, and DOD's Composite Health Care System II, showed additional investment management shortcomings. Such shortcomings included not economically justifying information technology projects on the basis of reliable analyses of benefits, costs, and risks and not reducing project risk by investing in the projects incrementally, both of which are practiced by successful public- and private-sector organizations and advocated by federal guidance. Similarly, the DOD Inspector General reported on investment management problems with DOD's Joint Personnel Adjudication System. Again, we made a series of recommendations to address DOD's investment management weaknesses. DOD generally agreed with our recommendations.³¹

³¹ [GAO-01-631](#); U.S. General Accounting Office, *Information Technology: Greater Use of Best Practices Can Reduce Risk in Acquiring Defense Health Care System*, [GAO-02-345](#) (Washington, D.C.: Sept. 6, 2002).

A third significant weakness is immature software and systems acquisition processes, which are key determinants of the quality of software-intensive information technology systems. Our work continues to show that DOD's implementation of mature acquisition management processes is uneven, as are its proactive efforts to improve these processes. For example, our review of the Defense Logistics Agency's system acquisition processes showed that one major system was following mature processes, while another was not. Similarly, our review of departmentwide software and system process improvement activities showed that some DOD components, such as the Army and the Navy, had active programs while others, such as the Defense Logistics Agency, did not. We made recommendations to correct each of these weaknesses. DOD generally agreed with our recommendations.³²

DOD recognizes the need to improve management of its systems modernization efforts. To this end, it has taken some steps to implement our recommendations addressing the weaknesses we identified. For example, DOD has begun to develop a departmentwide enterprise architecture for its financial and related operations, including ensuring alignment of this architecture with others in DOD. It also has revised its acquisition guidance to require that investment decisions for major projects be made incrementally to better ensure each segment delivers measurable benefits. Nevertheless, much remains to be accomplished before DOD will have effectively mitigated the risks it faces in modernizing its systems.

³² U.S. General Accounting Office, *Information Technology: Inconsistent Software Acquisition Processes at the Defense Logistics Agency Increase Project Risks*, [GAO-02-9](#) (Washington, D.C.: Jan. 10, 2002); *DOD Information Technology: Software and Systems Process Improvement Programs Vary in Use of Best Practices*, [GAO-01-116](#) (Washington, D.C.: Mar. 30, 2001).

Information Security Remains a Major Concern

The national defense, like many of the U.S. government's missions, depends on the security of computer operations at a time when dramatic increases in computer connectivity are revolutionizing both communications and operations. This interconnectivity poses significant risks to both DOD computer systems and the operations and infrastructures they support. We designated information security as a governmentwide high-risk area in 1997, and it remains so today. The DOD Inspector General noted in 2001 that improvements were needed to better manage security. DOD also acknowledged in its fiscal year 2000 performance report³³ that its systems and networks are more vulnerable than officials would like, and as we have reported, its information assurance³⁴ program has had problems in meeting its goals, such as poor coordination of technology and operations.

Security assessments continue to identify weaknesses that could seriously jeopardize DOD's operations and compromise the confidentiality, integrity, or availability of sensitive information. For example, in June 2002, we reported that the U.S. Army Corps of Engineers had made substantial progress in resolving systems security weaknesses identified in prior years in its financial management system but that new weaknesses had been found. Specifically, the Corps had not adequately limited user access, developed adequate systems software controls, documented software changes, segregated duties, or addressed continuity needs.

The DOD Inspector General also reported on information security weaknesses in several programs during fiscal year 2001. Specifically, the Inspector General found security lapses relating to access to data, risk assessments, sensitive data identification, access controls, password management, audit logs, application development and change controls, segregation of duties, service continuity, and system software controls, among others. In addition, both the Army Audit Agency and Air Force Audit Agency reported similar problems.

Weaknesses in departmentwide information security were also a problem. In March 2001 we reported DOD had made limited progress in implementing its information assurance program. Specifically, DOD

³³ Department of Defense, *Government Performance and Results Act, FY 2000 Performance Report* (March 2001).

³⁴ The DOD term "information assurance" encompasses the range of security activities and functions used to protect DOD information and systems.

had not tested its draft readiness assessment metrics; implemented its proposed actions to enhance its human resources; defined the organizations, policies, and procedures for monitoring and managing security; or consistently planned and coordinated security management technologies and operations throughout DOD. Further, management weaknesses such as the lack of a unified mission and performance goals and measures, unreliable financial and performance data, and no plan to leverage technology also limited progress in program implementation. We also noted weaknesses in attempts to catalog security activities and address standards, acquisition support, and research. Accordingly, we recommended a number of actions to improve departmentwide information security management.

DOD has established computer incident response teams throughout DOD, but improvements are needed. Specifically, DOD has not coordinated resource availability, integrated data from a variety of systems and sensors, periodically reviewed systems and networks for weaknesses, improved unit reporting on compliance with vulnerability alert tasks, ensured that components' responses to heightened security conditions are consistent and appropriate, or developed departmentwide performance measures to assess response capabilities. Accordingly, we made recommendations to improve the effectiveness of its computer incident response capabilities. The DOD Inspector General also noted the need for improvement in intrusion detection and response.

In response to our recommendations on departmentwide information security management and computer incident response capabilities, DOD is correcting security weaknesses by drafting and obtaining approval of an information security strategic plan, developing policies that establish standards, assigning responsibilities, and expanding coordination of security activities by executives and department staff. In addition, the DOD Inspector General reports that DOD has implemented a number of corrective actions and made progress in meeting the information security challenge.

However, DOD's fiscal year 2000 performance report, issued in March 2001, did not provide any data showing measurable progress for improving information security. Further, DOD has made limited progress on our recommendation to establish a performance-based management approach capable of assessing progress in meeting DOD's goals. The DOD Inspector General also agreed that, despite DOD's progress, improvements are still needed.

Key Actions Needed

To its credit, DOD has acknowledged that it needs to improve both its information technology modernization management capability and its information security. As we have reported, and as DOD's past success in overcoming the year 2000 computing challenge shows, the key to effecting meaningful change is executive management leadership and commitment and use of a proven management framework. Accordingly, DOD needs to (1) treat these areas as management priorities and (2) implement frameworks for modernizing and securing systems that are grounded in legislative requirements, federal guidance, and the practices and successes of leading public- and private-sector institutions. We plan to continue working with the Congress and DOD to improve these crucial information technology areas.

Improve DOD's Ability to Acquire Weapon Systems in a Cost-Effective and Timely Way

Acquiring high performance weapons is central to DOD's ability to fight and win wars. In fiscal year 2002, DOD spent about \$110 billion to research, develop, and acquire a wide array of weapon systems. These investments are expected to grow substantially, to an estimated \$157 billion by fiscal year 2007, as DOD pushes to transform itself to meet a new and challenging range of threats. While DOD's acquisition process has produced weapons that provide superior capability, it also routinely yields undesirable outcomes that constrain DOD's ability to modernize—higher costs, later fielding than planned, and less performance than expected. As we reported in January 2001, these undesirable outcomes often occur because of (1) unrealistic program cost and schedule estimates, (2) the use of immature technologies in launching product development, (3) design and manufacturing problems that are discovered late in test and evaluation, and (4) the failure to consider joint solutions and broader mission requirements when proposing systems.

We have reported that weapon systems acquisition has been a high-risk area since 1990, and it continues to remain on our high-risk list. DOD has undertaken a number of policy-level reforms to address long-standing problems with its acquisition process. However, while there have been individual successes, reforms have not produced consistent improvements in program outcomes. Those problems have proven resistant to reform in part because underlying incentives in the competition for funds have not changed. Over the past 2 years, DOD has made significant policy changes that have shaped a more knowledge-based acquisition process that reflects best practices. These are constructive changes for which the long-term effect on individual programs remains to be seen.

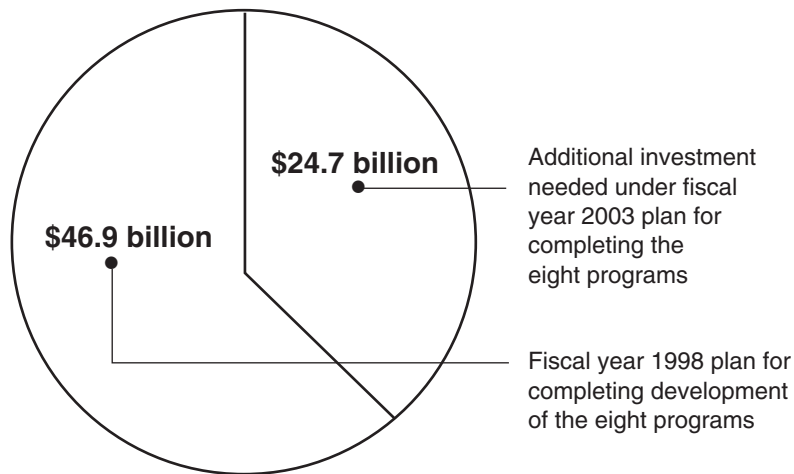
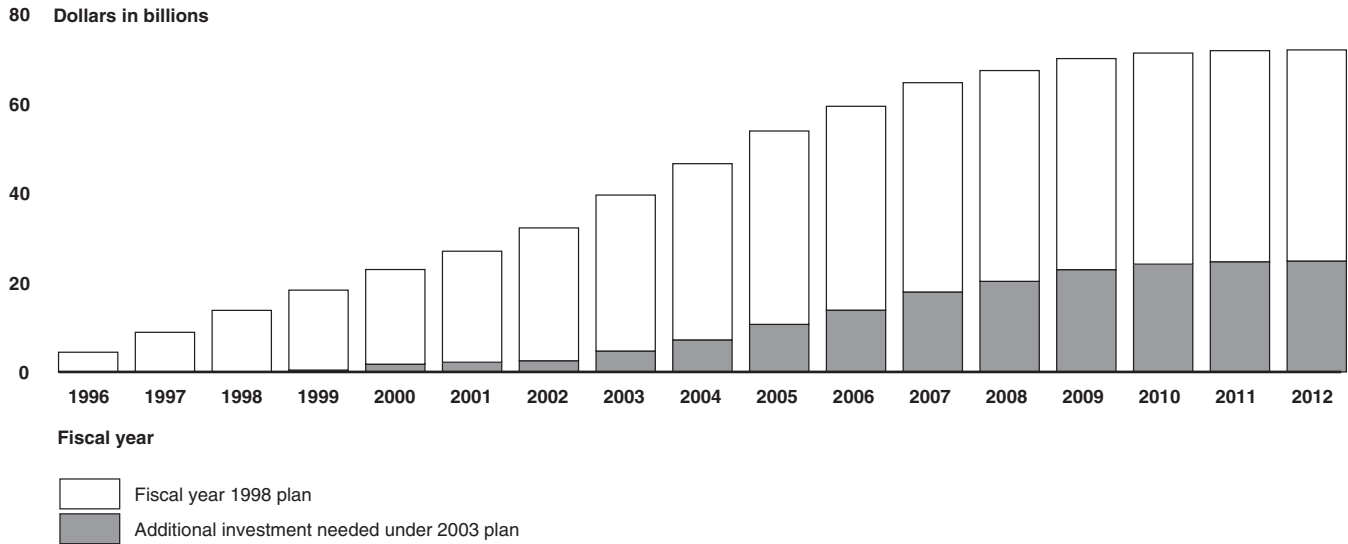
Cost and Schedule
Increases Continue to Erode
Buying Power

Our reviews have consistently found that DOD's weapons system acquisitions take a much longer time and cost much more than originally anticipated, causing disruptions to the department's overall investment strategy and significantly reducing its buying power. When an acquisition program needs more money than planned, it comes at the expense of delaying or canceling other programs. This loss of buying power means that less overall modernization or transformation gets accomplished. The ability to execute a program more predictably within cost and schedule estimates would lessen the need to offset cost increases by disrupting other programs.

To illustrate this problem, we compared the development costs, in the aggregate, of eight major weapon programs.³⁵ As shown in figure 7, DOD estimated that in fiscal year 1998 it would cost \$47 billion to complete the development of these eight programs; however, by fiscal year 2003 the estimated cost of completing them had grown to about \$72 billion. This means an additional \$25 billion (more than 50 percent above the fiscal year 1998 estimates) would be required to develop the same programs.

³⁵ The eight weapon systems are the Joint Strike Fighter, Comanche, Space Based Infrared System-High, F-22, V-22, AAV, DDG-51, and SSN-774.

Figure 7: Cumulative Effect of Cost Growth on Development of Eight Weapon System Programs



Source: DOD.

Individual examples of cost and schedule increases that we have continued to report include the following:

- Since the Air Force started the Airborne Laser Program in 1996, the estimated development costs have risen by about 50 percent, from \$2.5 billion to \$3.7 billion (as of August 2001), and the projected fielding of the system has been extended by 4 years, from 2006 to 2010.
- Since the Army's Comanche Helicopter Program's first cost estimate in 1985, the research and development price tag has almost quadrupled to \$41 billion and the time to obtain an initial operational capability has increased from 9 to 21 years. The program is undergoing another major restructuring, which may result in further cost increases.
- Since the Navy's Extended Range Guided Munition Program began in 1996, estimated program acquisition costs have increased more than 50 percent, from \$386 to \$600 million, while estimated development time has more than doubled, from about 4 to 10 years.

One of the main reasons why program costs and schedules are routinely underestimated is because the acquisition process tends to assert pressures on program managers to promise more than they can deliver and to push programs forward without sufficient knowledge about a weapon's technology, design, and production. The intense competition to get programs approved and funded encourages setting requirements that will make the proposed weapon system stand out from others. In addition, organizations that establish requirements often aim for the most capability possible, since it may be many years before they get another opportunity to acquire a new weapon system of the same type. These factors make it difficult to know what resources will be needed to meet requirements before launching a program. Furthermore, within this process, the systems engineering that is necessary to identify potential gaps between program requirements and the resources needed to meet them is not usually done until after programs are launched and cost and schedule targets have been set.

Product Development Is Often Started with Immature Technologies

Given the complexity of modern weapons, some problems associated with technology development can be expected, but many problems can be predicted and avoided. One such problem is for a new program to rely on fledgling technologies for high performance, only to report late in development that not enough time or money has been estimated to

mature the technologies and incorporate them into an overall design. Many weapon programs move forward with immature technologies because the developers do not understand the level of effort needed to develop the technologies or, if they do, they defer the effort until later because of institutional pressures to gain program funding. In many of our reviews, we have found major weapon systems at risk of not being able to meet program objectives because critical technologies were immature and software development was not effectively managed. Some recent examples of our findings are as follows:

- DOD's most expensive aircraft program, the Joint Strike Fighter Program, which is expected to cost about \$200 billion to develop and procure, is at risk of not meeting its cost and requirements goals because critical technologies, like the integrated flight propulsion control system and the radar, were not matured to acceptable levels when the program entered product development. Consequently, program managers will need to continue developing those technologies at the same time they are concentrating on production and integration issues.
- A primary reason why the Air Force was unable to meet the Airborne Laser Program's original cost and schedule goals was because it did not fully understand the level of effort required to develop the critical technologies that the system design depends on. These technologies were immature when the program was launched and several of them, including the optics and the laser, remain so today. This makes it difficult to estimate how long it will take and how much it will cost to develop and produce the system.
- The Space-Based Infrared System-Low satellite system, which is intended to detect and track ballistic missiles, has also experienced significant risk of cost increases and scheduling changes because of problems in developing critical technologies and software. The program office has determined that five of six critical technologies are at risk of not being available when they are needed. In addition, the development of key software needed to support the program would not have been completed until several years after the first satellites were to be launched, thus increasing the risk that the software will not be available when needed or perform as required. In recognition of these problems, DOD restructured the program to focus on research and development of the critical technologies.

Many Design and Manufacturing Problems Are Discovered Late in Test and Evaluation

The ultimate goal of testing and evaluation is to make sure a weapon system works as intended before it is fielded to users. When it is done early enough in development, testing and evaluation can provide a program manager with an opportunity to validate the technology's design and to identify and effectively correct problems. Ideally, the testing process goes through several phases: early laboratory testing, testing of components and subsystems, testing of the complete system, and finally trial use under realistic operational conditions. To be of value, test results at each phase must be credible and used to improve the product.

Our work over the past several years continues to show that weapon system programs suffer from late or incomplete test and evaluation. Design and quality problems with weapon systems are discovered late in the development cycle when they are difficult and costly to resolve. Often, tests of a full system, such as a missile launch, become the vehicle for discovering problems that could have been found earlier and corrected less expensively. When problems are revealed late in development, the response can take several forms: extending schedules to increase the investment in more prototypes and testing, terminating the program, or redesigning and modifying weapons that have already made it to the field. The most frequent corrective action is to restructure the development program by adding time and money so that the weapons can be redesigned and retested before production or so that weapons already in production can be redesigned and retrofitted.

In DOD, strong pressures and incentives can work against revealing problems during the testing and evaluation process. We have seen numerous instances where test results have turned into scorecards to show decision makers that the program was ready to proceed to the next acquisition phase or to receive the next funding increment. As a result, testing operated in a penalty environment. If the program did not pass the tests, it might look less attractive and be more vulnerable to funding cuts. Thus, managers had incentives to postpone difficult tests or modify tests by reducing the requirements and demonstrating enough progress to continue the program. Some key examples of our recent findings are as follows:

- In our review of the Marine Corps V-22 Aircraft Program, which is already in low-rate initial production, we learned that DOD planned to proceed with a full-rate production decision without knowing whether (1) the new technology could meet the Marine Corps's requirements; (2) the design would work as required; or (3) the design could be produced within the program's cost, schedule, and quality targets. This

knowledge is lacking because developmental testing was deleted, deferred, or inappropriately simulated in order to meet cost and schedule goals. In addition, testing was based on reduced system requirements.

- We found that many of the Navy's Space and Naval Warfare Systems Command information technology systems were being procured and fielded in large quantities during initial low-rate production and before completing operational testing. Program managers were doing this because of a desire to meet user demands for information system improvements. However, several of the systems that were purchased prior to operational testing experienced performance, interoperability, and suitability problems that adversely affected the fleet.
- In reviews of the Air Force's F-22 program, we found continuing problems with the assembly and delivery of development-test aircraft and the flight-test program. The Air Force extended the development test program, delayed the beginning of operational testing, and reduced the content of the test program. As a result, some additional development flight-testing is planned to take place concurrently with operational testing.

DOD Does Not Fully Consider Joint Solutions and Broader Mission Requirements

DOD's acquisition policies require that analyses of mission needs, costs, and weapon system alternatives match the valid needs of users before substantial resources are committed to a particular program. However, we have found that, while the services conduct considerable analyses in justifying major acquisitions, these analyses are often narrowly focused and do not fully consider alternative solutions, such as a joint acquisition of a system with other services. In addition, DOD often has not considered how individual systems are tied together to meet broader mission needs, including joint operations. Further, lacking complete and accurate overall life-cycle cost information for weapon systems impairs DOD and congressional decision makers' ability to make fully informed judgments on funding comparable weapon systems. As a result, there is no assurance that DOD and the services are avoiding costly duplication of systems, investing in the most cost-effective and affordable solutions, and optimizing mission performance. Furthermore, since the services plan, acquire, and operate systems to meet their own operational concepts, there is no guarantee that fielded systems will operate effectively together. Examples of our findings are as follows:

- While DOD has considerable capability to identify and strike most fixed targets, it has limited ability to rapidly identify and strike time-critical targets, such as mobile surface-to-air missile sites. This limited ability is largely because the command, control, communications, intelligence, surveillance, and reconnaissance systems involved in the sensor-to-shooter process have limited interoperability. The systems are often based on different architectures and technical standards and use different frequencies and data formats. Thus, the systems cannot share information directly and must be patched together, making the response time too slow to successfully defeat mobile targets.
- In response to a fiscal year 2000 congressional directive, DOD developed an antiarmor munitions master plan to support the military services' efforts to acquire new antiarmor weapons. Instead of determining how shortfalls in capabilities would be addressed from a joint perspective, the plan presented individual military service-level assessments. The military services did not consider each other's weapon capabilities or the impact of new systems in a joint warfighting environment. As a result, there is no assurance that the mix and quantities of new weapons being acquired, at an estimated cost of \$14 billion, provide the most cost-effective solutions for increasing capabilities.
- DOD and the military services have been working for many years to develop combat identification systems to prevent friendly fire in joint and coalition operations. These systems, which are being developed by many different entities within DOD and the military services, will be installed on a broad array of equipment and used in a wide range of military operations. DOD's efforts in developing improved capabilities have been hampered, however, because it has not developed a well-defined enterprise architecture and management framework to ensure that new combat identification systems are compatible, not duplicative, and supportive of overall department goals.

**DOD Could Benefit
from a Knowledge-based
Acquisition Process Used by
Leading Commercial Firms**

DOD would like to get the most out of its investments, and it has long-standing goals to develop weapons in half the traditional time and within budget. However, problems that work against delivering new weapons within estimates have proven resistant to reform. Promising solutions for DOD can be drawn from the best commercial product development efforts. We have conducted an extensive body of work in

recent years that has consistently shown that leading commercial firms are getting the kinds of outcomes from their development of new products that DOD seeks. Specifically, these firms are developing increasingly sophisticated products in significantly less time and at a lower cost than their predecessors.

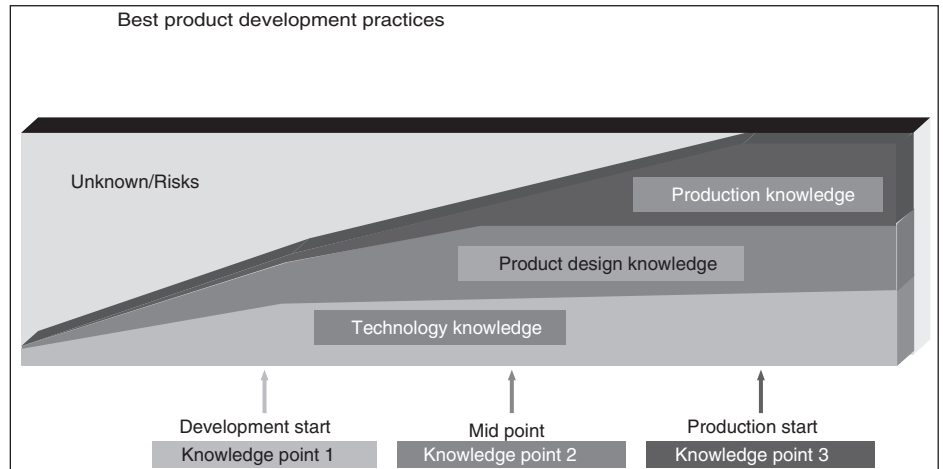
They do so by ensuring that a high level of knowledge exists about the product at key junctures during development. Such a knowledge-based process enables decision makers to be reasonably certain about critical facets of the product under development when they need it. The process can also help offset pressures on program managers to overpromise on cost and schedule estimates. The process is essential to getting better cost, schedule, and performance outcomes.

The process followed by leading firms can be broken down into three cumulative knowledge points:

- at program launch, when a match must be made between the customer's needs and the available resources—technology, time, and funding;
- midway through development, when the product's design must demonstrate its ability to meet performance requirements; and
- at production start, when it must be shown that the product can be manufactured within cost, schedule, and quality targets.

As illustrated in figure 8, the attainment of each successive knowledge point builds on the preceding one. While the knowledge itself builds continuously without clear lines of demarcation, the attainment of knowledge points is sequential. In other words, production maturity cannot be attained if the design is not mature and design maturity cannot be attained if the key technologies are not mature. Allowing technology development to spill over into product development puts an extra burden on program managers and provides a weak foundation for making product development estimates. It is perhaps the most significant problem in weapon system programs.

Figure 8: Knowledge Achieved at Key Points in Product Development Reduces the Risk of Unknowns



Source: GAO.

Note: GAO's analysis of best product development practices.

For the most part, all three knowledge points are eventually attained on a completed product, including weapon systems. The key difference with a best practices approach is how knowledge is built and how early in the development cycle each knowledge point is attained. When knowledge is built more slowly than those points suggest, programs invite greater cost, schedule, and performance risk because problems are more likely to be discovered late in the process and be more difficult and costly to correct.

We have found that when DOD programs employed similar practices, they experienced outcomes similar to leading firms. Programs like the Joint Air-to-Surface Standoff Missile, which mature technology before going into product development and stabilize the design by releasing the vast majority of engineering drawings midway through development, have experienced minimal cost increases and scheduling delays. Conversely, problems occur in programs when best practices are not followed. We know of several cases where programs are launched well before key technologies are mature, manufacturing of prototypes is done before the design is stable, and production is begun before reliable manufacturing processes are in place. The outcomes from these problems include increases in cost and schedule and degradations in performance and quality.

DOD wants the kinds of outcomes commercial companies have achieved and thus has revised its 5000 series of acquisition regulations to reform its acquisition process to attain them. Revisions have focused primarily on (1) making sure technologies are demonstrated to a high level of maturity before beginning a weapon system program and (2) taking an evolutionary, or phased, approach to developing a system. Separating technology development from a weapon system development program would help curb incentives to overpromise the capabilities of a new weapon system and to rely on immature technologies. Also, an evolutionary approach to developing requirements and making improvements to a system's capabilities is different from the historical approach of trying to deliver all desired capabilities in one "big bang." In addition, it has been reported that DOD plans to begin using program cost estimates from the Office of the Secretary of Defense's Cost Analysis Improvement Group, rather than those prepared by the military services, which may lead to more realistic cost estimates when pricing programs.

While DOD's policy changes are a positive step, implementation on individual programs will be a challenge. As discussed earlier, we continue to find major weapon programs (e.g., Joint Strike Fighter, Airborne Laser, Comanche, and Space-Based Infrared System-Low) at considerable risk of meeting cost, schedule, and performance objectives because critical technologies were less mature at program start than best practices recommend. There have been some successes with evolutionary acquisitions, such as the Tactical Unmanned Aerial Vehicle program, but so far they are exceptional cases in that they required significant intervention from top leadership in the services and DOD. It would be premature to interpret this progress as evidence that systemic change has occurred across DOD acquisitions. Nonetheless, DOD has continued to make policy reforms, and it has recently issued a new version of the 5000 series of acquisition guidance. According to DOD officials, the objective of the new guidance is to foster greater efficiency, flexibility, and innovation in developing and acquiring weapon systems.

Key Actions Needed

As we have recommended, DOD leadership could improve the acquisition of weapon systems by requiring that individual program decision makers:

- Separate technology development from product development and ensure that key technologies are mature before programs proceed into product development. DOD's use of evolutionary acquisition should

help decision makers to make the right trade-offs necessary to make this separation.

- Plan product development such that design and manufacturing knowledge points are attained in accordance with best practices.
- Conduct test and evaluation in such a way that the burden of component and subsystem testing does not get deferred until system level testing late in the development cycle.
- Establish weapon requirements that routinely consider the full range of alternative solutions, including joint mission needs and aggregate capabilities, to ensure that cost-effective systems are developed.

DOD has generally concurred with our recommendations and incorporated best practices into its acquisition policies.³⁶ As we have recommended, policy changes must be supported by a better environment for starting and managing weapon system development programs. Such an environment should more closely approximate a knowledge-based product development process, which provides incentives and funding to capture knowledge early for decision making and uses realistic assumptions in establishing system cost and schedule estimates.

Improve Processes and Controls to Reduce Contract Risk

DOD spent nearly \$163 billion in fiscal year 2001 for goods and services to equip, maintain, and support its military forces and has long been the largest purchaser in the federal government. The acquisition environment in which DOD operates, however, has changed significantly over the past decade. For example, DOD now purchases more services than supplies and equipment; DOD's acquisition workforce is half the size it was a decade ago; DOD increasingly buys goods and services using contracts awarded and managed by other federal agencies; and changes to laws and regulations have simplified the acquisition process. As we reported in 2001, these environmental changes contribute to the significant contract management-related challenges DOD faces, particularly in regard to (1) improving its acquisition of services, (2) ensuring the appropriate use of contracting techniques and approaches, (3) overcoming long-standing contract payment issues, and (4) managing its health-care contracts.

³⁶ Related reports on acquisition reform and best practices are listed in the "Related GAO Products" section of this report.

Underlying these challenges is DOD's need to address serious imbalances in the skills and experiences of its remaining workforce and the potential loss of highly specialized knowledge as its acquisition specialists retire. DOD's acquisition workforce issue is part of a broader human capital crisis that is confronting the federal government as a whole.

Individually, the problems in these areas undermine DOD's ability to ensure that it is acquiring the goods and services needed to meet the warfighters' needs as efficiently as possible. Collectively, these problems point to the complexity inherent in DOD's current contract management processes and the challenges in embracing new or alternative approaches within a changing acquisition environment. DOD and other federal agencies are taking actions to address these issues. Most of these actions, however, are at the early stages of implementation. It is uncertain whether the corrective actions can be fully and successfully implemented in the near term. Consequently, we continue to identify DOD's contract management as a high-risk area, as we have since 1992.

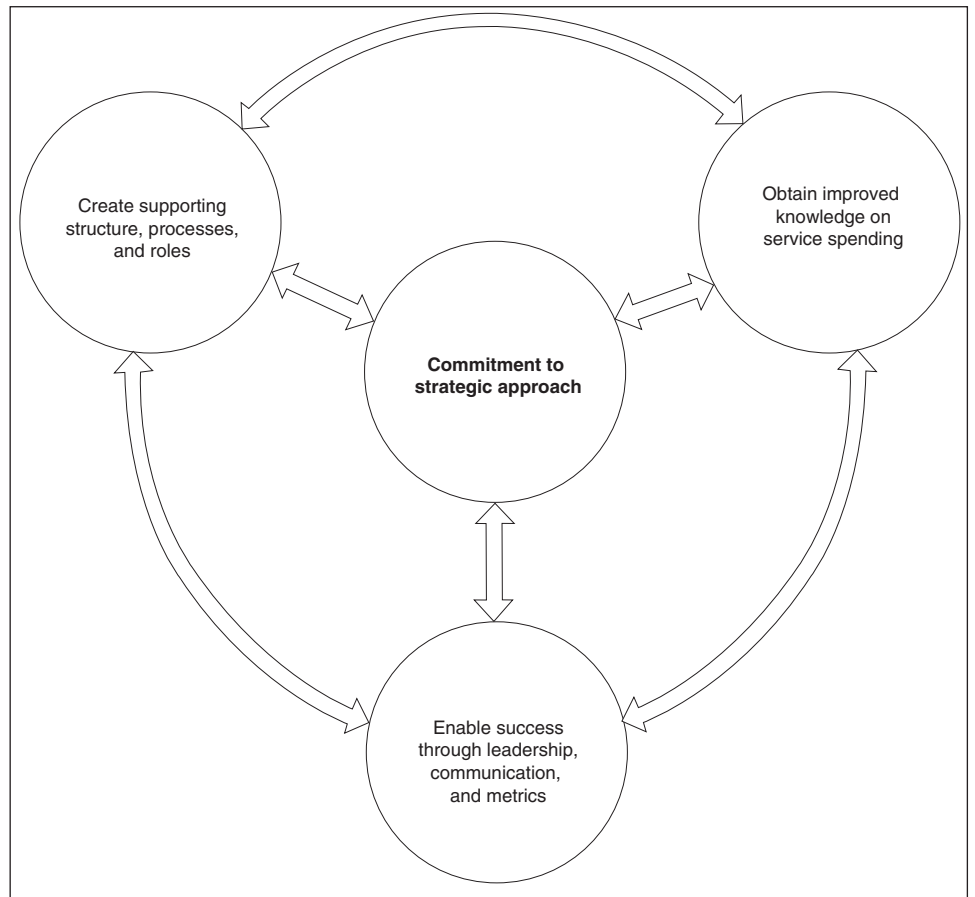
Management of DOD's Acquisition of Services Is Not Effective

DOD spent more than \$77 billion in fiscal year 2001 for a wide range of services, including professional and administrative support, information technology, utilities, medical services, and operation of government-owned facilities. However, our work, and the work of DOD's Inspector General, has found that spending on services is not being managed effectively. Too often, requirements are not clearly defined, alternatives are not fully considered, vigorous price analyses are not performed, and contractors are not adequately overseen. Additionally, there is only limited visibility or control at the DOD or military department level, and information systems that provide reliable data and are capable of being used as a management tool are lacking; and it has few enterprisewide contracting-related performance metrics. Furthermore, DOD lacks a strategic plan that integrates or coordinates ongoing initiatives or that provides a road map for identifying or prioritizing future service contracting-related efforts.

The experiences of leading private-sector companies to reengineer their approach to acquiring services offer DOD both valuable insights and a general framework that could serve to guide DOD's efforts. In January 2002, we reported that our work at six leading companies found that each had reengineered its approach to acquiring services to stay competitive, reduce costs, and improve service levels. These changes generally began with a corporate decision to pursue a more strategic approach to acquiring

services. Taking a strategic approach involves a range of activities from developing a better picture of what the company was spending on services to taking an enterprisewide approach to procuring services and developing new ways of doing business (see fig. 9). Pursuing such an approach clearly paid off, as the companies found that they could save millions of dollars and improve the quality of services received.

Figure 9: Key Elements of Strategic Approach Taken by Leading Companies



Source: GAO.

Note: GAO's analysis of strategic approaches taken by leading companies.

Once top leaders were committed to taking this approach, companies took a hard look at how much they were spending on services and from whom. With this knowledge, they could identify opportunities to leverage their buying power, reduce costs, and better manage their suppliers. The companies also instituted a series of structural, process, and role changes aimed at moving away from a fragmented acquisition process to a more efficient and effective enterprisewide process. For example, the companies we studied often established or expanded the role of corporate procurement organizations to help business managers acquire key services and made extensive use of cross-functional teams to help the companies better identify service needs, select providers, and manage contractor performance.

DOD already has in place certain elements critical to taking a strategic approach, such as the commitment by senior DOD leadership to improve practices for acquiring services and to adopt best commercial practices. For example, DOD issued new policy in May 2002 that was intended to elevate the importance and awareness of major purchases of services to the same level as purchases of major defense systems. However, DOD still faces a long journey, as it needs to take on the more difficult tasks of developing a reliable and accurate picture of service spending across DOD; determine what structures, mechanisms, and metrics can be employed to foster a strategic approach; and tailor those structures to meet DOD's unique requirements. We are continuing our work to identify how specific best practices can be applied to the DOD environment and are monitoring DOD's efforts to implement a more strategic approach to buying services.

**DOD Missed
Opportunities in
Contracting to
Enhance Acquisition
Savings and Outcomes
and Reduce Burdens**

The past decade heralded numerous changes in the way DOD bought goods and services, as the Congress and the executive branch looked for ways to streamline the acquisition process, reduce procurement lead times, decrease costs, and attract firms that traditionally chose not to work for the government. Several trends emerged in DOD's contracting business, including (1) a greater reliance on contracts awarded and managed by other agencies, (2) dramatic increases in the use of government purchase and travel cards, (3) an increased reliance on noncost-based pricing approaches, (4) expanded use of performance-based contracting approaches, and (5) the growth of "other transactions" for research and prototype projects. Unfortunately, our work often found federal implementing regulations to be unclear, DOD's guidance and internal controls were inadequate, and acquisition personnel improperly trained or

unaware of new processes and procedures. Consequently, DOD missed out on opportunities to generate savings, reduce administrative burdens, and enhance outcomes for its acquisitions. Some of these examples are as follows:

- Since early 2000, both the Inspector General and we have found continuing problems with DOD's use of the General Services Administration's Federal Supply Schedule program and, more generally, multiple-award task order contracts. In March 2000, we reported that DOD contracting officers often did not receive competing proposals and used broadly defined work descriptions for orders to acquire information technology goods and services. Subsequently, in November 2000, we reported that DOD contracting officers did not consistently follow procedures intended to promote competition, ensure fair and reasonable prices, or conduct a meaningful price analysis when using the program. Many DOD contracting officers were unaware of the General Services Administration's procedures for buying services when using the program, and federal regulations did not even mention such procedures. More recently, in September 2001,³⁷ the DOD Inspector General concluded that 304 of the 423—or 72 percent—task orders it had reviewed were awarded on a sole-source or directed-source basis and 264 were improperly supported.
- Over the past 2 years, we have found that DOD's purchase and travel card programs were plagued by a weak overall control environment and breakdowns in key internal control activities, leaving DOD vulnerable to potentially fraudulent, wasteful, or abusive purchases. For example, in July 2002, we issued reports on the Army's purchase and travel card programs, which the Army uses extensively. In fiscal year 2001, about 109,000 Army purchase cardholders made about 4.4 million transactions valued at over \$2.4 billion, while the Army's 430,000 individual travel card accounts had incurred about \$619 million in related travel card charges. However, the Army's purchase card guidance did not adequately identify and direct the implementation of needed actions and control activities, while DOD and Army memoranda were inadequate to manage the purchase card program. The Army's travel card program was also hampered by a weak overall control environment, flawed policies and procedures, and a lack of adherence to valid policies and

³⁷ Office of the Inspector General, Department of Defense, *Multiple Award Contracts For Services*, Report No. D-2001-189 (Arlington, Va: September 2001).

procedures, thereby contributing to significant delinquencies and charge-offs and fraud and abuse relating to Army employee account balances.

- Several reports issued since 1999 have indicated that inadequate guidance and poor training played a role in when DOD personnel did not use sound techniques to obtain the best prices for DOD. These situations are largely in areas where DOD cannot, or chooses not to, rely on cost-based pricing techniques for contracts awarded without competition.³⁸ For example, in June 1999 we reported that contracting officers often performed price analyses that were too limited to ensure that the prices were fair and reasonable in our review of 65 sole-source purchases of commercial items. In several cases, contracting officers did not use historical pricing information contained in contract files or require the sellers to provide certain information, such as sales data, to support their offered prices. In April 2002, we reported that DOD was waiving the requirement for contractors to submit certified cost or pricing data, a key requirement meant to ensure that the government has the data it needs to effectively negotiate with the contractor in contracts awarded without competition. We found that for 20 waivers, with a total value of \$4.4 billion, issued by DOD in fiscal year 2000, there was a wide variation in the quality of the data and analyses being used by DOD contracting officers to determine if the price was fair and reasonable. DOD did not have adequate guidance that would help contracting officers decide whether a waiver should be granted, help determine what type of data and analyses are acceptable, and determine what kind of expert assistance should be obtained. The DOD Inspector General identified similar problems in a May 2001 report,³⁹ concluding that the lack of planning, shortages in staffing, and the absence of senior

³⁸ The federal government generally seeks to award its contracts through competition. However, in instances in which it cannot rely on competition to get the best prices and values, such as when there is only a single source for products and services, contractors normally provide cost or pricing data supporting their proposed prices and certify that the data submitted are accurate, complete, and current. This requirement, established by the Truth in Negotiations Act, allows the government to pursue remedies, such as a reduction in contract price, should it later discover that the contractor submitted data that were not accurate, complete, or current. Contractors offering commercial items are generally exempt from this requirement, although the government can ask for other types of data to evaluate the reasonableness of the prices offered.

³⁹ Office of the Inspector General, Department of Defense, *Contracting Officer Determinations of Price Reasonableness When Cost or Pricing Data Were Not Obtained*, Report No. D-2001-129 (Arlington, Va: May 30, 2001).

leadership oversight contributed to poor pricing analysis and the inappropriate use of waivers in a significant number of contracts reviewed.

- As part of our recent review of the government’s use of performance-based contracts⁴⁰—a key administration initiative—we found that DOD, like other agencies we reviewed, had achieved mixed success in incorporating four basic performance-based attributes into its contracts.⁴¹ For example, only three of the five DOD contracts in our review that were for commercial-type services clearly exhibited all four performance-based attributes. We found that DOD strived to build in the attributes for the five contracts that were for more complex, government-unique services; however, DOD found it needed to maintain a strong role in specifying how the work should be done as well as overseeing the work. We recommended that the Administrator of the Office of Federal Procurement Policy clarify existing guidance to ensure that performance-based contracting is appropriately used, particularly when acquiring more unique and complex services that require strong government oversight.
- In April 2000, we reported that DOD needed better guidance to assist DOD personnel in using its “other transaction” authority for prototype projects—a new tool that embodied alternative approaches to standard contracts. We found that DOD had provided only limited guidance to defense components, in part, because it did not want to unduly restrict the authority’s usage. As a result, DOD did not provide specific objectives or criteria for using the authority, define what constituted a prototype project, or establish metrics to assess whether the expected benefits were actually achieved. Furthermore, we found that the services relied on a model agreement that may have led to agreements that did not address all relevant issues or include appropriate terms and conditions. DOD issued new guidance in December 2000 that laid out the conditions for using prototype agreements and provided a framework to tailor the terms and conditions appropriate for each

⁴⁰ U.S. General Accounting Office, *Contract Management: Guidance Needed for Using Performance-Based Service Contracting*, [GAO-02-1049](#) (Washington, D.C.: Sept. 23, 2002).

⁴¹ These attributes describe desired outcomes rather than how the services should be performed, set measurable performance standards, describe how the contractor’s performance will be evaluated, and identify positive and negative incentives, as appropriate.

agreement. In October 2002, we reported that this updated guidance complied with our earlier recommendation and should assist DOD personnel.⁴²

DOD Has Difficulty in Overcoming Long-Standing Contract Payment Issues

Ensuring prompt, proper, and accurate payments—whether for the delivery of goods and services, for financing the construction of facilities or the production of major weapon systems, or for accomplishment of particular events or milestones on production contracts—is a key element of a sound contract management process. Yet for DOD, completing such basic tasks has long been a challenge. DOD’s financial management procedures and practices do not fully meet federal accounting standards and financial system requirements or its own accounting policy. As a result, DOD managers do not have important information needed for effective financial management, leading DOD to overpay contractors by billions of dollars over the past 8 years.

We first reported on contractor overpayments in 1994. The report, and those issued subsequently, noted that (1) contractors were refunding hundreds of millions of dollars to DOD each year, for a total of about \$6.7 billion between fiscal year 1994 and 2001; (2) DOD made overpayments due to duplicate invoices and paid invoices without properly and accurately recovering progress payments; (3) contract administration actions had resulted in significant contractor debt or overpayments; (4) DOD and contractors were not aggressively pursuing the timely resolution of overpayments or underpayments when they were identified; and (5) DOD did not have statistical information on the results of contract reconciliation.

In May 2002, we reported that DOD has various short-term corrective actions underway that appear to be having positive results. These actions include redoubling efforts to reconcile contracts, a recovery audit program intended to identify overpayments and ensure that contractors have adequate internal controls to promptly identify and report overpayments, and improved procedures to better identify potential duplicate payments before the invoices are paid. However, cost increases, performance issues, or schedule delays have beset two of DOD’s key long-term initiatives: the

⁴² U.S. General Accounting Office, *Defense Acquisitions: DOD Has Implemented Section 845 Recommendations but Reporting Can Be Enhanced*, [GAO-03-150](#) (Washington, D.C.: Oct. 9, 2002).

Defense Procurement Payment System, which is intended to be DOD's standard contract payment system, and the Standard Procurement System, which is intended to be DOD's single, standard system to support contracting functions and interface with financial management functions, such as payment processing.

Both the DOD Inspector General and we have reported on performance problems and schedule delays in the Defense Procurement Payment System. For example, the Inspector General concluded in September 2001 that the system would not fully eliminate DOD's disbursement and contract accounting problems because DOD will still need to make manual payments for which there is a greater risk of errors being made. In May 2002, we reported that the system's implementation would be delayed by more than 2 years, from August 2001 to October 2003.

We have raised concerns about DOD's approach to acquiring the Standard Procurement System on a number of occasions. In July 2001, we questioned whether further investment in the system was justified given that DOD did not have a credible cost and benefits analysis, it had not effectively addressed the inherent risks associated with developing the system, and it had not met key program commitments used to justify the system. For example, DOD had committed itself to implementing a commercially available contract management system; however, because it had modified so much of the foundational commercial product, the system had evolved into a customized DOD system. Furthermore, the system had slipped by 3½ years in its target date for full implementation and its projected life-cycle costs had increased from about \$3 billion to \$3.7 billion. We reiterated our concerns in February 2002, noting that although DOD had taken some positive steps, (1) it still did not have definitive plans for how and when to justify future system releases or major enhancements to existing releases, (2) it was considering making changes to the software that could compound existing problems and further increase costs, and (3) not all defense components had agreed to adopt the system.⁴³

Managing DOD's Contracts for Health Care

DOD's challenges in contract management are further illustrated in the difficulties it has experienced in implementing contracts under its health-care program, TRICARE. This program, implemented in 1994, currently offers over 8 million eligible beneficiaries a choice of three options through which they can receive health care from either military treatment facilities or civilian providers. Care from civilian providers is arranged and paid for by TRICARE contractors. In fiscal year 2002, approximately \$5 billion was budgeted for TRICARE contracts.

⁴³ U.S. General Accounting Office, *DOD's Standard Procurement System: Continued Investment Has Yet to Be Justified*, [GAO-02-392T](#) (Washington, D.C.: Feb. 7, 2002).

Beginning in 1994, DOD sequentially awarded 7 contracts covering 11 geographic TRICARE regions. Each contract was originally awarded for a base period and 5 option years. Each contract has been or is expected to be extended beyond the base period because of DOD's difficulties in designing a new approach for the next round of contracts. In May 2001, we reported that DOD's contracting approach for TRICARE was overly complicated and prescriptive and limited innovation and competition. We also reported that numerous adjustments to the contracts had created an unstable program.⁴⁴

In August 2002, DOD released a solicitation for its next generation of TRICARE contracts, called T-Nex. DOD plans to implement these contracts sequentially over the next 2 years. This new approach attempts to address some of our concerns with the current contracts, including complexity, numerous contract adjustments, and prescriptiveness. Additionally, T-Nex represents a major overhaul of the current structure. DOD has reduced the number of geographic regions from 11 to 3 and has segregated functions that were previously incorporated in the current contracts. For example, DOD has segregated health-care delivery, marketing and education, and retail pharmacy into separate solicitations.

The successful implementation of this approach depends largely on DOD's ability to attract sufficient competition and ensure a smooth and seamless transition for its beneficiaries. However, the reduction in the numbers of regions and contracts may hinder a smooth transition. For example, under the new regional structure contractors will be required to develop provider networks over a greater geographic area. DOD will also face challenges in integrating the new contracts into a cohesive and seamless program for beneficiaries while maintaining the existing contracts. Nonetheless, DOD has heeded our earlier recommendation to allow for a longer transition period of 10 months. Whether DOD can successfully launch the new approach and whether the new approach will control costs, ensure quality, and minimize disruption to beneficiaries remain to be seen.

⁴⁴ U.S. General Accounting Office, *Defense Health Care: Lessons Learned from TRICARE Contracts and Implications for the Future*, GAO-01-742T (Washington, D.C.: May 17, 2001).

DOD also faces continuing challenges in coordinating with the Veterans Administration (VA) to jointly contract for health-care supplies. Since the early 1980s, the Congress has urged DOD and VA to achieve greater efficiencies through improved acquisition processes and increased sharing of medical resources. Last year we reported that DOD and VA had saved over \$170 million annually by jointly procuring pharmaceuticals. They achieved these savings by agreeing on, or “standardizing,” particular drugs that their facilities would purchase and then contracting with the manufacturers of these drugs for discounts based on their combined larger volume. However, DOD and VA have not achieved many savings by jointly contracting for medical and surgical supplies. This lack of progress has, in part, been the result of their different approaches to standardizing medical and surgical supplies. DOD reports that it is discussing with VA ways to overcome these differences to develop joint ventures for medical and surgical supplies. Nevertheless, DOD has opted to follow a regional approach to standardization and VA has opted for a national approach; opportunities for national joint procurement will be more difficult to achieve. In addition, neither department has accurate, reliable, or comprehensive procurement information, a basic requirement for identifying potential medical and surgical items to standardize.⁴⁵

Problems Hamper DOD’s Efforts to Improve the Acquisition Workforce

Properly managing the \$163 billion worth of goods and services it purchased in fiscal year 2001 requires that DOD have the right skills and capabilities in its workforce. In the past decade, DOD has downsized its acquisition workforce⁴⁶ by half to respond to acquisition reforms, base realignment and closures, and congressional direction. At the same time, DOD, like other agencies, is facing growing public demands for better and more economical delivery of products and services. Moreover, the ongoing technological revolution and acquisition reforms require a workforce with new knowledge, skills, and abilities and a transition from a role of technician to that of business manager. Consequently, DOD now faces,

⁴⁵ U.S. General Accounting Office, *VA and Defense Health Care: Potential Exists for Savings through Joint Purchasing of Medical and Surgical Supplies*, [GAO-02-872T](#) (Washington, D.C.: June 26, 2002).

⁴⁶ DOD refers to its acquisition workforce as its acquisition, technology, and logistics workforce.

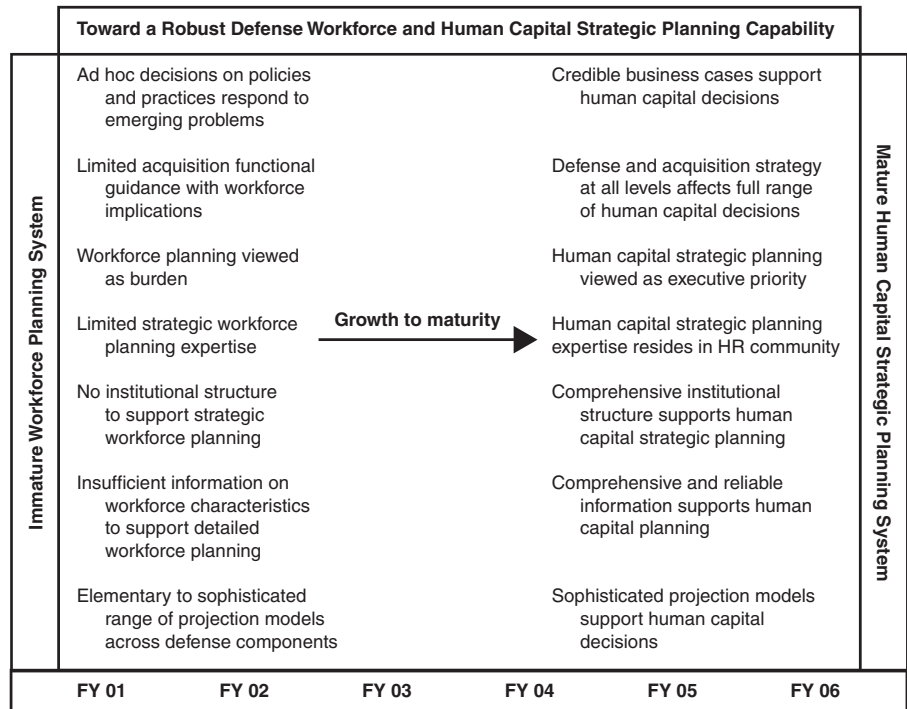
in its opinion, serious imbalances in the skills and experience of its remaining workforce and the potential loss of highly specialized knowledge if many of its acquisition specialists retire.⁴⁷ DOD has initiated a substantial strategic planning effort that seeks to identify the competencies needed for the future and address what reshaping of the workforce will be needed to achieve the desired mix, but it has encountered a number of problems that have hampered this effort.

Reshaping a workforce is a challenge for any agency. As we have previously reported, because mission requirements, client demands, technologies, and other environmental influences change rapidly, a performance-based agency must continually monitor its staffing needs. It must identify the best strategies for filling its talent needs through recruiting and hiring and follow up with the appropriate investments in training and development. In addition, the agency must match the right people to the right jobs and, in the face of finite resources, be prepared to employ matrix management principles, maintaining the flexibility to redeploy its human capital and realigning its structures and work processes to maximize economy, efficiency, and effectiveness.

We recently reported that DOD has made progress in laying a foundation for reshaping its acquisition workforce. As shown in figure 10, DOD recognizes that it will take a considerable amount of time just to lay a good foundation for strategic planning, with specific outcomes taking years to achieve.

⁴⁷ DOD's estimate of personnel eligible to retire includes early retirement programs and individuals eligible for retirement with reduced annuities based on March 2001 data from the Defense Manpower Data Center.

Figure 10: DOD's Framework for Developing a Mature Human Capital Strategic Planning System



Source: DOD.

Note: HR is human resources.

Part of this long-term effort will involve making a cultural shift as well as developing better data to manage risk by spotlighting areas for attention before crises develop and to identify opportunities for improving results. DOD has worked to identify and address problems that have been hampering this effort. These problems include a lack of (1) accurate, accessible, and current workforce data; (2) mature models to forecast future workforce requirements; (3) a link between DOD's planning and budgeting processes; and (4) specific planning guidance.

One of DOD's ongoing initiatives to address various workforce size and structure issues is the Acquisition Workforce Personnel Demonstration Project. The demonstration project started in February 1999, and it is to experiment with various concepts in workforce management, such as those pertaining to recruiting, hiring, and retention. For example, the demonstration project is testing broadbanding⁴⁸ concepts that are intended to allow managers to set pay and facilitate pay progression. Broadbanding would allow managers to recruit candidates at differing pay rates and to assign employees within broad job descriptions consistent with the needs of the organization and the skills and abilities of the employee. However, participation in the project has been fairly limited. As of September 2001, only 5,300 acquisition personnel—out of a maximum of 95,000 allowed by statute—were participating in the project. A DOD official indicated that DOD intends to significantly increase project participation over the next several years.

Key Actions Needed

With the events of September 11, and the federal government's short- and long-term budget challenges, it is more important than ever that DOD effectively transform its business processes to ensure that it gets the most from every dollar spent. At the same time, it should be recognized that DOD's contract management-related challenges are both difficult and deep-rooted and will not be resolved overnight. Two common elements that pervade discussions of ways to address DOD's key contract management-related challenges—service contracting, contract payment, and human capital—are the need for (1) sustained executive leadership and (2) a strategic, integrated, and enterprisewide approach. In addition, ensuring that these efforts achieve their intended results will require the Congress's continued involvement and support. For example, the Congress passed legislation in 2001 requiring that DOD establish a management structure to enhance the acquisition of services and to collect data on the purchase of services, which could provide DOD with additional means to take a more strategic approach to acquiring services. Lastly, there remains a continuing need to provide the framework and tools for acquisition personnel to make sound business decisions in obtaining high-quality goods and services at good prices and in a timely manner.

⁴⁸ Broadbanding is the replacement of the current General Schedule or General Manager system with a system consisting of broad "bands" of career paths.

Provide Logistics Support That Responds to the Needs of the Warfighter at an Affordable Cost

DOD spent an estimated \$88.2 billion in fiscal year 2001 for logistics support activities;⁴⁹ and despite decreasing force structure, logistics support costs have continued to increase. Logistics is a complex, multidisciplined function that relates to all aspects of operating and supporting military systems. Weapon systems and the personnel who operate them cannot perform military missions without support systems that keep the weapon systems operating and armed and the personnel supplied with essential supplies. We have reported long-standing problems in DOD's logistics processes, systems, and operations. As we reported in January 2001, these problems have resulted in decreasing the quality and timeliness of logistics support to operational forces and/or increasing support costs. To its credit, at any one time, various DOD activities have about 400 logistics improvement initiatives ongoing. However, the reported logistics problems seem to transcend time and continue to challenge logistics providers' efforts to achieve their goal of providing timely support to the warfighter in a cost-effective manner. Furthermore, long-standing problems continue with regard to the acquisition, management, and distribution of spare and repair parts, an area that we have designated as high risk since 1990.

DOD's Efforts to Address Long-Standing Problems of Quality, Timeliness, and Cost of Logistics Support Have Shortcomings

In 2000, we reported that DOD was attempting to reengineer and modernize its logistics program to increase efficiency, improve performance, and reduce system operation costs. We have reported that inadequate integration and coordination of logistics processes, systems, and operations had occurred within DOD—decreasing the effectiveness of jointly operated forces in a theater of operations and increasing the cost. We have recommended the development of an adequate overarching logistics strategy to effectively guide the military components development of an efficient and effective logistics system. However, DOD's efforts in this direction are not comprehensive and do not continue previous efforts.

DOD took a positive step in dealing with its logistics planning shortfall when it developed a logistics strategic plan and directed the services and the defense commands to develop implementing plans that reflected the vision, objectives, and metrics of the departmentwide plan. While we

⁴⁹ Logistics activities include weapon system maintenance, supply management, engineering, storage, distribution, and transportation of military goods.

identified shortcomings in the departmentwide plan and those developed by the components to implement it, we also recognized that this planning effort was a step toward improving the economy and efficiency of the logistics support systems and developing a more coordinated and cohesive logistics operation.

In December 2002, we reported that DOD had restructured its logistics improvement initiatives and, as a part of this effort, had discontinued its strategic planning initiative.⁵⁰ In implementing its 2001 Future Logistics Enterprise, DOD is focusing its efforts over the next few years in six key areas:

- Pursue depot maintenance public-private partnerships to achieve greater facility utilization, realize greater investment in organic depots, and reduce cost by empowering DOD depots to develop partnerships with the commercial sector.
- Use condition-based maintenance to increase the operational availability and readiness of weapon systems by improving the services' ability to predict failures and maintenance requirements using more accurate condition data, thereby reducing unnecessary maintenance.
- Adopt a total life-cycle approach to weapon system management by reengineering the life-cycle management of DOD systems to achieve effective performance and optimum readiness while reducing operations and support costs.
- Pursue end-to-end distribution to streamline supply support to the warfighter by providing materiel, including items to be shipped, from the source of supply or point of origin to the point of use or disposal, as defined by the combatant commander.
- Establish an executive agents determination process to assign responsibility to a service or defense agency for providing common services and improve planning to ensure that the needed resources are available to support the responsible agent.

⁵⁰ U.S. General Accounting Office, *Defense Management: New Management Reform Program Still Evolving*, GAO-03-58 (Washington, D.C.: Dec. 12, 2002).

- Enhance enterprise integration by building on service and Defense Logistics Agency software integration efforts and reduce information system support costs by streamlining and changing current DOD business processes and practices so that they are supported by commercially available software.

Many details for implementing the Future Logistics Enterprise initiatives have yet to be worked out. During our review⁵¹ of the current status of this effort, we found that the new initiatives should result in improvements to the quality of logistics support in the areas addressed. However, the new initiatives are not comprehensive (for example, they do not address critical shortages in strategic mobility assets), and they do not continue prior efforts in developing and implementing a coordinated and comprehensive logistics strategic plan.

We continue to believe that the development and implementation of a comprehensive and coordinated logistics support planning process, as we and the Congress have encouraged in the past, is essential to DOD's ability to improve the quality and the cost-effectiveness of all logistics support processes, systems, and operations, especially those pertaining to supply support.

Inventory Management Continues to Be High Risk

Since 1990, we have consistently identified DOD's management of secondary inventories (spare and repair parts, clothing, medical supplies, and other items to support the operating forces) as a high-risk area because levels of inventory were too high and management systems and procedures were ineffective and wasteful. Many of these same weaknesses regarding excess inventories and the lack of economy, efficiency, and effectiveness in the department's inventory management practices still exist today.

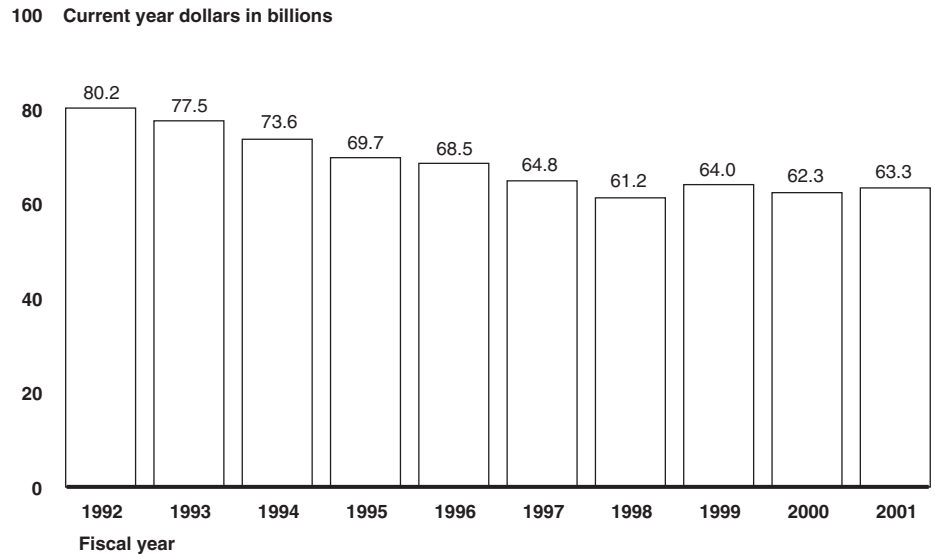
As discussed in the previous section, the long-term solution to these problems necessitates that DOD reengineer its entire logistics operations, to include the development of a long-range strategic vision and a departmentwide, coordinated approach for logistics management. In the short term, however, we have made a number of recommendations in recent years directed at correcting specific long-standing weaknesses in the supply system. Specifically, we recommended that DOD (1) reduce

⁵¹ [GAO-03-58](#).

excess inventories, (2) eliminate material purchases for which no valid requirement exists, (3) establish better controls and visibility over material shipped to and from military activities, (4) address key spare parts shortages, (5) better track how it spends its funds for spare parts, (6) correct information systems weaknesses, and (7) adopt specific industry-proven best practices for improving inventory management. DOD concurred with our recommendation to develop an overarching strategy, and it is planning to reengineer and transform its logistics system.

While figure 11 shows that DOD's inventory value for the last 10 years has generally declined, we reported that almost half of its \$63.3 billion inventory as of September 2001 exceeded war reserve or current operating requirements. DOD had this excess partly because demands decreased, fluctuated, or did not materialize; items became obsolete or were phased out of service; and some of the initial requirements and demand forecasts were not accurate. We reported in May 2001, however, that DOD does not have a sound basis for determining which of these excess items should be retained or disposed of. Several military services had developed models for making this determination but were not using them. Consequently, the services cannot guarantee that they are retaining the right items or the right amount. We also reported that DOD's quantities of excess ammunition continue to increase. Specifically, we reported in April 2001 that excess ammunition had increased from 354,000 tons in 1993 to 493,000 tons in 2000.

Figure 11: Value of DOD's Secondary Inventory, Fiscal Years 1992-2001



Source: DOD.

Note: Based on DOD's latest acquisition cost method of value; data taken from DOD's Supply System Inventory Report, September 30, 2001.

As of September 30, 2001, DOD records showed that the department had inventory on order valued at about \$1.6 billion that would not have been ordered based on current requirements. We have issued several reports in the past few years highlighting weaknesses in DOD's requirements determination processes for materials and its procedures for canceling orders for items that are no longer needed. For example, we reported in May 2001 that the Army was unable to accurately identify its requirements for war reserve spare parts because (1) it was not using the best available data concerning the rate at which spares would be consumed during wartime and (2) a potential mismatch existed between how the Army determines spare parts requirements for war reserves and how the Army plans to repair equipment on the battlefield. We also reported in April 2001 that because DOD had not resolved a number of key issues in its requirements determination process for ammunition, the services' munitions requirements were uncertain, which could affect munitions planning, programming, budgeting, and industrial production base decisions.

We reported similarly in May 2001 and July 2002 that the Army still did not use current data from industry for assessing wartime spare parts requirements and based its requirements determination on historical parts procurement data. DOD partially concurred with our findings and recommendations. We also reported in June 2000 that DOD was unable to efficiently and effectively cancel orders for material it no longer needed because the military services do not (1) use the same criteria for determining the amount of excess inventory on order that should be canceled, (2) consistently use their computer models for determining whether it is more economical to cancel orders or not, and (3) review orders of excess inventory for cancellation frequently enough to avoid contractor cancellation costs. We recommended that DOD review and improve its processes for identifying and canceling excess inventory on order.

One of DOD's more serious and long-standing inventory management weaknesses that we have been reporting on for over a decade is DOD's inability to maintain adequate accountability over material being shipped between contractor facilities and DOD activities or between DOD activities. We reported in July 2002, for example, that the Air Force had not properly controlled or maintained effective accountability over material reportedly valued at about \$567 million that had been shipped to contractors for repair or use in the repair process.⁵² Specifically, contractors receiving shipped material had not properly recorded the receipts or routinely reported shipment discrepancies.

Furthermore, Air Force procedures for following up on shipments that contractors had not confirmed as received were ineffective, leaving the status of the shipments uncertain. We recommended that the Air Force strengthen its procedures for controlling shipments of material and following up on shipment discrepancies. We have reported similar weaknesses regarding the shipment of chemical and biological defense equipment that could affect the readiness of overseas Air Force medical units to operate in a chemically contaminated environment. In addition, we found weaknesses in the Army's and the Navy's procedures for maintaining visibility over shipped material and following up on shipment discrepancies.

⁵² U.S. General Accounting Office, *Defense Inventory: Air Force Needs to Improve Control of Shipments to Repair Contractors* [GAO-02-617](#) (Washington, D.C.: July 1, 2002).

The Navy is to be commended for reconciling many of its shipment discrepancies in response to our March 1999 report and, as a result, bringing about \$2.5 billion worth of material back under its visibility and control.

In January 2002, we reported that, because of control weaknesses over excess DOD material, the Military Affiliate Radio System, the Civil Air Patrol, and the 12th Congressional Regional Equipment Center had obtained a reported \$34 million worth of items between 1995 and 2000 that they were not eligible to receive. Many of these included items whose use, storage, and disposal were restricted because of military technology/applications or items that were hazardous to public health and safety. We made several recommendations aimed at enhancing internal controls over DOD's disposal of its excess property and the subsequent accountability for the property. DOD generally concurred with our recommendations.

Although much of DOD's inventory is excess to current requirements, DOD has experienced equipment readiness problems because of shortages of key spare parts. We reported in three separate reports in 2001 that the Army, the Navy, and the Air Force were all experiencing operations and maintenance problems because of a lack of key spare parts, specifically aviation spares. While these shortages were caused by a number of factors, the primary ones that the services cited included underestimated demands for items, delays in the repair process, unreliability of parts, inability to obtain parts for aging weapon systems, and contracting problems.

As shown in table 1, the shortages of key spare parts have directly contributed to readiness problems. Specifically, table 1 highlights the nonmission capable rates due to supply problems for selected weapon systems. Each of the services has a number of initiatives planned or underway to address these shortages, and we are continuing to monitor their efforts.

Table 1: Percentage Rates at Which Selected Aircraft Were Reported as Not Mission Capable due to Supply Problems

Fiscal year	Reported not mission capable rates due to supply problems		
	Air Force C-5 aircraft	Navy F-14D aircraft	All Navy aircraft
1996	15.6%	10.0%	12.5%
1997	15.2	11.7	12.4
1998	16.8	12.4	12.9
1999	17.3	11.1	12.1
2000	18.1	7.6	12.9

Source: Navy and Air Force.

Note: GAO's analysis of Navy and Air Force data based on work completed in July 2001.

Another contributing factor to shortages of key spare parts is defective parts received from contractors. We reported in August 2001 that the Navy was not adequately monitoring or reporting defective spare parts and that, as a result, contractors were not fully reimbursing it for these defective items. We attributed these weaknesses, to a large extent, to a lack of management attention, limited training and incentives to report deficiencies, and competing priorities for staff resources.

We reported in May 2001 that, because of the shortages of key spares and the related impact on readiness, each of the services had resorted to extensively cannibalizing parts from other equipment to obtain needed spares. We pointed out that cannibalizations increased maintenance costs by increasing mechanics' workload, adversely affecting morale and personnel retention, and sometimes taking expensive aircraft out of service for long periods of time. We made a number of recommendations aimed at establishing standardized, comprehensive, and reliable cannibalization data collection procedures and at developing strategies to reduce the amount of time spent on cannibalizations. DOD concurred with our recommendations and stated that consistent, complete, and accurate reporting by the services of all types of maintenance actions, not just cannibalizations, is essential to effective management oversight of logistics support processes.

In an attempt to alleviate these spares shortages, the Congress provided DOD with a \$1.1 billion supplemental appropriation in fiscal year 1999 specifically earmarked for spare parts purchases. However, DOD's financial reports do not provide the Congress with reasonable assurance about the amount of funds being spent on spare parts. Specifically, we reported in

June 2001 that the \$1.1 billion earmarked for spare parts in fiscal year 1999 had been placed in the military services' operation and maintenance accounts and that DOD did not separately track the use of these funds. Consequently, the funds could have been used for other purposes. We recommended that DOD annually develop detailed financial management information on the uses of spare parts funding. In an October 2002 follow-up report, we reported that the financial reports that DOD had submitted in response to our earlier recommendation did not provide an accurate and complete picture of spare parts funding because the reports generally presented estimated, not actual, expenditures by the military services. DOD presented these estimates, which were derived from various service computations, modeling, and historical data, because the services do not have reliable expenditure data or a central tracking system to compile the needed information on their actual spending by commodity.

We recommended that DOD (1) improve its guidance for preparing these reports to ensure that the services provide actual and complete data on spare parts spending and (2) require the services to fully comply with its reporting guidance. In written comments, DOD stated that to have a comprehensive picture of spare parts spending, information on spare parts purchased with working capital funds and other investment accounts needs to be reported. DOD offered to work with the Congress to facilitate this kind of analysis. In addition, DOD agreed that the services need to explain deviations between programmed and actual spending but believed that reporting spare parts quantities purchased, as required by the financial management regulation, would not add significant value to the information being provided to the Congress because of the wide range in the unit costs for parts.⁵³

One primary factor contributing to DOD's inventory management weaknesses is its outdated and ineffective management information systems. While DOD has a number of initiatives planned or underway to modernize its supply support management information systems, it lacks an overall information technology enterprise architecture to guide and constrain its investments. We reported in January 2002, for example, that the Defense Logistics Agency lacks (1) a mature software acquisition process across the agency and (2) a software process improvement

⁵³ U.S. General Accounting Office, *Defense Inventory: Better Reporting on Spare Parts Spending Will Enhance Congressional Oversight*, GAO-03-18 (Washington, D.C.: Oct. 24, 2002).

program to effectively strengthen its corporate software acquisition processes. We also reported in March 2002 that because information technology investment has only recently become an area of management focus and commitment at the agency, the agency's ability to effectively manage investments is limited. Consequently, we continue to question the agency's ability to make informed and prudent investment decisions regarding information technology. We recommended that the agency develop a well-defined process improvement plan and controls to ensure the establishment of a mature investment management capability. DOD generally concurred with our recommendation.

We have issued a number of reports in recent years recommending that DOD apply commercial best practices to its logistics operations. We reported in February 2002, for example, that it estimates a \$59-billion-a-year expenditure for logistics support to operate and sustain weapon systems, but it believes that better logistics support practices could reduce these costs by as much as 20 percent. In March 2002, we issued a Best Practices Executive Guide, which described fundamental practices and procedures used in the private sector to achieve consistent and accurate physical counts of inventory and related property. DOD responded that it is attempting to improve its logistics support through its new Future Logistics Enterprise Initiative.

Key Actions Needed

Our recent reports have consistently highlighted the need for DOD to reengineer its logistics programs and apply best commercial practices to its logistics operations as a long-term solution to its inventory management weaknesses. In these reports, we recommended that DOD develop an overarching plan that integrates the individual service and defense agency logistics reengineering plans to include an investment strategy for funding reengineering initiatives and details for how DOD plans to achieve its final logistics system end state. DOD recognizes its inventory management weaknesses and has begun corrective actions. In the September 2001 Quadrennial Defense Review, the Secretary of Defense also highlighted the need to transform the U.S. military and the DOD establishment. The Secretary's report stated that, without change, the current DOD program will only become more expensive to maintain over time. In testimony delivered in June 2002 before the House Subcommittee on National Security, Veterans Affairs, and International Relations, Committee on Government Reform, we presented two case studies that clearly demonstrated the need for DOD to reform its business operations. In this testimony, we provided our views of the underlying or root cause of DOD's

long-standing inability to successfully reform its business operations, including a lack of sustained top-level leadership, cultural resistance to change, and military service parochialism. In addition, we identified the need for DOD to approach its broad array of management challenges using an integrated, enterprisewide approach.

In the short term, we recommend that DOD address the long-standing weaknesses that are limiting the economy and efficiency of its logistics operations. Specifically, we recommend that DOD establish better controls and visibility over material shipments, take actions to address shortages of key spare parts, better track how it is spending its funds for spare parts, and develop a departmentwide strategy for information technology investment.

Sustained Visible Leadership and Commitment to Reform Is Necessary

In spite of numerous initiatives and plans to transform DOD's business processes, much remains to be done as evidenced by the six management areas that are included on our high-risk list. Over the years, various administrations have tried to overcome these challenges, with varying degrees of success. At the same time, our work over the years, most prominently in the Performance and Accountability and High-Risk Series, has amply documented that many federal agencies, including DOD, suffer from a range of long-standing management problems and a lack of attention to basic stewardship responsibilities. Successfully addressing these challenges will require concerted action and sustained top-level attention over a period of years that span from one administration to the next. The common thread that is needed to tie DOD's efforts together is sound strategic planning that recognizes the integrated nature of DOD's management processes and related solutions; the importance of continuity in leadership to achieve process improvements; and an agreement between the executive and legislative branches of government on planned actions and desired results. As we discussed earlier, one option for DOD to address the challenges it faces would be to establish a full-time chief management officer position with long-term "good government" responsibilities that are professional and nonpartisan in nature. These responsibilities, described in a special GAO Roundtable report,⁵⁴ could include

⁵⁴ U.S. General Accounting Office, *Highlights of a GAO Roundtable: The Chief Operating Officer Concept: A Potential Strategy To Address Federal Governance Challenges*, GAO-03-192SP (Washington, D.C.: Oct. 4, 2002).

- strategic planning,
- organizational alignment,
- core values stewardship,
- human capital strategy,
- performance management,
- communications and information technology management,
- financial management,
- acquisition management,
- knowledge management,
- matrix management, and
- change management.

DOD, with its long-standing management problems in key operational areas, could be a good first candidate, using its risk-based approach, to try such a concept.

GAO Contacts

Subjects covered in this report	Contact persons
Strengthen strategic planning and budgeting to achieve desired mission outcomes	Sharon L. Pickup, Director, Defense Capabilities and Management (202) 512-9619 pickups@gao.gov
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Overcome support infrastructure inefficiencies to reduce costs and improve operations	Barry W. Holman, Director, Defense Capabilities and Management (202) 512-5581 holmanb@gao.gov
Confront pervasive, decades-old financial management problems to improve financial accountability	Gregory D. Kutz, Director, Financial Management and Assurance Defense, State, and NASA Financial Management (202) 512-9505 kutzg@gao.gov
Effectively manage information technology investments	Joel C. Willemssen, Managing Director Information Technology (202) 512-6408 willemssenj@gao.gov
Improve DOD's ability to acquire weapon systems in a cost-effective and timely way	Jack L. Brock, Jr., Managing Director Acquisition and Sourcing Management (202) 512-4841 brockj@gao.gov
Improve processes and controls to reduce contract risk	
Provide logistics support that responds to the needs of the warfighter at an affordable cost	William M. Solis, Director, Defense Capabilities and Management (202) 512-8365 solisw@gao.gov

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