DEFENSE ACQUISITION ORGANIZATIONS

Linking Workforce Reductions With Better Program Outcomes

Statement of Louis J. Rodrigues, Director, Defense Acquisitions Issues, National Security and International Affairs Division
Mr. Chairmen and Members of the Subcommittees:

I am pleased to be here today to discuss issues associated with the acquisition workforce and acquisition process of the Department of Defense (DoD).

As you know, Mr. Chairmen, we have reported many times on cost growth and other problems on individual weapon systems; systemic problems, such as the mismatch between planned programs and available funding; and the underlying reasons for these problems. I believe that in contemplating changes to the acquisition workforce, there is an opportunity to improve the acquisition process and the results it produces. It does not appear to us that DoD has taken that opportunity. It is not an easy task but we believe that it is the right approach.

Reducing infrastructure is one approach DoD is pursuing to increase funds for modernization. As an element of that infrastructure, the defense acquisition workforce is a logical place to look for efficiencies and savings. This morning I will talk about the reasons why this will be a complex and challenging undertaking. I see these reasons as threefold:

First, there is no agreed-upon definition of what constitutes the acquisition workforce. This makes targeting changes and measuring their progress very difficult. Second, the workforce cuts made to date have not resulted in expected savings and have kept the basic organizational structure relatively intact. Third, decisions to restructure or reduce the acquisition workforce should be linked to getting better outcomes from the acquisition process. Cutting personnel levels without changing how acquisition organizations generate weapon system requirements and estimates will miss an opportunity to address the deep-seated causes of acquisition problems.

I will elaborate on these points in my statement today and will offer some preliminary observations on DoD’s plan to reduce and restructure its acquisition workforce submitted in January in response to legislation. Before turning to these issues, I would like to provide a general description of the current climate for change.

Background

As you know, budgets available for defense modernization over the last several years have been declining. In response, there has been a significant restructuring of the defense industry. Lockheed and Martin Marietta, the
Northrop and Grumman Corporations, Hughes Aircraft Company and General Dynamics Corporation’s Missile Operations, to name a few, have merged in the face of reduced defense spending now and for the foreseeable future. Those companies and others have determined that their health and profitability required more efficient structures, less overhead, and fewer employees. So too has DOD. Yet within DOD itself, which is operating in the same environment of declining resources but without the same business imperatives, no such restructuring of the acquisition community of this magnitude has occurred.

The demand within DOD for available dollars is growing. DOD has said that funds needed for weapons modernization will come, in part, from acquisition reform initiatives and infrastructure reductions. However, the significant level of savings has not yet materialized. It is clear there is a significant mismatch between desired program funding and funds available that should not be perpetuated.

What Is the Acquisition Workforce?

A sound, agreed-upon definition of what constitutes the workforce is important for two reasons. It helps set the stage for identifying those individuals and organizations involved in the acquisition process and it is critical in establishing whether and to what extent DOD is making cuts. When measuring cuts on a percentage basis, which DOD has been mandated to do, the larger the baseline, the larger the cuts for any given percentage.

The smallest universe I am aware of that defines DOD’s acquisition workforce is the 46,500 people DOD includes in its estimate of personnel associated with infrastructure. A second definition is those individuals covered by the Defense Acquisition Workforce Improvement Act (DAWIA) of 1990. The DAWIA workforce in fiscal year 1994 was about 114,000. About 98,000 of these were civilians.

A third definition is based on the DOD instruction that defines an acquisition organization as one whose mission includes planning, managing, and/or executing acquisition programs that are governed by the DOD 5000 series of regulations. In our November 1995 report, we pointed out that the workforce associated with those organizations in 1994 was about 464,000, of which about 398,000 were civilians.

In its plan on workforce downsizing recently submitted in response to section 906 of the Fiscal Year 1996 Defense Authorization Act, DOD used a fourth definition. This definition includes acquisition organizations, minus depot trade skill personnel.

DOD states that its workforce in the first quarter of fiscal year 1997 was comprised of about 382,420 military and civilian personnel, using the same definition we used in our 1995 report. DOD has stated its intention to develop another definition of the acquisition workforce. If in doing so, however, the baseline changes, it may be necessary to calculate future cuts differently.

Finally, I should point out that these definitions may not include all of the organizations within the services that establish requirements to start new programs—groups with a significant impact on the acquisition process. We do not know how many additional people this would entail.

Managing the Acquisition Workforce

In our November 1995 report on selected aspects of DOD’s acquisition workforce, we compared civilian acquisition workforce levels with procurement budget funding. Figure 1 provides an update of that comparison.
As you can see, the number of individuals involved first increased and then decreased during the period from 1980 to 1994, roughly tracking DoD’s budgets during that period. In 1994, a year that roughly matched DoD’s budget level in 1980, DoD’s civilian acquisition workforce was 12 percent smaller. Since 1994, DoD has continued to reduce its civilian workforce. At the time of our 1995 review, DoD officials stated that it would be possible to again see increases in the acquisition workforce with any increases in the defense procurement budget.

In our 1995 report, we found that the personnel reductions did not result in a commensurate decline in civilian payroll cost. The average annual payroll costs for civilians in acquisition organizations was about $20 billion in 1980 and in 1994, measured in 1996 constant dollars. The higher per capita costs were due to several factors. There was a significant decline in blue collar workers and an increase in white collar employees.
In addition, DOD officials stated that civilian payroll costs increased because of the advent of locality pay and changes in grade structure.

We also looked more closely at two occupational categories in DOD’s acquisition workforce—engineers and computer specialists. These groups increased from 1980 until 1990 and then decreased from 1990 until 1994. During the period of decrease, we found that contracts for these services were increasing. To the extent that DOD was contracting out for services its own personnel formerly provided—in essence, outsourcing—savings from reducing those positions would be offset. In general, our work on outsourcing shows that there is reason for caution about whether the magnitude of hoped for savings can be achieved.

Finally, despite the declines in both the defense procurement budgets and the civilian workforce since 1990, the number of acquisition organizations remains relatively constant. Each acquisition organization maintains similar occupational fields in common areas such as personnel, budgeting, computing specialists, and contracting. Many other duties performed in these occupations are not unique to an acquisition organization’s mission. As a result, there may be significant opportunities to improve efficiencies in these areas.

In one sense, the consistency in DOD’s acquisition structure may reflect the incentives underlying the process by which DOD acquires systems. Despite the many reform initiatives adopted by DOD over the last several years, many of which represent improvements, the basic incentives in weapons acquisition to downplay risk and present optimistic assessments of cost, schedule, and performance still exist. Putting in place incentives and performance indices that drive DOD acquisitions to be more efficient and effective, in other words, to change the culture, should go hand in hand with a more efficient structure that can operate successfully with a reduced force and, perhaps, result in better outcomes.

Let me turn now to those outcomes.

**The Need for Better Acquisition Outcomes**

DOD’s acquisition process has provided the United States with military weapons that no other country is in a position to challenge. Yet, despite a number of initiatives to improve the process, the acquisition of these weapons has been and, in many cases continues to be, fraught with significant problems. Weapon systems cost more and take longer to field than expected, encounter performance problems, and are often difficult to
produce or support. Stretching out production of proven systems to fund new starts or going into production with unproven systems are conscious decisions that contribute to these problems. These outcomes put significant pressure on the efficient use of resources. Thus, the goal of improving acquisition outcomes is perhaps more important today than ever. Understanding the factors that drive those outcomes is critical in working toward this goal.

Acquisition Outcomes Are Accompanied by Persistent Problems

At the aggregate level, a systemic problem with weapon acquisitions has been described as “too many programs chasing too few dollars”. We first reported on this issue in 1984. At that time, our analysis showed that from 1963 to 1983, the Congress provided an average of 32 percent more in appropriations for weapons than projected in DOD plans, even though the numbers of weapons DOD procured were less than anticipated. In the late 1980s, we estimated the mismatch between DOD’s program estimates and estimated appropriations to be $553 billion over a 5-year period. In 1995, we estimated this mismatch could exceed $150 billion over a 5-year period. It is still a problem today, as evidenced by repeated delays in DOD’s projected buildup of procurement funding, illustrated in figure 2.
To illustrate, assume that a weapon system was approved to begin low rate production in fiscal year 1995 on the basis that the projected funding increases would support full rate production in fiscal year 1998. As you can see, as fiscal year 1998 approached, the projected funding increases did not materialize. Consequently, the program started in fiscal year 1995 would have to continue in low rate production, along with other programs, to fit within available funding for fiscal year 1998.

Despite the chronic nature of this funding mismatch, DOD continues to (1) generate and support acquisitions of new weapon systems that will not satisfy the most critical requirements at minimal cost and (2) plan on the availability of more procurement funds than can be reasonably expected to be in future budgets. For example, we have reported that DOD is proceeding with major investments to improve air power capabilities.
without clear evidence that all of the programs are justified. Some of these programs will add only marginally to already formidable capabilities; in some cases viable, less costly alternatives exist. As a case in point, we have reported that the Navy's F/A-18E/F program will result in an aircraft whose operational capabilities will only be marginally improved over that of the F/A-18C/D model. Yet, the C/D model would cost almost $17 billion less (in fiscal year 1996 dollars) in recurring flyaway costs for the purchase of 660 aircraft.

DOD's force modernization plans are based on several assumptions that we believe are unlikely to materialize fully. These assumptions include:

- Procurement funding levels will rise to $60.1 billion in fiscal year 2001—over 40 percent higher than the fiscal year 1997 procurement budget.
- Significant savings will result from base closures, other infrastructure reductions, and outsourcing many support activities.
- Significant savings will result from reforming the defense acquisition system.

On individual acquisition programs, familiar problems still add billions of dollars to defense acquisition costs. Problems persist regarding (1) questionable requirements and solutions that are not the most cost-effective available; (2) unrealistic cost, schedule, and performance estimates; (3) questionable program affordability; and (4) the use of high-risk acquisition strategies. Over the years, we have observed that, while a small number of systems reach the field as unqualified successes and a small number are canceled, most weapons reach the field but cost more, take longer, and are often harder to support than expected. Generally, they represent a significant improvement over those weapons they replace, but it is not uncommon for them to have performance shortfalls or to require expensive, time-consuming modifications to achieve the required performance. These outcomes are impervious to different reforms, contract types, contractors, acquisition strategies, weapon types, critics, military services, administrations, and Congresses.

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3Navy Aviation: F/A-18E/F Will Provide Marginal Operational Improvement at High Cost (GAO/NSIAD-96-98, June 18, 1996).

4Recurring flyaway costs include costs related to the production of the basic aircraft and do not include all procurement costs.

To the extent these problems increase the costs of individual programs, they exacerbate the aggregate funding mismatch that already exists. DOD usually resolves these funding mismatches—whether stemming from across-the-board cuts in defense spending, the unanticipated start of a new program, or cost growth—by stretching and reshuffling programs to fit new funding levels. For example, we have recently reported that DOD has inappropriately placed a high priority on buying large numbers of untested weapons during low-rate initial production to ensure commitment to new programs and thus has had to cut by more than half its planned full-rate production for many weapons that have already been tested. The costs for 17 of 22 full-rate production systems we reviewed increased by $10 billion beyond original estimates due to stretching out the completion of the weapons' production.

Outcomes Are the Consequences of an Underlying Culture

While occurrences such as performance shortfalls, schedule delays, and cost increases are frequently cited as the major problems in weapon acquisitions, we believe that they are largely the consequences of a prevailing culture. This culture can be defined as the collective behavior of the various participants in the acquisition process and the forces that motivate their behavior. In fact, the process may be more realistically portrayed as the interaction of its participants than the methodological procedure depicted on paper. This culture has evolved as the acquisition process has become a vehicle for meeting the diverse needs of its participants.

While participants may see their individual needs as aligned with the national interest, collectively, these needs create incentives for pushing programs and encouraging undue optimism, parochialism, and other compromises of good judgment. Under these circumstances, the inevitable performance problems, cost growth, schedule slippage, and difficulties with field support cannot be written off as mainly the result of errors or lack of expertise. Rather, these problems have been the undesirable, but apparently acceptable, consequences of the process. They persist not because they are overlooked or underregulated, but because they enable more programs to survive and thus more needs to be met. Over time, the threat and the ability of weapon programs to help participants achieve their own goals have institutionalized a culture that prefers continuing a program over terminating it and hinders making difficult trade-offs to alleviate cost, affordability, duplication, risk, and logistic supportability.

concerns. Collectively, these needs shape the cultural problem, for they cannot be easily met without an ample supply of programs.

The traditional difficulty the acquisition process has had in dealing squarely with affordability limitations is a case in point. In a collective process that favors compromise, decisionmakers have preferred to find ways to afford individual programs rather than making difficult decisions between programs that would result in not starting or terminating some. The result has been to sustain more programs at lower funding levels rather than to fully fund fewer programs. Program sponsors are motivated to make optimistic cost assumptions and to reduce quantities, program scope, or prolong the schedule to avoid cancellation. Although these actions do not solve the long-term affordability problem, they lessen the need for decision-makers to make difficult choices among programs. Collectively, they provide insights as to why the production rates of mature programs are lowered to make room for new production of immature weapons.

The seeds of weapon system problems can often be traced to the very beginning of the acquisition process. In addressing mission needs, service organizations propose programs that perpetuate their existence and oversell the programs to ensure their survival. Predictably, programs begin as parochial solutions embodying highly optimistic estimates. If the proposing organizations were to act more objectively, they could doom their own programs and jeopardize their own existence. The decisions made in justifying a program are crucial because they largely determine the eventual performance, schedule, and cost of the weapon system. An approved requirement embodies how a weapon is to perform its mission and often the specific technical characteristics it is to possess, thereby setting the tone for the remainder of the acquisition.

The parochialism endemic to the services’ structures for developing weapon system requirements tends to narrow consideration of alternatives. The convergence of parochial preferences and the demand for high performance in justifying weapons creates incentives for developing requirements that embody a preferred solution against which alternatives can hardly compete. The result is not necessarily that the best solution to a valid need is selected, but that the preferred solution is successfully justified.

The organizations responsible for developing requirements for new weapons generally represent individual communities, such as infantry,
within the services that analyze their own mission area deficiencies and recommend solutions from within their communities. These organizations, over time, have institutionalized an advocacy for the weapons under their purview and help perpetuate the funnelling of successor weapons into the acquisition process. Under this system for developing requirements, programs are justified on their unique characteristics under the protection of closely-guarded missions, making it difficult to broadly assess which alternative best serves the general defense. Narrow reviews of missions and requirements, together with each service’s reluctance to compromise in design or performance goals for weapon systems, have contributed to the services’ large investment in service-unique weapons that perform similar missions.

As a program proceeds through development, the disposition for sponsors to present program information optimistically and to protect the program against disruption intensifies. This behavior is necessary to overcome the numerous challenges a program faces as it competes for more funds. At the same time, program support grows because more acquisition participants have become active sponsors and because the money spent has built a compelling argument for continuing the program. Together, these factors complement the initial efforts to push the program and begin to pull it through the acquisition process. They enable the program to develop “a life of its own” and to become its own objective. Thus, even when the very underpinnings of a program are badly shaken, strong arguments are made by participants at all levels to continue the program as planned. This is particularly true for programs that have entered the engineering and manufacturing development phase, by which time it is generally conceded that they are committed to production. Ironically, if a weapon has serious problems, they are most likely to surface during this phase—when the program has become virtually unstoppable.

The foregoing does not stem from a pejorative view of individual participants or organizations. Rather, they do what they believe is right given the pressures they face. The difficulty lies in the fact that there is no consensus on what is right. In the absence of such a consensus, the acquisition process serves to satisfy the diverse needs of its participants within the umbrella of providing U.S. forces with the best weaponry. In so doing, the incentives of the process—both positive and negative—favor maximizing programs. Parochialism, optimism, protectionism, and information hoarding are pragmatic responses to these incentives, while cost growth, schedule delays, duplication, and performance problems are the logical consequences. These cultural issues are not unique to DOD’s
we have reported on a similar situation with respect to major acquisitions undertaken by the Federal Aviation Administration.7

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<td>Several attempts have been made to strengthen DOD’s ability to set program requirements and priorities from an aggregate perspective to curb the dominance of the individual service perspective. These include (1) the Goldwater-Nichols Department of Defense Reorganization Act of 1986, (2) the increased responsibilities given to the Joint Requirements Oversight Council, and (3) the establishment of the joint warfighting capability assessment process. Although these efforts have improved DOD’s joint orientation, the individual services continue to heavily influence defense decisions, particularly those related to investments in weapons.</td>
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In its May 1995 report, the Commission on Roles and Missions of the Armed Forces faulted the decision support processes that DOD used to develop requirements and make resource allocation decisions. It cited a need for the Joint Requirements Oversight Council and the Office of the Secretary of Defense staff to address DOD needs in the aggregate. The Commission found that each service was fully engaged in trying to deliver to the commanders in chief what it viewed as the best possible set of its specific capabilities, without taking into account the similar capabilities provided by the other services. We believe that the Chairman of the Joint Chiefs of Staff must be the strong advocate for the joint perspective that the Goldwater-Nichols legislation intended.

In our review of combat air power, we found that DOD had not sufficiently assessed joint mission requirements and was not well positioned to determine the need for and priority of its planned investments. Joint warfighting capability assessment teams have thus far had little impact in identifying unneeded overlaps and duplication in existing capabilities or in weighing the relative merits of alternatives. Assessments that could threaten service plans and budgets are frequently avoided, and the potential effects of program reductions or cancellations on careers, jobs, and industrial base inhibit serious consideration of alternatives.

We also found that not enough information is available above the service levels to weigh individual investments against aggregate capabilities. Consequently, there is little assurance that the decisions to buy or modify air power systems are sound. Aggregate analysis has been limited by

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(1) weak analytical tools and databases, (2) weaknesses in decision-making support processes (such as the Office of the Secretary of Defense’s oversight being limited by information shortages and the limited ability of joint warfighting concerns to influence the requirements for new weapons), and (3) service resistance.

Conversely, much of the information for making decisions on major acquisition programs is developed by the individual services and is limited in scope. The services conduct considerable analyses to identify mission needs and justify new weapons proposals. The needs are not based on assessments of the aggregate capabilities of the services to perform missions and DOD does not routinely review service modernization proposals from such a perspective. Currently, reviews done by the Office of the Secretary of Defense and the Joint Requirements Oversight Council have not provided adequate assurance that there is a valid mission need, that force capabilities are properly sized, and that the most cost-effective alternative has been identified.

DOD’s Planned Restructuring

As you know, DOD was required to submit a plan to reduce and restructure its acquisition workforce in response to Section 906 of the Fiscal Year 1996 Defense Authorization Act. Specifically, the plan was to (1) result in an acquisition workforce that was 25 percent smaller by the end of fiscal year 2000 than it was in fiscal year 1996, (2) eliminate duplication of functions, (3) maximize opportunities for consolidation among DOD’s acquisition organizations and (4) assess specific streamlining and restructuring options. DOD submitted the plan in January of this year and at the request of this Committee, we have just begun an evaluation of it. But today, I can offer some preliminary observations.

It appears that the plan falls short of what is needed.

DOD has presented numbers in the plan that show a declining workforce. The definitional differences I described earlier in my statement could make it difficult to evaluate the extent of any quantitative changes in the workforce. These declines, as we have previously shown, do not necessarily indicate commensurate savings, do not preclude contracting out functions previously performed by government employees, or ensure that organizations and functions have been appropriately adjusted and not just “hollowed out.”
In responding to the legislative requirement to eliminate duplication of functions and maximize opportunities for consolidation among acquisition organizations, the plan includes actions such as base closures and pending plans that will not take effect until after the year 2000. The plan does not assess specific streamlining and restructuring options but rather concludes that DOD’s current efforts are sufficient. It is unclear whether the plan is maximizing opportunities to consolidate or will result in an acquisition workforce and structure that will achieve better program outcomes.

Conclusions

If better program outcomes are desired and persistent acquisition problems are to be alleviated, then the motives and incentives that drive the participants and the process must be realigned to produce such outcomes. Thus, decisions on how to reduce or restructure DOD’s acquisition workforce should, at the same time, alter the status quo and improve outcomes.

Whether DOD’s acquisition workforce and organizations drive the outcomes of the acquisition process or are a reflection of them, they are connected in a way that should be considered in contemplating solutions.

Mr. Chairmen, this concludes my prepared statement. I would be happy to respond to any questions you or other Members of the Subcommittees may have.
Related GAO Reports


Defense Outsourcing: Challenges Facing DOD As It Attempts to Save Billions in Infrastructure Costs (GAO/T-NSIAD-97-110, Mar. 12, 1997).


Defense Aircraft Investments: Major Program Commitments Based on Optimistic Budget Projections (GAO/T-NSIAD-97-103, Mar. 5, 1997).


Navy Aviation: F/A-18E/F Will Provide Marginal Operational Improvement at High Cost (GAO/NSIAD-96-98, June 18, 1996).


Weapons Acquisition: Low-Rate Initial Production Used to Buy Weapon Systems Prematurely (GAO/NSIAD-95-18, Nov. 21, 1994).
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