
Appendix A

The DoD Acquisition System

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Appendix A

The DoD Acquisition System

INTRODUCTION

The time needed to field new technology depends critically on the time taken to complete the acquisition cycle, from defining a requirement to deploying operational hardware. Understanding how new technology becomes incorporated in operational forces requires first understanding the acquisition process, which is the subject of this appendix. This appendix is the basis for the concluding section (The Defense Acquisition System¹) of chapter 8 of the main report.

The purpose of this appendix is to analyze acquisition delays that in turn, delay the introduction of new technology into the field. But, since no single aspect of the acquisition process by itself causes delays, shortening the cycle requires making the entire process more efficient and effective. Therefore, the discussion of acquisition in this appendix takes a broad view.

After first describing the consequences of long acquisition lead times, Appendix A summarizes some studies that have tried to measure the problem. These studies show that the acquisition cycle is not significantly shorter now than it was several decades ago, and in some respects maybe getting longer. The fact that the problem of a long acquisition cycle persists—even with many studies over time identifying many of the same difficulties—is noteworthy.

In light of these findings, the discussion turns to the issue of why defense acquisition problems are so difficult to solve. In particular, it examines the relevance of private sector acquisitions to the Department of Defense (DoD) environment, in view of the marked differences between the two approaches. The remainder of the appendix then analyzes the major defense acquisition problems—together with proposed solutions—that preceding studies have uncovered.

Costs of Delay

For years, defense analysts have been frustrated with the length of the acquisition process. Delays in acquisition lead to lost time in fielding new systems, which threatens our technological lead over the Soviets. Also, the expense of maintaining extended development efforts leads to higher costs. Even more serious than the increased time and cost, according to a Defense Science Board (DSB) panel¹ that studied the acquisition cycle over a decade ago, are the “second order effects” of delays:

- unsatisfactory results, with systems technologically obsolete by the time they are fielded;
- increased technical risk, since system designers attempt to stretch the state of the art as far as they can to avoid such obsolescence;
- loss of flexibility, since the extended approval process makes it difficult to change the design of a system to meet changing perceptions of its need; and
- added complexity, because delays aggravate the tendency to want systems to do “everything.”

Finally, delays lead to even further delays. According to the DSB panel, attempts to fix the problem by requiring earlier and more frequent reviews only serve to extend the front end of the process and make the problem worse. Delays also tend to be self-reinforcing. Costs escalate, forcing programs to stretch out to stay within annual budgetary ceilings. As the expected time for deployment lengthens, planners magnify the anticipated threat, up the system’s requirements, and thereby extend development times further.

Growth in Acquisition Times

Several studies of acquisition lead times have tried to determine how serious delays are, and whether the problem is getting worse. These studies, some of which are summarized in appendix B, have generally examined major aerospace systems. To the

¹Defense Science Board, “Report of the Acquisition Cycle Task Force 1977 Summer Study,” prepared for the Office of the Under Secretary for Research and Engineering, Mar. 15, 1978, p. 53.

extent that the acquisition process and/or the level of technology of aerospace programs is typical of other military systems, their results may be generalized. The studies indicate that the development cycle—especially the portion preceding full-scale development (FSD)—has increased somewhat over time. However, this increase accounts for only a small portion of the program-to-program variation in development time over the years. Moreover, as one of the studies points out, increases in the pre-FSD phase “should not automatically be deemed undesirable,” since these increases were consistently accompanied in the study data by reductions in cost growth, schedule slippage, and performance short-fall.²

These studies found that, once decisions had been made and approvals to proceed had been given, the full-scale development period did not generally lengthen. Based on this finding, one can conclude that increases in technological complexity have not, in and of themselves, extended hardware development. However, production times are increasing as budgetary limitations, coupled with increasing unit costs, reduce the numbers of units purchased per year.

Comparing the increases in decision time to the relative constancy in the length of hardware development, the 1977 DSB study concluded that “it doesn’t take any longer to *do* something; it just takes longer to obtain the necessary approvals and acquire funding to do it and to get to the deployment state once the development is finished.”³ More recent studies have corroborated this finding.

Persistence of Problems

Making the acquisition process more efficient and effective will not be simple, as the Acquisition Task Force of the President’s Blue Ribbon Commission

on Defense Management (the Packard Commission) stated in 1986:

... present procedures are deeply entrenched. Acquisition problems have been with us for decades, and are becoming more intractable . . . In frustration, many have come to accept the ten-to-fifteen year acquisition cycle as normal, or even inevitable.⁴

Shortly afterward, the Center for Strategic and International Studies (CSIS) concluded that:

... the process is in serious trouble . . . [it] has become overburdened with exorbitantly expensive management layers, excessive delays in program decision approval, inordinate program changes, and cumbersome oversight and regulations

These pessimistic outlooks are not particularly new. Studies over the previous decades have identified many of the same problems and even proposed many of the same solutions. However, these solutions have not been implemented—or not sufficiently to keep the same problems from cropping up in the next study.⁵

The possibility certainly exists, of course, that none of these studies identified the real problems, which therefore remain to be addressed. Alternatively, perhaps sheer intransigence and bureaucratic inertia within DoD keep it from substantially improving its operation.

More likely, however, is that many difficulties in defense acquisition stem from factors that are beyond the DoD’s direct control and that no amount of unilateral activity can address. To the extent that such external factors dominate, improving defense acquisition will require large-scale structural and institutional changes that would not be restricted to the Defense Department.

Some of these changes are impossible within our present system of government. Others would inter-

²G.K. Smith and E.T. Friedmann, “An Analysis of Weapon System Acquisition Intervals, Past and Present,” The RAND Corp., R-2605-DR&E/AF, November 1980, p. vi.

³Report of the Defense Science Board, *op. cit.*, footnote 1, p. 35.

⁴*A Formula for Action: A Report to the President on Defense Acquisition*, by the President’s Blue Ribbon Commission on Defense Management, April 1986, pp. 5, 15.

⁵“U.S. Defense Acquisition: A Process in Trouble—The CSIS Defense Acquisition Study,” The Center for Strategic and International Studies, Georgetown University, Washington, DC, March 1987, p. 3. (CSIS has since dropped its affiliation with Georgetown University.)

⁶For example, see “Defense Acquisition: Major U.S. Commission Reports (1949-1988), Vol. 1,” prepared for the Defense Policy Panel and Acquisition Policy Panel of the Committee on Armed Services, House of Representatives, Nov. 1, 1988, Committee Print No. 26. The report was prepared by David Lockwood, Andrew Mayer, and Cheryl Crow of the Congressional Research Service.

fare with different objectives that the Nation has so far—explicitly or otherwise—decided are at least as important as efficient defense acquisition. And still others involve resolving longstanding political disagreements and identifying common ground in the face of seemingly incompatible positions.

PRIVATE SECTOR ACTIVITIES: MODELS FOR DoD ACQUISITION?

Studies

Given the premise that the private sector can accomplish tasks more efficiently and cheaply than the bureaucracy-encumbered Federal Government, previous studies have looked to the private sector to provide a model for improving defense acquisition and shortening the acquisition lead time. In some respects, defense acquisition compares quite favorably to private sector activities. Figure A-1, showing average cost growth of major weapons systems along with that of large, complex civilian projects, shows that in general the major weapons systems do quite well by this *measure*. However, this comparison does not address acquisition time or acquisition procedures, which studies and reports have asserted are far more complex and time-consuming in the government than in the private sector.

The 1977 DSB summer study on the acquisition cycle concluded that the acquisition cycles of commercial aviation programs, unlike those of defense systems, had not lengthened over the preceding two decades. The panel attributed the stability of commercial acquisition programs to their smaller technical steps, a greater degree of concurrency between development and production, and competitive market forces that place a premium on timely delivery.

A later DSB summer study also compared DoD acquisition programs with programs of similar complexity and size in the private sector. The final report of this study⁷ qualitatively discussed differences in program structure and management between the commercial programs and various DoD

programs, but it did not provide a quantitative comparison. Nevertheless, the Packard Commission—perhaps relying on interim results or personal communications with study panelists—represented the DSB study as concluding that each of the commercial programs “took only about half as long to develop and cost concomitantly less” than equivalent DoD programs.⁸ With this premise, along with its own analysis of successful DoD programs that were developed under special streamlined conditions, the Packard Commission concluded that “major savings are possible in the development of weapon systems if DoD broadly emulates the acquisition procedures used in outstanding commercial programs.”⁹ The study went on to characterize those features of successful commercial programs that could be incorporated into defense acquisition: clear command channels; funding stability; limited reporting requirements; small, high-quality staffs; communication with users; and prototyping and testing.

While there are certainly lessons that the private sector can offer the Federal Government—lessons that the Packard Commission sought to uncover—fundamental differences between the government and the private sector must be grasped before any of these lessons can be applied.

Differences in Mission

Private industry exists to make money. Although it is too simplistic to assert that the bottom line dominates all corporate activities—indeed, companies respond to a range of interests and motivations that are not adequately described by focusing on any one measure—the premise underlying the generation of capital for use by industry is that such investments will be profitable. Even if profit and return on investment are not the only relevant indicators, at least they are quantifiable measures of corporate performance.

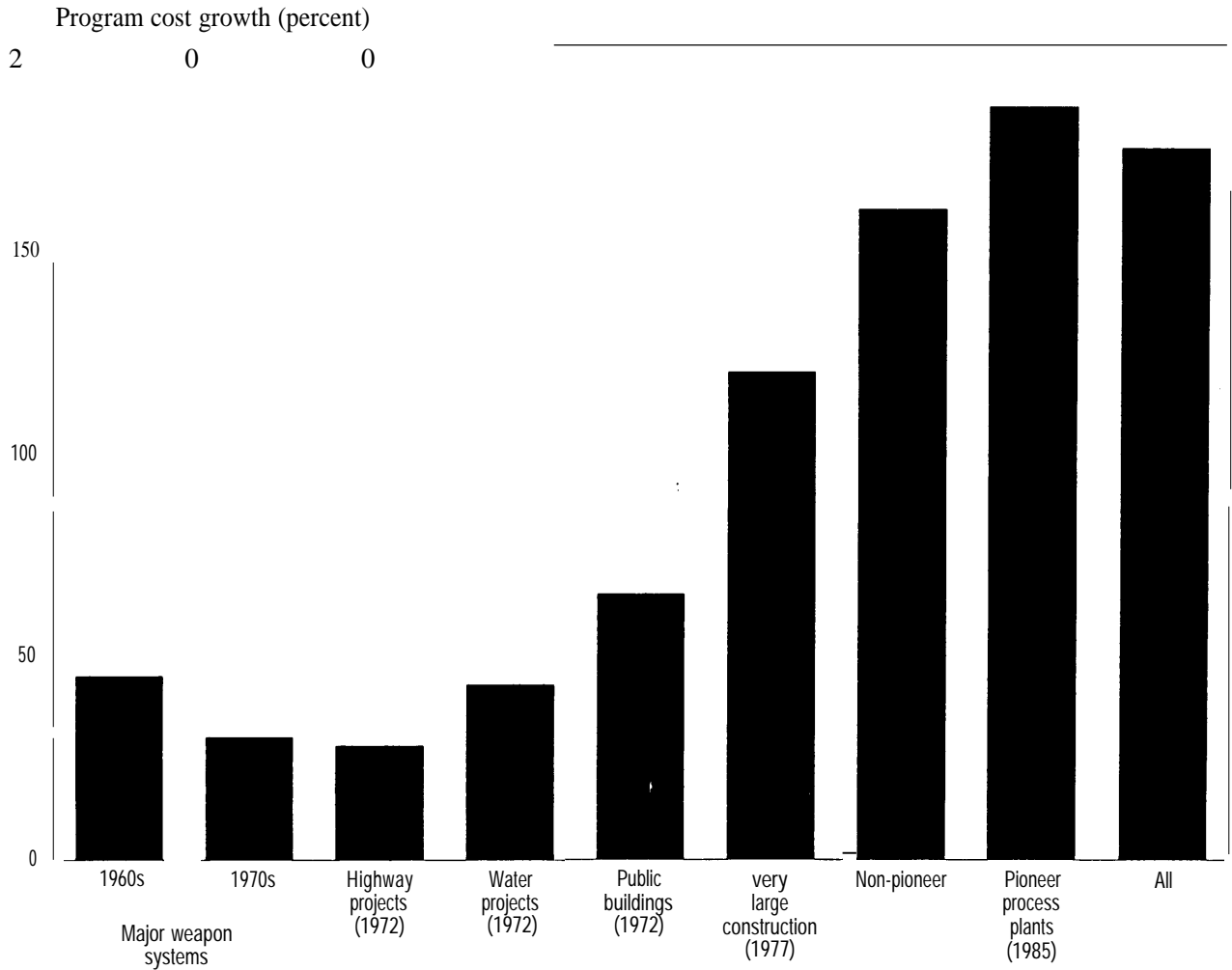
On the other hand, the government’s mission of providing services such as maintaining the common defense has no corresponding measure—at least in

⁷Defense Science Board, “Report of the Defense Board 1985 Summer Study on Practical Functional Performance Requirements,” prepared for the Office of the Under Secretary for Research and Engineering, March 1986.

⁸ President’s Blue Ribbon Commission on Defense Management, Op. Cit., footnote 4, p. 11.

⁹ *Ibid.*, p. 12.

Figure A-1 — Cost Growth In Major Projects



SOURCE: Michael Rich and Edmund Dews, "Improving the Military Acquisition Process-Lessons From RAND Research" (R-3373-AF/RC), A Project AIR FORCE Report prepared for the United States Air Force, February 1986, p. 11

peacetime. As Secretary of Defense Weinberger stated in his fiscal year 1985 Report to the Congress, "We can never really measure how much aggression we have deterred, or how much peace we have preserved. These are intangibles-until they are lost."¹⁰

Moreover, just as there is no single measure of government effectiveness, neither is there a single—or even a consistent—set of objectives that govern

ment seeks to satisfy. For example, pursuit of objectives such as fairness, environmental protection, equal opportunity, and maintenance of America's economic base may conflict with the ability to acquire defense systems efficiently. With government purchases of goods and services constituting close to a tenth of the 1987 gross national product of \$4.5 trillion, the Federal acquisition budget offers considerable leverage for achieving national socio-

¹⁰Caspar W. Weinberger, Secretary of Defense, "Annual Report to the Congress, Fiscal Year 1985," Feb. 1, 1984, p. 8.

economic goals—leverage that legislators have not refrained from using.¹¹

Differences in Accountability and Oversight

Government and industry have very different relationships with their sources of funds. A taxpayer is not the same as a shareholder. The two have very different attitudes regarding the uses to which their funds are put, attaching to the expenditure of public funds a sensitivity—and a standard of accountability—that goes beyond business accounting practices. Consider how easy it is to set compensation for a member of a corporate Board of Directors compared with that for a Member of Congress.

One of the most significant differences between government and private sector activities, the role of Congress, has no parallel in the commercial world. Congress serves as the “court of last resort” for societal issues that cannot be resolved in any other forum. Issues of high congressional visibility are by definition controversial, and it is unrealistic to expect the political process by which these issues are resolved to proceed efficiently or directly. This process, and the annual budget cycle, will always introduce an uncertainty to defense acquisition that commercial programs do not share. As James Schlesinger, former Secretary of Defense, has stated,

This is a society that based its system of government on the Constitution, which calls for a dispersion of powers. That means that everybody has to agree, and under normal circumstances, most people don't agree. As a consequence, we are never going to have the kind of model efficiency in the Department of Defense, or in government generally, that some kind of theorist would want.¹²

Moreover, the U.S. Constitution gives Congress specific responsibilities with respect to defense that extend above and beyond its involvement in other

government activities, making defense activities even less comparable than other government projects to private sector activities.

Differences in Size

● Although individual projects in the commercial sector may rival individual defense programs in size, the DoD as a whole is orders of magnitude larger than most commercial enterprises. The DoD budget for fiscal year 1989 was roughly equal to the combined annual sales of the top four Fortune 500 firms—General Motors, Exxon, Ford, and IBM.

Bureaucratic complexity increases geometrically with size, leading to inherent inefficiencies of scale. To some extent, these inefficiencies are unavoidable. All military/defense work (except that involving nuclear weapons) has been centralized in a single Department of Defense precisely so that all claims on defense dollars could compete against one another. One possible way to reduce bureaucracy would be to fence off elements of what is now the DoD budget, eliminating them from the competition.¹³ This situation existed before 1947, when the Department of War and the Department of the Navy were two independent Cabinet-level departments. Combining them into a single Department of Defense made it harder for each component to operate, but in theory the combination benefits the taxpayer by permitting the allocation of available funds where they can most effectively be used.¹⁴

Differences in “Market Forces”

Ideally in a free market, competition among firms rewards the most efficient ones and penalizes the unsuccessful ones. Duplication of effort—i.e. competition—ultimately serves to improve the quality of those who survive. The Federal Government, on the other hand, is a monopoly; there is only one

¹¹Government purchases of goods and services represented 8.4 percent of GNP in 1987; defense goods and services totaled 6.5 percent of GNP. From “National Income Product Accounts,” distributed by the U.S. Department of Commerce, Bureau of Economic Analysis, July 1988.

¹²“The Second Annual Report of the Secretaries of Defense,” complete edited transcript of a 3-hour conference held at Gaillard Municipal Auditorium in Charleston, SC, on Sept. 30, 1988, produced by the Southern Center for International Studies, p. 24.

¹³This approach is indeed taken, most notably by the recent practice of placing the entire Strategic Defense Initiative Organization out of the ordinary DoD process and making its funds unavailable for any other use. Highly classified or “black” programs also operate outside many of the usual DoD processes; their budgets are protected largely by invisibility.

¹⁴The National Security Act of 1947 created the Air Force as an independent entity and combined it with the Army and Navy to form the National Defense Establishment under a single Secretary of Defense. In 1949, Public Law 81-216 consolidated centralized power under the Secretary of Defense by creating the Office of the Secretary of Defense and replacing the National Defense Establishment with the Department of Defense. Albert G. Dancy, “Department of Defense Research and Development Management,” *National Security*, July/August 1977, p. 349.

Department of Defense. To prevent duplication, the roles and missions of DoD components are designed not to overlap. There are, therefore, no corresponding “market forces” that provide built-in incentives for DoD to improve its performance. Moreover, DoD cannot sell off or disband a military service or agency that does not perform as well as hoped.

EFFICIENCY v. EFFECTIVENESS

Defense analyst Edward Luttwak has stated that, “The great irony is that the defense establishment is under constant pressure to maximize efficiency, and that its leaders believe in that goal when they ought to be striving for military effectiveness—a condition usually associated with the deliberate acceptance of inefficiency.”¹⁵ The nature of defense acquisition imposes specific requirements that go even beyond the disincentives to efficiency facing government activities in general.¹⁶

Level of Technology

Much of the technology used in defense systems is ahead of that in the commercial sector—if indeed any commercial analogs exist at all. Although the defense lead is not as pronounced as it has been—and several areas of defense technology now lag behind their commercial counterparts—military technology must nevertheless often be developed from scratch for a relatively limited production run.

Responsibility for the Defense Industrial Base

Since the Department of Defense is the only customer for sophisticated military systems, producers do not have the option of selling elsewhere should they not be able to sell to DoD.¹⁷ If the

Defense Department wants to maintain a diversity of suppliers, ‘t must buy enough from each of them to keep them in business, even if their products may not be DoD’s first choice. As analyst Edward Luttwak has put it:

When I go shopping for shoes, I can select them on the basis of price and quality. I need not buy more shoes than I want simply to keep shoe-production lines open. Nor do I have to ensure that this or that shoe manufacturer has enough profit to pay for the design of new shoes. Above all, I have no reason to pay more for my shoes to ensure that there is spare capacity in the industry, to meet a sudden need I may have for a hundred pairs of shoes instead of just one. Yet those are all key concerns for defense purchasing.¹⁸

In-depth examination of defense industrial base concerns is beyond the scope of this study. Recent studies looking at the interrelationship between DoD needs and policies and the viability of the defense industry have concluded that there is cause for concern.¹⁹

Low Production Rates

Aggravating the problem of maintaining a viable production base are production rates lower than economically optimal because the required inventories are small and must be divided among firms. To preserve competition, the most efficient producer cannot be permitted to drive the others out of business. Moreover, production rates are typically determined by externally imposed budgetary limits, rather than being derived internally according to what makes sense for the program.

¹⁵Edward Luttwak, “The Price of Efficiency,” *Military Logistics Forum*, July/August 1984, p. 22.

¹⁶Leonard Sullivan, Jr., “Characterizing the Acquisition Process,” paper presented at the Center for Strategic and International Studies Conference on U.S. Defense Acquisition, November 1986, Washington, DC, pp. 15-16. (Commissioned for “U.S. Defense Acquisition: A Process in Trouble,” the CSIS Defense Acquisition Study.) Used by permission of the author.

¹⁷Companies can produce military systems for export, but such exports must be approved by the U.S. Government and are not usually approved for technologies at or above the state of the art available to U.S. forces.

¹⁸Edward Luttwak, “Behind the Pentagon Scandal: The Real Problem is a System That Treats Weapons Like Commodities,” *The Washington Post*, June 26, 1988, p. C-1.

¹⁹See in particular U.S. Department of Defense, “Bolstering Defense Industrial Competitiveness,” Report to the Secretary of Defense by the Under Secretary of Defense (Acquisition), July 1988; and “Final Report of the Defense Science Board 1988 Summer Study on the Defense Industrial and Technology Base,” Report to the Under Secretary of Defense (Acquisition), October 1988.

Unpredictability

There is no way to predict how, where, or when war might break out. Procurement needs are therefore impossible to predict, and shut-down of production lines is risky.

Unacceptability of Failure

The inevitable consequence of competition in the free market is the risk of failure, which entrepreneurs willingly accept as the price for the chance to strike it rich. In the commercial arena failure translates to loss of investment or to reduced earnings. Substantial failure on the part of DoD could have far more severe consequences.

The Department must therefore tolerate a far greater degree of redundancy and risk aversion than a commercial enterprise would. This degree of risk aversion should not apply to individual defense programs; indeed, lack of failures would indicate that the overall program was far too conservative. In the aggregate, however, the Department's attitude toward risk must be substantially different than a corporation's.

Summary

In light of the features that characterize government activities in general and defense acquisition in particular, it may well be true, as defense analyst Leonard Sullivan has concluded, that "many efforts to make acquisition more efficient are simply second-order expedients to paper over largely insoluble first-order problems."²⁰

THE ACQUISITION PROCESS

The Packard Commission's report was not the first attempt to apply lessons from the private sector to defense management. Seventeen years before chairing the President's Blue Ribbon Commission on Defense Management, David Packard (the Deputy Secretary of Defense) established the present

DoD acquisition process to emulate industrial practices of project management and sequential review and approval. The basic process is one of distinct phases separated by decision points or milestones. The Office of the Secretary of Defense (OSD) develops policy for major system acquisition programs and conducts reviews to ensure that these programs respond to specific needs and are managed soundly. The military Services and defense agencies individually (for the most part) identify those needs and define, develop, and produce systems to meet them.

The Defense Acquisition Executive and Defense Acquisition Board

Regulations issued by the Office of Management and Budget and DoD have codified acquisition procedures: OMB Circular A-109, "Major System Acquisitions"; Department of Defense Directive 5000.1, "Major and Non-major Defense Acquisition Programs"; and various implementing DoD Directives and Instructions. These regulations specify the milestones that major defense acquisition programs—those exceeding certain budgetary limits or having particular urgency, risk, congressional interest, or other special significance—must pass. The Secretary of Defense conducts milestone reviews of these programs, unless he delegates review authority to a Service or agency head.

OMB Circular A-109 directs the head of each Federal agency that acquires major systems to "designate an acquisition executive to integrate and unify the management process for the agency's major system acquisitions."²¹ The role of Defense Acquisition Executive is now assigned to the Under Secretary of Defense for Acquisition [USD(A)], an office created on the Packard Commission's recommendation to consolidate responsibility for DoD acquisition. The Deputy Secretary of Defense or the Under Secretary for Research and Engineering had served as Defense Acquisition Executive prior to the establishment of the USD(A). (The rationale for

²⁰Leonard Sullivan, Jr., op. cit. footnote 16, p. 16.

²¹Circular A-109, "Major System Acquisitions," Executive Office of the President, Office of Management and Budget, Apr. 5, 1976, p. 5

establishment of this position is discussed later in this appendix, under “Bureaucratic Paralysis.”)

The USD(A) chairs the Defense Acquisition Board (DAB), a panel of senior defense officials that assists the Secretary of Defense in determining acquisition policy and making program milestone decisions.²² DAB replaced the Defense Systems Acquisition Review Council (DSARC), which had had a similar function but a somewhat different composition. Upon completing each phase of a program’s progress, DAB reviews parameters such as cost, schedule, performance, and affordability. programs whose oversight is delegated to the Services or defense agencies follow a corresponding series of milestone reviews at the Service or agency level. These service reviews are conducted through Service Systems Acquisition Review Councils, or SSARCs.

Program Management

The DoD acquisition process is based on the principle of Program Management, in which one individual—the program manager—is responsible for integrating in a single office the diverse administrative, professional, and technical capabilities required to manage the development and production of a major system. This concept was first formalized—

at least within DoD—by the Air Force Systems Command in the late 1950s,²³ although its basic structure originated within industry.²⁴ The other Services have adopted some version of this process.

The size and organization of program offices vary. The larger ones are self-contained, containing up to several hundred personnel. Others have “matrix” organizations, in which a small core staff is dedicated to each program, while shared support organizations carry out most of the effort.

Under DoD Regulation 5000.1, individual program managers are to be separated from the USD(A) by no more than two intermediate management layers. Program managers are to be given “full authority to manage their respective programs within the scope of established program baselines.” However, besides the program manager and program office,

... there are many additional senior managers and organizations who also have management authority and responsibilities within the overall DOD system acquisition environment. Programs do not belong exclusively to [program managers]. They are DOD and service programs, and represent investment decisions by the [Secretary of Defense] and service

²²The Defense Acquisition Board was established by DoD Directive 5000.49 in 1987. Its permanent members are:

Under Secretary of Defense for Acquisition (chair)
Vice-Chairman of the Joint Chiefs of Staff (vice-chair)
Deputy Under Secretary of Defense for Acquisition
Service Acquisition Executive of the Army (currently the Under Secretary of the Army)
Service Acquisition Executive of the Navy (currently the Under Secretary of the Navy)
Service Acquisition Executive of the Air Force (currently the Assistant Secretary of the Air Force for Research, Development, and Acquisition)
Department of Defense Comptroller
Assistant Secretary of Defense (Production and Logistics)
Assistant Secretary of Defense (Command, Control, Communications, and Intelligence)
Assistant Secretary of Defense (Force Management and Personnel)
Assistant Secretary of Defense (Program Analysis and Evaluation)
Director, Operational Test and Evaluation
Director, Program Integration
Director, Defense Research and Engineering
Chair of the appropriate Committee
DAB Executive Secretary
(Acquisition Committees have been established to assist DAB in various function areas.)

²³Senate Armed Services Committee Staff Report, “Defense Organization: The Need for Change,” Senate Print 99-86, Oct. 16, 1985, p. 531.

²⁴Albert G. Dancy, “Department of Defense Research and Development Management,” *National Security*, July/August 1977, p. 350.

secretaries who are also accountable for their management and decisions.²⁵

Study after study has identified the separation of responsibility and authority—the control exerted over a program’s outcome by people and offices who are not directly accountable for it—as a major problem of the defense acquisition structure. Analysts differ as to the degree to which power and accountability can be brought back together in the defense acquisition environment.

The Planning, Programming, and Budgeting System

One of the most important factors external to the program manager is the allocation of resources for the program. Resource allocation throughout the DoD is conducted via the Planning, Programming, and Budgeting System (PPBS) instituted by Robert McNamara. Prior to McNamara, the Secretary of Defense exerted little control over the budget submissions of the Services. The result was that budget decisions were largely independent of long-term plans, Service budgets were prepared independently of one another with little rationalization across Services, and the Secretary of Defense had no analytic basis on which to challenge Service requests. The situation has been summarized as one in which “requirements planning was being done without explicit regard to cost, and budget planning was being done without explicit regard to need.”²⁶

Although there are formal links between the two, the PPBS is separate from, and largely independent of, the systems acquisition system. In theory, PPBS is supposed to start with assumptions and projections concerning national strategy and future threats (planning) and lead to definition and analysis of alternative force structures and weapons/support

systems, including resource requirements (programming). These programs are then translated into budgetary terms and submitted to Congress (budgeting).

In practice, the process has never worked this clearly. In particular, criticisms leveled at the planning stage are that the absence of fiscal constraint makes the process somewhat irrelevant, and that planning often justifies desired force levels and new systems after the fact, instead of forming the analytical basis for setting those levels and initiating those systems. The programming and budgeting stages of PPBS, from which the actual funding request and ultimately the funds themselves derive, have a more direct impact on DoD activities than the planning phase.²⁷

The relationship between the acquisition system and PPBS has been compared to that between congressional authorizations (programmatic review) and appropriations (budgetary allocation). However, this analog fails to recognize that PPBS alone integrates programmatic and budgetary considerations.²⁸ A better model is that acquisition programs proceed along a “dual track.”

This relationship poses complications for program managers. Under the acquisition system, they report through at most two higher officials to the Under Secretary for Acquisition. Under PPBS, however, their resources are justified through a much more complicated chain of authority, involving a systems command of their military Service, the military headquarters staff of the Service, the civilian Service Secretariat, and the Office of the Secretary of Defense. The PPBS process is managed and overseen by the Defense Resources Board (DRB), which consists of most of the DoD’s most

²⁵Defense Systems Management College, “Introduction to DoD Program Management,” April 1986, p. 25.

²⁶Senate Armed Services Committee Staff Report, op. cit., footnote 23, pp. 484–485. Original sources are “Planning, Programming, and Budgeting System,” by the Joint DoD/General Accounting Office Working Group, pp. 17–18; and (for the quotation) K. Wayne Smith, *Proceedings of the Conference on the Defense PPBS: Past, Present, and Future*, March 1983, p. 50.

²⁷PPBS is also criticized on the basis that DoD officials spend so much time preparing and justifying budget requests that they are not able to devote as much attention as they should to monitoring the actual execution of funds once they are appropriated.

²⁸Edwin A. Deagle, “Organization and Process in Military R&D,” in Franklin Long and Judith Reppy (eds.), *The Genesis of New Weapons: Decision Making for Military R&D* (Elmsford, NY: Pergamon Press, 1980), p. 178.

senior officials and is chaired at present by the Deputy Secretary of Defense.²⁹ The Defense Resources Board, like the Defense Acquisition Board, seines in an advisory role to the Secretary of Defense, who has final authority over both acquisition and PPBS activities.

The directive implementing the PPBS specifies that coordination between the acquisition process and the PPBS is achieved through common members of the Defense Acquisition and Defense Resources Boards and “by the requirement to develop an acquisition strategy for all major systems.”³⁰ The acquisition strategy is the basis of a program manager’s system acquisition plan. Various milestones identified in the acquisition strategy tie into the PPBS process; approval will not be given for a program to proceed to a new acquisition phase unless its sponsoring Service or agency has planned for the program in its budget request through PPBS.

Despite the ties between the two, the relationship between acquisition and PPBS has been controversial, especially concerning which path should “have the last word.” According to a House Armed Services Committee report, Richard Godwin, the first USD(A), proposed that “once a decision to develop or purchase a system had been made by the DAB it could not be overruled by the DRB,” enabling the acquisition organization to bypass the PPBS.³¹

This proposal was not accepted. On September 1, 1987, Deputy Secretary of Defense William H. Taft IV issued a revised version of DoD Directive 5000.1 stating that significant changes in approved major defense acquisition programs could not be made without prior approval of the Defense Acquisition Executive (i.e., the USD(A)) “unless *made during the course of the Planning, Programming, and*

²⁹Established in 1979 by Secretary of Defense Harold Brown, the Defense Resources Board originally had five formal members, one ex-officio member (Chairman of the Joint Chiefs of Staff), and five associate members. As of July 18, 1988 (according to DoD), it had 21 Permanent Members and 5 “Attendees”:

- Deputy Secretary of Defense—Chairman
- Secretary of the Army
- Secretary of the Navy
- Secretary of the Air Force
- Chairman, Joint Chiefs of Staff
- Under Secretary of Defense (Acquisition)
- Under Secretary of Defense (Policy)
- Department of Defense Comptroller
- Assistant Secretary of Defense (Command, Control, Communications, and Intelligence)
- Assistant Secretary of Defense (Force Management and Personnel)
- Assistant Secretary of Defense (Health Affairs)
- Assistant Secretary of Defense (International Security Affairs)
- Assistant Secretary of Defense (International Security Policy)
- Assistant Secretary of Defense (Production and Logistics)
- Assistant Secretary of Defense (Reserve Affairs)
- Assistant Secretary of Defense (Special Operations and Low Intensity Conflict)
- Assistant Secretary of Defense (Program Analysis and Evaluation)
- Director, Defense Research and Engineering
- Director, Operational Test and Evaluation
- Director, Strategic Defense Initiative Organization
- Associate Director of the Office of Management and Budget for National Security and International Affairs

Attendees:

- Chief of Staff of the Army
- Chief of Naval Operations
- Chief of Staff of the Air Force
- Commandant of the Marine Corps
- National Security Council Representative

SOURCE: Department of Defense, “The Defense Resources Board,” July 18, 1988.

³⁰Department of Defense, Directive 7045.7, “Implementation of the Planning, Programming, and Budgeting System (PPBS),” May 23, 1984.

³¹House Armed Services Committee, “Report on the Duties and Authority of the Under Secretary of Defense (Acquisition),” Committee Print No. 15, Nov. 16, 1987, p. 29.

³²DoD Directive 5000.1, “Major and Non-Major Defense Acquisition Programs,” Sept. 1, 1987, Section E.3, p. 7 (emphasis added). 5000.1 also states that the Defense Acquisition Executive “shall be promptly notified” in the event of such changes.

*Budgeting System process.*³² Under Secretary Godwin resigned 2 weeks later.

Milestones

Taken in total, the acquisition process consists conceptually of the four activities shown in figure A-2. However, only the lower two—definition of solutions and production of equipment—are specifically associated with new systems. The two upper activities of assessing operational needs and advancing the technology base are ongoing and largely system-independent.

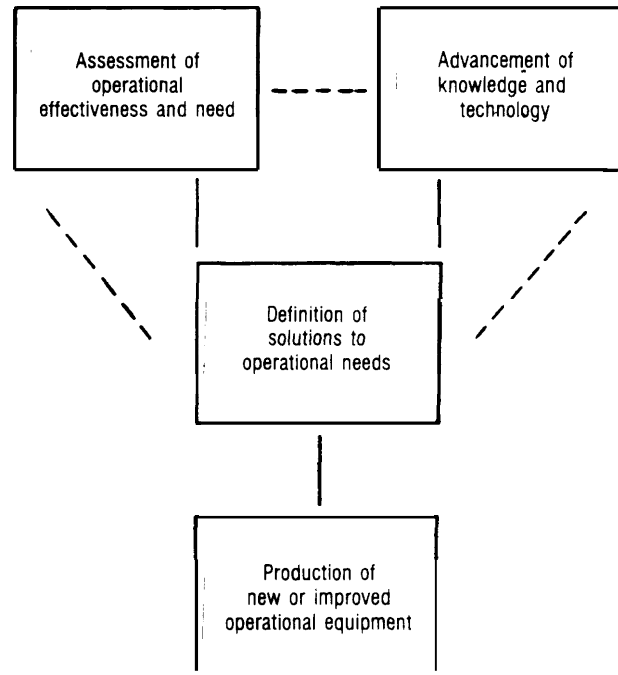
The formal process for major defense acquisition programs—those expected to cross a preset dollar threshold or otherwise qualify as described in the preceding section, “The Defense Acquisition Executive and Defense Acquisition Board”—is normally divided into five phases delineated by distinct milestones. These phases and milestones are diagrammed in figure A-3 and discussed in more detail in appendix C.

The diagram and the description are idealized in that they assume a progressive linear process in which each stage is completed satisfactorily before the next begins. In reality—no matter what the organizational structure—activities in each phase overlap and interact. Research and development is a risky process. Not only are surprises to be expected in utilizing new areas of technology, but they often crop up in what had been thought to be straightforward applications of established techniques.

Appropriateness of Oversight

Through this series of milestone reviews, the OSD exercises oversight over major Service acquisitions. The degree of OSD oversight in the past has varied considerably and remains quite controversial. The DSARC (now DAB) process was originally justified as a means of decentralizing decisionmaking by limiting OSD involvement in major programs to specified milestone reviews. However, the extensive briefings required before DSARC meetings and the

Figure A-2—Components of Defense System Acquisition



SOURCE: Alexander Kossiakoff, “Conception of New Defense Systems and the Role of Government R&D Centers,” in Franklin Long and Judith Reppy (eds.), *The Genesis of New Weapons: Decision Making for Military R&D* (Elmstord, NY: Pergamon Press, 1980), p. 67.

need to respond to OSD concerns has led to nearly continuous OSD involvement.³³ While some criticize this situation as OSD “micromanagement,” others support a significant role for OSD. According to the General Accounting Office,

Critics of the system fail to realize that program managers are responsible for expenditures involving billions of dollars in public funds and that a system of checks and balances is essential.³⁴

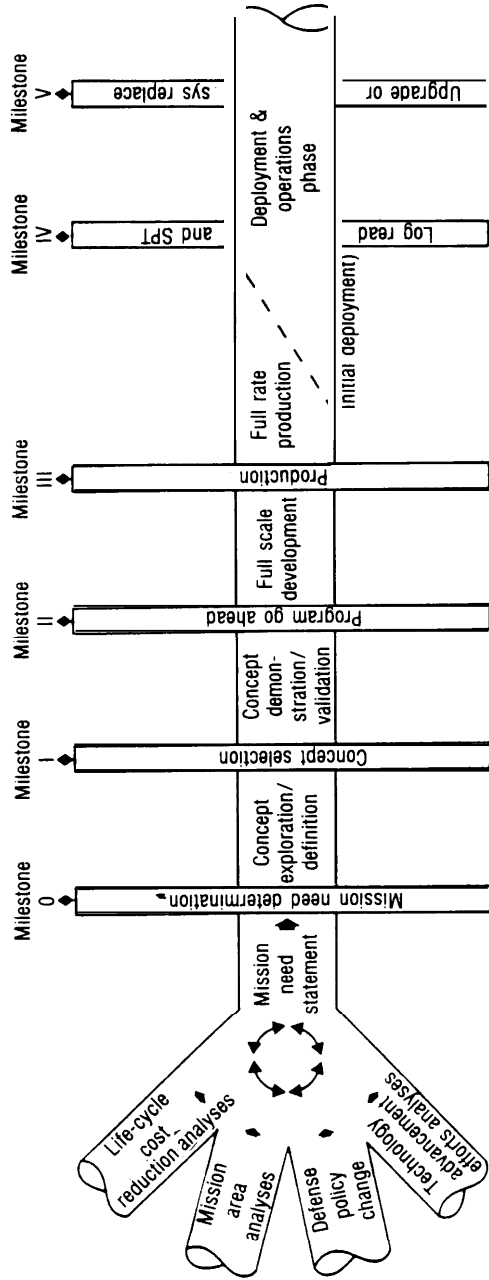
GAO further concluded that micromanagement is difficult to define: “There exists no clear distinction of where appropriate management surveillance ends and interference in day-to-day operations begins.”

The 1977 DSB study determined that “the DSARC, OMB (Office of Management and Budget),

³³Franklin Long and Judith Reppy, “The Decision Process for U.S. Military R&D,” in Kosta Tsipis and Penny Janeway (eds.), *Review of U.S. Military Research and Development, 1984* (Washington, DC: Pergamon-Brassey’s, 1985), p. 14. Original citation on this point is to Acquisition Advisory Group, *Report to the Deputy Secretary of Defense*, Sept. 30, 1975, vol. 1, p. 23.

³⁴General Accounting Office, “A Critique of the Performance of the Defense Systems Acquisition Review Council: Billions in Public Funds Involved,” PSAD-78-14, Jan. 30, 1978, p. i.

Figure A-3—Life Cycle of Major System Acquisitions



SOURCE: Defense Systems Management College, unpublished materials.

and PPBS processes are reasonable with respect to the provision of external review and control over acquisition program budgeting and management.”³⁵ However, the study panel did identify weaknesses in the process that lead to delays. In particular, it worried that annual budget deliberations, and the ease with which unfavorable decisions in one venue could be reopened in another, had unnecessarily extended the “front end” of the cycle. Moreover, the study predicted that things were likely to get worse unless changes were made.

It is certainly true that the DAB oversight process and the PPBS process—both inherently bureaucratic, both involving the participation of a great many people, and both having significant impact on programs—pose problems for the program manager. Commenting on the 1977 study, one analyst agreed that “the endless sequence of reviews, interventions, and delays caused by the struggle for access to decisions both within and outside the Pentagon is a program manager’s nightmare.”³⁶ However, this individual disagreed with the DSB study’s particular recommendations for streamlining the initial stages of the cycle. Although “compression of the front end of the acquisition cycle would be a program developer’s dream,” he argued, “to all the other participants in the process—OSD, OMB, and the Congress—it would be a nightmarish return to all the evils which brought McNamara to inject OSD forcefully into the process in the first place.”³⁷

ANALYSIS OF THE ACQUISITION PROCESS

Problems in defense acquisition can be separated into a number of categories, including program variability (sometimes called program instability); the requirements generation process, including the process by which resources are allocated and weapons systems selected; bureaucratic paralysis; inappropriate organization of the defense procurement system; and the quality of and incentive structure facing acquisition personnel.

Program Variability

Constant changes in defense acquisition programs—and the ensuing inefficiencies, cost increases, and delays they cause—have become the rule. According to a study by the Center for Strategic and International Studies,

Few, if any, defense acquisition programs follow either the course for which they were originally planned or any other stable pattern of development or production. Many purists refer to this real-world phenomenon as program instability—a term that captures their frustration, but not the facts of the complex legislative/executive system.³⁸

Program variability, the more appropriate term used by the CSIS study, results from a number of factors: the requirements process; the risks inherent in developing new technology; the political/budgetary process; and personnel turnover. While the disruptions introduced by these factors can be controlled to some extent, their underlying causes cannot be eliminated.

Whereas the unwillingness to reexamine requirements in the light of technological difficulties can drive up the cost and complexity of weapons systems, changing requirements too frequently can make sound management impossible. In the past, according to analyst Jacques Gansler, the military Services have “felt free to change their minds frequently” concerning the requirements and budgets for new systems.³⁹ Now, in a process called “baselining,” internal contracts are developed between program managers and the senior management of their Services concerning the cost, schedule, and performance milestones for new weapons systems. Since changes to the baseline require equally high level review, formalizing a baseline represents an attempt to reduce the amount of change that programs undergo within DoD.

In practice, however, baselining requires that the program manager have the authority to reject changes to his or her program that are imposed from

³⁵Defense Science Board, *op. cit.*, footnote 1, p. 66.

³⁶Edwin A. Deagle, *op. cit.*, footnote 28, p. 175.

³⁷*Ibid.*, p. 176.

³⁸“U.S. Defense Acquisition: A Process in Trouble—Acquisition Study, The CSIS Defense,” *op. cit.*, footnote 5, p. 32.

³⁹Jacques Gansler, “Improving Weapons Acquisition,” *Yale Law and Policy Review*, vol. V, No. 1, Fall/Winter 1986.

BoxA—Concurrency¹

One method that has been used to shorten acquisition times is to overlap some of the phases in the process, specifically those of full-scale development and procurement. In highly concurrent programs, production starts well before full-scale development is completed on the assumption that, although changes will inevitably be made as development proceeds, it will be possible to accommodate these changes without disrupting production. Overall, a significant amount of time can be saved.

Besides shortening the time needed to field new systems, concurrency can in principle achieve cost savings and management efficiencies because reduced development time means lower overhead and more continuity and stability in the labor force. Concurrency can also reduce program changes that would otherwise force cost increases and delays. However, the principal risk of increased concurrency is that significant problems uncovered after production has begun may necessitate major design changes, forcing extensive rework on completed systems. These changes lead to cost overruns and schedule slippages, countering the very goal of concurrency in the first place. If adequate solutions cannot be found, the program must accept diminished technical performance or even face cancellation and the consequent writeoff of sunk costs.

Concurrency has historically been emphasized during wartime or periods of national emergency (e.g., depth charges developed in World War I, the Manhattan Project in World War II, the missile programs undertaken in the 1950s, and "smart" weapons developed for use in Vietnam). But, until the 1960s, concurrency was rare in peacetime defense acquisition programs. Since then, the practice has gone in and out of favor as the time savings have been seen to outweigh, or conversely not to justify, the risks. Problems encountered with systems developed in a highly concurrent manner in the 1960s led DoD to establish a "fly before buy" system that emphasized prototype development and testing prior to production decisions. The 1977 DSB study nevertheless concluded that "the policy of 'no concurrency' is being applied too rigidly and is inefficient and costly in many cases."²

Despite this recommendation, pressures against concurrency appear to be increasing after major problems were encountered with two recent weapons systems, the B-1 B bomber and the Division Air Defense (DIVAD) gun, developed in a highly concurrent manner. The Packard Commission has urged that prototypes be built and tested before full-scale development, let alone production, begins.³

The current regulatory and legislative environment provides no clear direction concerning concurrency. While existing DoD regulations do not prohibit and in places encourage concurrency, legislation has constrained it. On one hand, Directive 5000.1 states that "commensurate with risk, such approaches as . . . reducing lead time through concurrency. . . shall be considered and adopted when appropriate."⁴ On the other, the 1987 Defense Authorization Act stated that "a major defense acquisition program may not proceed beyond low-rate initial production until IOT&E (initial operational test and evaluation) of the program is completed." This Act also stressed competitive prototype development that will likely have the effect of inhibiting concurrency.⁵

In attempting to determine the effects of concurrency, the DSB study found that "there is no convincing evidence that concurrency necessarily adversely affects program outcome in terms of cost, performance, or field utility." Therefore, the blanket ban on concurrency should be eliminated since "the acquisition time span . . . can be minimized if concurrency is properly employed."⁶ A Congressional Budget Office study 10 years later found that "no strong relationship exists between concurrency and schedule delay" but that "a modestly stronger relationship exists between concurrency and cost growth." The more highly concurrent programs experienced higher cost growth.⁷

¹Much of this discussion is drawn from the Congressional Budget Office (CBO) publication "Concurrent Weapons, Development and Production," August 1988.

²Defense Science Board, "Report of the Acquisition Cycle Task Force 1977 Summer Study," prepared for the Office of the Under Secretary for Research and Engineering, Mar. 15, 1978, p. 53.

³President's Blue Ribbon Commission on Defense Management, *op. cit.*, footnote 4, p. 19.

⁴DoD Directive 5000.1, Section D.9.b, Sept. 1, 1987, p. 5.

⁵Congressional Budget Office, *op. cit.*, footnote 1.

⁶Defense Science Board, *op. cit.*, footnote 2.

⁷Congressional Budget Office, *op. cit.*, footnote 1, p. ix. CBO defined the degree of concurrency as the fraction of the initial operational test and evaluation that occurred after the decision to proceed with low-rate initial production. The congressional ban on concurrency prohibits the *full-rate* production decision from occurring during this period.

sources outside the program. Granting this degree of authority would be extremely difficult within the present DoD environment. For example, although specified in a program's baseline, one of the most important program parameters—its budget—is ultimately established by a PPBS system external to the acquisition process. Moreover, it is often changed (i.e., annually) by Congress.

Increased emphasis on technology demonstrations and prototyping can be expected to help control program changes caused by technological risk. If, however, such demonstrations further extend the entire cycle, they could increase uncertainties due to changes in the threat and in projected program budgets.

Changes imposed on defense acquisition programs by the political process—e.g., battles over program budgets, policies, and control—originate at every level of activity within DoD, the executive branch of government, and Congress. The key difficulty here is politics—not in the pejorative sense of backroom deals, influence trading, and pork barreling that the word has come to acquire. but in its true definition as a struggle between competing interests. Examining major strategic weapons systems such as the MX and Trident, analyst Edwin Deagle illustrates the larger context in which defense acquisition fits:

The MX and Trident are not simply expensive programs deserving of careful management. They are also: major commitments to specific solutions of the complex problem of strategic nuclear deterrence; affirmation of roles and missions within and among the military services; explicit choices about the importance of strategic weapons relative to other military activities: explicit choices about the importance of strategic weapons relative to other public initiatives such as urban housing, national health insurance, energy security or middle class tax relief: and, by no means least commitments to particular commercial enterprises which, as a result, will employ people in specific places. In short, these weapons systems and the R&D process which yields them lie in the center of the competition among values, purposes, and programs inherent in the

process of public choice—by nature a political process. Organizational and procedural imperatives designed to support this political process are likely to be vastly different from, and perhaps in conflict with, those designed to yield efficient management.⁴⁰

Granted, the programs Deagle has chosen to discuss are among the largest and most politically visible of defense programs. Nevertheless, the point he makes—that political judgments are inherent in resolving competing demands on public resources—applies to all defense programs.

Even without political influences, change is inevitable:

Development will always be difficult, uncertain, time consuming, and more expensive than expected. Threat, doctrine, and resources will change, requiring constant reevaluation of the system. **That is how it should be, and efforts to isolate the acquisition management process from such pressures in the name of coherent and sound management are sure to introduce crippling distortions into the political structure of the process.**⁴¹

The fact that the political process necessarily introduces uncertainty into defense acquisition does not, however, mean that nothing can be done to mitigate the effects of this uncertainty. Actions within both Congress and the DoD can improve the coupling between the political and the acquisition processes,

Congress

The” level of congressional oversight—many would say micromanagement—has risen dramatically over the past 20 years. A few statistics reflect this growth: In 1970, the defense authorization act was 9 pages in length and was accompanied by a 33-page conference report. Congress made 180 adjustments to the authorization, and 650 to the appropriations bill, during that year's budget review. By 1985, the authorization act grew to 169 pages and the conference report to 354; congressional adjustments to defense authorization and appropriation legislation totaled 1,315 and 1,848, respectively.⁴²

⁴⁰Edwin A. Deagle, *op. cit.*, footnote 28, p. 162.

⁴¹*Ibid.*, p. 179. *Emphasis added.*

⁴²Senate Armed Services Committee Staff Report, *op. cit.*, footnote 23, p. 591.

Today, 29 committees and 55 subcommittees oversee defense activities in both houses, and over 20,000 congressional staffers and employees of congressional agencies deal with some aspect of defense.

This growth has not occurred in a vacuum. The DSB Acquisition Cycle task force concluded in 1978 that:

A significant portion of the “blame” for this increasing congressional “micromangement” can probably be laid to the fact that the DoD has exhibited a chronic inability or unwillingness to adequately forecast program, cost, schedule, and performance information and projections to the Congress.⁴³

The Defense Systems Management College, the organization that trains DoD program managers, includes the following interchange in a discussion of congressional oversight:

Senior DoD acquisition official, appearing before an authorizing committee:

“Gentlemen, what we’d like to know is when are you going to stop micromanaging our business?”

Senior, veteran professional staff member of that committee:

“Sir, when you start.”⁴⁴

Congressional action on the defense budget is often an extension of debates conducted in other arenas.

Much of the so-called Congressional micromangement is, in fact, stimulated by factions within the Pentagon hying to reverse, through selectively leaked information to Congress, unpalatable decisions made within the executive branch. In this sense many Congressional actions on weapons programs are an extension of internal decision making by the Department of Defense.⁴⁵

Underlying much of the congressional interest in details of the defense budget is, of course, its direct impact on a great many congressional districts—those having major defense contractors, defense bases, or large numbers of defense workers. Although Members of Congress are responsible for

national policy, they are accountable to their individual constituents. It should not come as a great surprise that Members of Congress therefore look out for their constituents’ interests in the course of their legislative responsibilities. To put it bluntly, they have every incentive to pork barrel. Damaging as this practice may be on the national level, it is difficult to see how changes in congressional procedure can substantially reduce it, given the underlying incentives built into the United States Constitution.

In specific cases where national consensus exists on a matter of high priority, Congress has shown that it can rise above parochial tendencies. A good example is the recently enacted legislation that will permit the DoD to close down unneeded defense bases. Although every Member of Congress wants to eliminate waste from the defense budget, none considers bases in his or her own district to be wasteful. Moreover, many Members of Congress are convinced that DoD uses base closures to threaten legislators considered insufficiently “pro-defense.”* Therefore, Congress has enacted legislative roadblocks over the past decade or so, effectively making it impossible for DoD to close any bases. To break this impasse, Congress established a commission to draw up a list of bases to be closed on an “all or nothing” basis, forcing any legislator seeking to remove a particular base from the chopping block to torpedo the entire package. By this means, Congress and DoD cut through the storm of political controversy surrounding individual closures.

Congressional review of the defense budget presently deals more with artificial accounting inputs (dollars, personnel slots, buildings, etc.) than with defense outputs (mission capabilities or strategic goals). The inputs are easier to count and to control, and unlike defense mission capabilities they permit comparisons to other programs across the entire Federal Government.

A report to the Senate Armed Services Committee described how the budget request needed to fulfill a particular defense mission—developing the capability to deploy 10 combat divisions to Europe within

⁴³Defense Science Board, *op. cit.*, footnote 1, pp. 63-64.

⁴⁴Defense Systems Management College, “Congressional Involvement and Relations: A Guide for Department of Defense Program Managers,” November 1986, p. 60.

⁴⁵Judith Reppy and Franklin A. Long, “The Decision-Making Role of Congress,” in Franklin Long and Judith Reppy, *op. cit.*, footnote 28, p. 185.

10 days of mobilization—was divided by accounting categories into separate pieces parcelled out among the committee's subcommittees. Although each different piece—storage site construction, spare part supply, updating airlift capability, transporting materials to Europe, etc.—was part of an integrated whole, each was treated as an independent item. Each subcommittee compared the items in its jurisdiction to similar ones wholly unrelated to the mobilization mission. "In a short time, the emphasis on policy implementation of a major defense commitment was lost among thousands of minor decisions on accounting inputs."⁴⁶

Although many have recommended that Congress serve as a board of directors for DoD as a whole, its present budget process tends to push the examination to a much lower level. Moreover, Congress has difficulty entering into a dialog with the Defense Department on strategic objectives because there is no clearly identifiable counterpart within DoD with whom such a discussion can be conducted:

There is no appropriate forum at the OSD [Office of the Secretary of Defense] level in which strategy, policy, and operational concepts and capabilities are fully debated and translated into specific acquisition programs. The thrust of the current process is to concentrate on procurement, management, and allocation of resources for individual systems rather than on the overarching rationale and purposes that define the need for and the operational capabilities of those systems. . . . Ideally, the Joint Chiefs of Staff (as a collective body) and the Secretary of Defense could furnish this longer perspective, but they are hampered by process, schedule, and organization from dwelling on many of these broad operational considerations.⁴⁷

It might be added that much of the "process" keeping these officials from taking a broad view consists of responding to numerous congressional inquiries and directives.

Additional factors complicating congressional review of the DoD budget are major procedural changes that have been introduced over the last 15 years. In 1974, the Congressional Budget and

Impoundment Control Act established a new budgetary process within Congress. Prior to that act, the two-stage process of authorization and appropriation dealt with Federal agencies and programs individually. There was no mechanism whereby revenues and expenditures could be examined across the entire Federal Government. The 1974 Act prefaced a third "budgeting" stage in which Congress establishes income and expenditure targets for the Federal budget as a whole and specifies spending targets in each of 15 mission areas. These targets are supposed to guide, but not formally bind, the authorizing committees. Later in the budgetary cycle, the budget guidelines are reviewed and new targets are specified that are binding upon the appropriations committees.

Under this new process, review and appropriation of the DoD budget takes significantly longer. Final decisions for the defense budget are made by congressional conference committees as (or, in many recent cases, after) the new fiscal year starts, late in the executive branch's budget-formulation process for the following fiscal year. Last-minute changes in the appropriated funding levels require last-minute changes to next year's request and influence planning estimates for the following fiscal year. The Packard Commission found that the timing and scope of changes introduced late in the appropriations process "prevent the DoD from making coherent linkages among the three defense budgets that it manages at any one time—the budget being executed, the budget under review by Congress, and the budget that DoD is developing for the upcoming fiscal year."⁴⁸

The Balanced Budget and Emergency Deficit Control Act of 1985 (Public Law 99-177, more commonly known as the Gramm-Rudman-Hollings Act) placed further constraints on congressional budgetary process. Besides reinforcing the "zero-sum" nature of the Federal budget, the major impact of this legislation was its emphasis on Federal "outlays," or money actually spent, during a fiscal year. The appropriations process prior to Gramm-Rudman-Hollings dealt not so much with actual

⁴⁶Senate Armed Services Committee Staff Report, *op. cit.*, footnote 23, p. 584-585.

⁴⁷U.S. Defense Acquisition: A Process in Trouble—the CSIS Defense Acquisition Study," *op. cit.*, footnote 5, p. 26.

⁴⁸President's Blue Ribbon Commission on Defense Management, "A Quest for Excellence: Final Report to the President," June 1986, p. 22.

spending but with “budget authority,” or permission to enter into contracts that obligate the Federal Government to future expenditures.

Deficits are created not by budget authority but by actual expenditures. Since funds appropriated for different purposes are spent at very different rates, the relation between budget authority and outlays depends on the purposes for which the funds are to be used. Salaries, for example, are essentially spent entirely within the year for which they are appropriated; cutting one dollar of budget authority for salaries will reduce that year’s outlays by a dollar. Funds for building ships, on the other hand, can be spent more than a decade after their appropriation; cutting a dollar off a ship procurement appropriation trims as little as two cents off that year’s outlays.

Due to this variation in outlays versus budget authority, Gramm-Rudman-Hollings outlay controls make it even harder to review the defense budget. Increasing appropriations in one area may require far greater cuts in another to keep outlays from changing.

As a final point concerning the role of congressional “micromanagement,” the prospects for changing the relationship between Congress and DoD to one of greater strategic oversight were damaged by the years of tension and confrontation that existed between Congress and DoD in the early 1980s.

Department of Defense

Actions within the DoD contribute as much to program variability as do those by Congress. Although congressional line item changes certainly complicate program management, changes generated within the many layers of DoD management add significantly to the problem. The cuts that are passed down are due to DoD’s inability to forecast program costs accurately, to defer new starts until sufficient funding to cover the actual (rather than the originally estimated) costs is available, or to elimi-

nate programs—rather than stretch them out—in the event of funding shortfalls.

In 1981, then-Deputy Secretary of Defense Frank Carlucci offered 32 management initiatives to improve the defense acquisition process, with number 4 being to “increase program stability in the acquisition process.” Program stability was also one of six areas cited for high-level management attention in 1983. Nevertheless, a General Accounting Office (GAO) review of the Defense Acquisition Improvement Program in 1986 found that “despite large budget increases, DOD has reported essentially no progress in stabilizing major weapon programs.”⁴⁹ GAO found that although the impact of underfunding programs is “well-recognized and documented, a workable and effective method for matching DoD’s needs with budgetary constraints has not been developed.”⁵⁰ The Office of the Secretary of Defense, according to GAO, “has reported that the inability to cancel low priority programs continues to be a fundamental obstacle to improving program stability.”⁵¹

Limiting the number of new programs and terminating low priority ones will be required in order to prevent the remaining programs from being underfunded. Although DoD has claimed progress in limiting the number of “major new programs,” GAO found this reduction to be due in part to a doubling of the minimum cost threshold that defines a major system. “Consequently, fewer new starts are considered major under the revised higher thresholds.”⁵² These funding issues are discussed further in the “Affordability” section of chapter 8 of the main report.

Too often, desire for “funding stability” wanes when the possibility of funding growth presents itself. According to the Comptroller General of the United States, the boom and bust cycle that the DoD budget experiences “encourages managers to procure as much as possible when funding is relatively plentiful and not attempt to develop a stable and

⁴⁹General Accounting Office, “Acquisition: Status of the Defense Acquisition Improvement Program’s 33 Initiatives,” GAO/NSIAD-86-178BR, September 1986, p. 10. The 33rd initiative was added in 1984.

⁵⁰General Accounting Office, “Major Acquisitions: Summary of Recurring Problems and Systemic Issues: 1960-1987,” GAO/NSIAD-88-135BR, September 1988, p. 10.

⁵¹General Accounting Office, Acquisition: “DoD’s Defense Acquisition Improvement Program: A Status Report,” GAO/NSIAD-86-148, p. 10.

⁵²Ibid.

realistic procurement plan.”⁵³ Although he doubted that “defense budgets will ever be as stable as DoD managers would like,” the Comptroller General nevertheless argued that steps could still be taken within DoD and Congress to “create as much stability as possible in an environment which will always be uncertain to some degree.”⁵⁴

Personnel Turnover

Another contributor to program variability is turnover in acquisition personnel. Although typical defense programs have lifetimes measured in decades, the average tenure of program managers surveyed by GAO in 1986 was less than 2 1/2 years. Such short tenures make it difficult to increase the authority of program managers because they hinder any attempt to assign accountability. Moreover, they can generate pressures to sacrifice long-term quality for short-term results.

The contribution of high turnover rates to program variability is only one of the many issues concerning the acquisition workforce. Additional issues are discussed in the section on “Acquisition Personnel,” below.

Reducing Program Variability

Analysts disagree as to which of two management failures is the more serious in the light of unexpected change: failure to plan and budget flexibly, or failure to hold to a fixed schedule in the light of performance and budgetary uncertainties. Writing for the CSIS Defense Acquisition Study, Leonard Sullivan notes that acquisition plans during the Reagan Administration “have gone through a boom and bust cycle that totally defies rational planning.” “These gyrations . . . make fixed planning for ‘stable acquisition’ an unachievable ideal.” His conclusion is that “inescapable fluctuations in White House and Congressional budget expectations and tactics demand the development of an acquisition system that

responds resiliently to the inevitable changes in long-range projects in America’s short-range political environment.”⁵⁵

On the other hand, participants in the DSB summer study on Practical Performance Functional Requirements believed that every effort must be made to hold to a fixed schedule in the event of unexpected changes. “Upon commencement of FSED [Full Scale Engineering Development], schedule should be considered as the dominant program driver and the program contracted and funded accordingly . . . In the event that technological opportunities or operational requirements warrant change, block upgrades [deferring a set of changes for a later production series rather than redesigning and/or retrofitting changes into the entire production run] should be the primary solution to avoid schedule delays.”⁵⁶ If a block upgrade is not acceptable, “it’s probably better to terminate the program and begin the process over again.”⁵⁷

Several techniques have been proposed to lessen program variability and/or plan in the face of uncertainty, among them baselining, multiyear budgeting, and increasing management flexibility.

Baselining-The Defense Acquisition Improvement Act of 1986 (Public Law 99-661) mandated baselining for major acquisition programs—a requirement incorporated in DoD Regulation 5000.1 as of September 1987. The Act also requires each military Service to designate selected high priority, major acquisition programs as “Defense Enterprise programs” having streamlined reporting procedures for program managers. For these programs, congress may authorize funding for the full-scale development or production stages “in a single amount sufficient to carry out that stage, but not for a period in excess of five years . . .”⁵⁸ Such multiyear authorizations would eliminate annual congressional reviews for these programs, at least by the Armed

⁵³Statement of Charles A. Bowsher, Comptroller General of the United States, before the Senate Committee on Armed Services, GAO/T-NSIAD-88-18, Mar. 14, 1988, p. 10.

⁵⁴Ibid.

⁵⁵Sullivan, Leonard, Jr., op. cit., footnote 16, pp. 33-35.

⁵⁶Defense Science Board, op. cit., footnote 7, p. 2.

⁵⁷Ibid., p. 74.

⁵⁸10 U.S.C. 2437 (c), as added by Public Law 99-661, Section 906. Quoted in Andrew C. Mayer, “The Defense Acquisition Improvement Act of 1986: An Analysis of Key Provisions.” Congressional Research Service Report 87-733F, Aug. 28, 1987, p. 9.

Services Committees. Four programs—the Army’s Multiple Subscriber Equipment (MSE) and Advanced Tactical Missile System (ATACMS) programs and the Navy’s Trident II missile and T-45 Trainer System programs—have been given Milestone Authorization status by Congress. However, Congress has neither received nor approved the actual authorizations for these programs.

Multiyear Budgeting—Multiyear budgeting goes beyond multiyear authorizations for selected programs to provide authorization and appropriation of the entire Department of Defense budget for periods longer than one year. With a longer planning horizon and less frequent congressional review, the hope is that programs can enjoy greater stability, with congressional oversight directed more towards strategic guidance and away from individual line items. Following the Packard Commission’s strong recommendation, the Department of Defense submitted a 2-year 1988-89 budget to Congress early in 1987.

Biennial budgeting has not been readily accepted by Congress. One reason is obvious—one of the purposes behind biennial budgeting is to lessen congressional influence. The matter is not that simple, however, since Gramm-Rudman-Hollings plays a role. Facing fixed deficit targets for future years, Congress is reluctant to commit itself to future outlays when it has no firm idea of what the corresponding revenues will be. Estimating revenues for the ongoing fiscal year is difficult enough, given their dependence on economic conditions that cannot be predicted in detail. Doing the same thing for future fiscal years becomes highly problematic.

The CSIS Defense Acquisition study points out a number of other practical disadvantages and complications of the biennial defense budget.⁵⁹ Unless implemented government-wide, it would give DoD a preferential status within the executive branch. Government policies and procedures—especially with regard to personnel—emphasize uniformity across the board. If the 2-year cycle enabled the

Defense Department to resist budget cuts, it could come under strong political attack.⁶⁰

Second, while a 2-year budget reduces opportunities for congressional micromanagement, it also restricts DoD’s flexibility. A supplemental appropriation adjusting the second-year amounts would restore some of this flexibility, but it would therefore also reintroduce opportunities for congressional intervention.

The CSIS study goes on to describe timing difficulties that the 2-year terms of members of the House of Representatives and the 4-year term of the President present when coupled with a biennial budget. If the 2-year budget were submitted and approved during a presidential election year, the incoming President would not be able to execute his or her own defense budget for 20 months after taking office. If the budget were submitted and approved in odd-numbered years, Members of Congress running for reelection would be doing so on the basis of defense budget votes made more than a year ago. The CSIS study believed that Members would not want to put themselves in this position. However, the report does not make clear why a Member of Congress would find it much harder to justify a defense budget decision made the previous year on the basis of conditions at the time, than it would be to defend any other decision made during the first year of a 2-year term.

The CSIS study does not discuss the root cause of these timing problems, which is that absolute program stability is fundamentally incompatible with holding elected officials accountable at periodic intervals for their actions. Every time an elected official is replaced, there is—and must be—the opportunity for the new official to change the way things have been done.

There are two ways to handle the timing problem. One is to permit a new President to make significant changes in a previously submitted 2-year budget,

⁵⁹“U.S. Defense Acquisition: A Process in Trouble—The CSIS Defense Acquisition Study,” *op. cit.*, footnote 5, pp. 83-84.

⁶⁰A later study conducted jointly by CSIS and the Johns Hopkins Foreign Policy Institute argued that even if biennial budgeting were not extended government-wide, “defense expenditures are sufficiently different from the balance of federal expenditures to warrant such special treatment.” DoD manages a large capital plant and spends half its budget on the development, maintenance, and manufacture of goods, therefore requiring a longer view than other Federal agencies. See “Making Defense Reform Work: The Project on Monitoring Defense Reorganization,” Harold Brown and James Schlesinger, co-chairmen, a joint project of the Johns Hopkins Foreign Policy Institute and the Center for Strategic and International Studies, Washington DC, November 1988, p. 20.

thereby vitiating the advantages of long-term budgeting. The other is for the new President to leave essentially intact the budget he inherits upon assuming office, concentrating instead on the budgets that he will submit. This latter approach, of course, counts on the new President's successor to respect those future budgets when they extend into a subsequent Administration.

For whatever reason, the first submission of a biennial budget in 1987 for fiscal years 1988 and 1989 did not go far. Neither the House nor the Senate Armed Services Committees authorized very much of the DoD 1989 request. More significantly, the 1988 authorization act specified that "authorizations of appropriations and of personnel strength levels in this Act for fiscal year 1989 are effective only with respect to appropriations made during the first session of the One Hundredth Congress" —i.e., appropriations made that year. The appropriations committees of the House and Senate, even less enthusiastic about multiyear budgeting than the Armed Services Committees, did not appropriate any 1989 funds.

Although no funds were appropriated for 1989 during the 1988 budget cycle, one effect that the 2-year submission did have was to make DoD's out-year plans more visible to Congress than they had been before. Although some might fear that this visibility just gives Congress that much more opportunity to meddle, it is also plausible that improved communication between Congress and DoD might give Congress the confidence in DoD planning it needs to relax its level of "micro-management." Good communication extends the planning horizon, enabling both parties to take a longer view.

Management Flexibility—A further way to reduce the variability of DoD programs is to increase the ability of the DoD to adjust to changing circumstances without having to come back to Congress. Such techniques—which would make DoD management easier just as they would lessen congressional influence—include increasing DoD's ability to

Box B—Multiyear Budgeting and the U.S. Constitution

Multiyear budgeting for the Department of Defense is, to some extent, restricted by the United States Constitution. Article I, Section 8 of the Constitution gives to the Congress the power "To raise and support Armies, but no Appropriation of Money to that Use shall be for a longer Term than two Years."¹ According to the debate surrounding the ratification of the Constitution, this provision reflected the desire of the founding fathers to keep close tabs on the standing military.

The very next paragraph of the Constitution, however, gives Congress the power "To provide and maintain a Navy"² without specifying any time limit for appropriated funds. Presumably this reflects the fact that shipbuilding—even in the 18th century, before the growth of a massive Defense Department procurement bureaucracy—took longer than 2 years.

None of this language would have any effect on a biennial budget cycle. Neither does it affect the authorization process, which is not specifically discussed in the Constitution. Should budget cycles longer than 2 years be desirable, constitutional lawyers would have to answer questions such as how multiyear appropriations for procurement, personnel, research and development, and construction would be affected by these clauses.

¹Article I, Section 8, Paragraph 12.

²Article I, Section 8, Paragraph 13.

transfer money from one program to another (i.e., reprogramming); using funds in one appropriation type (e.g., procurement) for another purpose (e.g., research and development); and including unspecified management reserves in program budgets.

Congress now grants DoD the ability to make some such changes without prior notification of or approval by Congress. However, in other cases, either notification or prior approval of the Appropriations and/or the Armed Services Committees is

required.⁶¹ Furthermore, each fiscal year's budget has associated with it a maximum amount of transfer authority. If the sum total of all reprogrammings subject to the transfer authority limit reaches the maximum, no further reprogrammings can be made.

These requirements, along with the emphasis in DoD budgeting on specific program elements, restrict DoD's ability to respond to changing circumstances. The DSB Acquisition Cycle Task Force pointed out several DoD needs that do not neatly fall within existing line items and that therefore require additional funding flexibility to address:

- Getting started with technology and system experiments in areas that DoD has already decided to submit to Congress in the following year's budget. (This problem would be aggravated by a biennial budget cycle.)
- Purchasing good ideas from the losing bidders in competitions.
- Providing extra support to programs performing better than expected.

The Task Force recognized the belief within Congress that too many reprogrammings were already being used to evade congressional intent. "Negotiating new and higher thresholds will thus require a restoration of DoD's credibility with the Congress."⁶²

The decomposition of the defense budget into different accounting categories restricts DoD flexibility. It also can impede efficient program management objectives such as maintaining a smooth transition from development to production. A DSB Task Force concluded in 1983 that "the Design to Production transition is a process and not a fixed event," and that DoD funding rules prohibiting the use of R&D funds for production make it "very

difficult to apply resources [during full-scale development] to producibility, manufacturing planning, tooling and test equipment and other actions leading to production."⁶³

A Final barrier to sound program management, and the biggest obstacle towards giving program managers greater authority over their own programs, is the lack of management reserves. Although the funds required to fix unexpected problems obviously cannot be estimated for any particular program, they can be determined statistically in the aggregate. Supervisors who oversaw several program managers, if provided with these reserves and the authority to allocate them, would be able to address problems as they arose. According to the Acquisition Cycle Task Force,

... the important thing to keep in mind is that this is not "contingency" money that is simply budgeted "in case something happens." It is a necessary management resource that should be provided because it is well known, and experience amply demonstrates, that something *will* happen and it must be fixed quickly if the program is to remain on schedule and within "planned for" costs.⁶⁴

However, the intense competition for funds within DoD, as well as the degree of scrutiny applied to defense budgets by Congress, both mitigate against providing such reserves. In an environment where there are already far more claims on defense dollars than available funds, there is every incentive to underestimate the costs of programs when Service budgets are prepared. Even if contingency reserves are initially provided for, they are one of the first items to be trimmed.

Were management reserves somehow to survive DoD's internal budget preparation process, they

⁶¹"Below threshold" reprogrammings can be done by DoD without congressional notification or approval. "Notification reprogrammings" require that the Appropriations and/or Armed Services Committees of both houses be notified in advance; such reprogrammings are considered approved if the notified committees do not object within 15 days. A "prior approval" reprogramming, on the other hand, must be approved by all the relevant committees and is considered rejected if no response is made.

Whether a reprogramming can be approved internally to DoD or whether it requires the notification or the prior approval of Congress depends on factors such as the particular appropriation accounts involved, the size of the requested transfer, and whether any of the affected accounts have been designated as being of "Special Interest" to the congressional committees. Similar factors govern whether only the Appropriations Committees are involved or whether the Armed Services Committees are involved as well.

⁶²Defense Science Board, *op. cit.*, footnote 1, p. 93.

⁶³Defense Science Board Task Force, "Transition of Weapons Systems From Development to Production," report prepared for the Office of the Under Secretary of Defense for Research and Engineering, August 1983, pp. 40, 42.

⁶⁴Defense Science Board, *op. cit.*, footnote 1, p. 78.

would probably not fare well on Capitol Hill. According to Leonard Sullivan,

Reserve funding wedges, if identified in the budget so that congressional staffers can find them, end up spotlighted, renamed “slush funds,” to protect the taxpayer from waste, fraud+ and abuse.⁶⁵

Requirements Generation and the Resource Allocation Process

Description of the Problems

In 1985, a DSB summer study examined the process by which requirements for new military systems are generated. The task force concluded that “although promising efforts are underway in all of the Services to improve their requirements processes, deficiencies in this process are still likely to be significant contributors to continuing increases in both the cost and the length of time required to field new defense systems.”⁶⁶ The report identified three problems in particular:

- . Users are not involved directly and continuously in determining and ranking their military needs.
- . Requirements are expected to be observed too rigidly.
- . Acquiring organizations do not go over their requirements often enough with their suppliers, before making them formal.

The study proposed emulating the organizational structure of successful commercial programs to streamline DoD acquisition, a proposal which formed the basis of the Packard Commission’s recommendations regarding acquisition organizations.

According to the DSB report, deciding what to acquire in the commercial world—at least for the highest priority, “bet-your-company” programs examined by the study panel—is essentially a one-step operation. Balancing requests from users against technological opportunities and available resources, the program manager advances realistic proposals

from which the company’s chief executive officer (CEO) can select.

The PM [Program Manager] is motivated to be realistic about performance, cost and schedule, both because he will have to carry out the program if it is approved and because his job is dependent on the merits of the proposal and not simply on whether it is accepted.⁶⁷

The DoD, on the other hand, decides what to buy in two stages. First, a highly political competition for funds involves the military Service, the OSD, OMB, and Congress. After funds are reserved, as denoted in the milestone process by a DRB decision to initiate a new program, a second stage of competition selects the actual supplier.

There are great pressures to overpromise in order to survive the [funding] competition. Since the decisions are made by political processes among a large and diverse group of people, there is little pressure to discipline the process and to enforce realism. Clear-cut designs to meet the requirements are not allowed because they would interfere with the next step—competitive source selection. The result is a firm over-stated requirement which too frequently can neither be met nor changed.⁶⁸

Leonard Sullivan describes a little more bluntly some additional factors within DoD that lead to overstated requirements:

The twin siren songs of “nothing is too good for our boys” (sung by the Services) and “nothing is impossible” (crooned by the technological community) have produced a deeply embedded American defense culture and guarantee the perpetuation of a military force that is at or beyond the leading edge of technology in the factory, and at or behind the trailing edge of any realistic sustainable warfighting capability.⁶⁹

“Another myth popular among amateur ‘requirements’ generators,” Sullivan adds, “is that since the desired system is going to be expensive anyway, the marginal costs of adding a few more capabilities will

⁶⁵Leonard Sullivan, Jr., *op cit.*, footnote 16, p. 50.

⁶⁶Defense Science Board, *op. cit.*, footnote 7, p. 1.

⁶⁷*Ibid.*, p. 91.

⁶⁸*Ibid.*, pp. 93-94.

⁶⁹Leonard Sullivan, Jr., *op. cit.*, footnote 16, p. 17.

be small . . . [However, these] add-ons become ‘the straw that breaks the camel’s back’ in terms of design complexity, {development scheduling, and production costs.’⁷⁰

Sullivan, the DSB panel, and the Packard Commission all attribute much of the pressure for overstated requirements to insufficient interaction between those who know what is needed and those who know how to provide it. According to the Packard report, “Generally, users do not have sufficient technical knowledge and program experience, and acquisition teams do not have sufficient experience with or insight into operational problems.”⁷¹

The DSB panel recommended that the Commanders in Chief [CINCs] of the operating forces be given a more significant role in requirements generation.⁷² The CINCs “do not participate with the services in making requirements tradeoffs even though they may be the most qualified to judge the true operational value of a particular requirement.”⁷³ The Packard Commission agreed that much greater emphasis should be placed on “an informed trade-off between user requirements, on the one hand, and schedule and cost on the other.”⁷⁴ The DSARC process, according to the Packard Commission, was unable to strike this balance. Although DSARC was able to determine whether proposed new systems would meet the requirements set for them, it “lacks a viable mechanism for *challenging* those requirements.”⁷⁵

The 1985 DSB panel on requirements that recommended the CINCs play a greater role in generating requirements also called for them to be more involved in-or at least, more aware of—the subse-

quent development process. Admiral W.J. Crowe—at the time of the DSB study the Commander in Chief of the U.S. Pacific Command—believed that his input into the requirements process was sufficient until the system entered development. “From that point, however, I have little influence over the process because feedback on affordability, priorities, and any tradeoffs made by the developing Service is almost non-existent. I do not want the capability to design or build systems, but I do need sufficient involvement in the development process to be able to point out major design changes of omission or commission which would affect my capabilities and/or strategy.”⁷⁶

According to the DSB, even the program managers who are immediately responsible for developing major systems do not have sufficient ability or desire to reexamine requirements once development has started. Should meeting a particular requirement prove more difficult than expected, leading to cost growth or schedule slippage, program managers all too often fail to reconsider the need for it. Moreover, since program offices are established after the requirements have been ratified, managers generally arrive too late to affect requirements at all.

Improving the Requirements Process

Changes in the requirements process can come in two different areas. One is in the process by which the Services first establish requirements for new systems or upgrades. The existing two-stage process is a recipe for producing the wrong system too late and at too high a cost. Moreover, Services may not fully evaluate non-traditional means of meeting their requirements, especially if they involve changing the respective roles and missions of the Services.

⁷⁰Ibid., p. 77.

⁷¹The President’s Blue Ribbon Commission on Defense Management, op. cit., footnote 4, p. 21.

⁷²The military Services (the Army, the Navy and Marine Corps, and the Air Force) are responsible for training and equipping military forces, but not for commanding them operationally. For operational purposes, the Armed Forces are organized into military commands that report through the Secretary of Defense to the President. Although the Commanders in Chief (CINCs) of these military commands individually are members of one of the military Services, they do not report directly to the Chiefs of Staff or Secretaries of their respective military services for operational matters.

The CINCs—not the Services—have responsibility for commanding troops in time of war. They often have a different perspective on military needs than that put forth by the Service leadership.

⁷³Defense Science Board, op. cit., footnote 7, p. 54.

⁷⁴The President’s Blue Ribbon Commission on Defense Management, op. cit., p. 21.

⁷⁵Ibid., emphasis in original.

⁷⁶Defense Science Board, op. cit., footnote 7, p. 48.

Improvements to the initial requirements generation process involve strengthening the role of the USD(A) in these early stages, ensuring an objective evaluation, and preserving a role for Defense Advanced Research Projects Agency (DARPA) to explore nontraditional solutions outside of Service processes.

The report of the Project on Monitoring Defense Reorganization, charged with reviewing the implementation of the Packard Commission's recommendations, concluded that "although the Packard Commission's objectives pertaining to 'requirements' are far from fulfilled, there has been material progress."⁷⁷ Most important, according to the study, was the establishment of the Joint Requirements Oversight Council (JROC) under the newly created post of Vice Chairman of the Joint Chiefs of Staff. This council is charged with reviewing all programs that are candidates for joint development because they can be used by, or affect the operation of, more than military Service. JROC has also served to increase the role of the CINCs in decisions on weapon characteristics, according to the study.

With respect to the Packard Commission's recommendation that requirements be better balanced against cost and schedule and that affordability be taken more seriously, the implementation study found that "the organizations and procedures that could make possible such a change have been set up," but "their effective operation will require continued high-level attention."⁷⁸

The requirements process can also be improved at the point where program managers review them with the ultimate users: the CINCs and others serving in operational capacities. Here, managers can bring considerations of cost, schedules, and technical developments into play to change those requirements.

Bureaucratic Paralysis

"When I took over procurement responsibility for General Motors, the guidelines for running the acquisition activities was 154 pages. I gave them a target of 10. We ended up with 13 pages to run all General Motors acquisition efforts.

"I was interviewing a General from the Air Force for a job and he said, 'You cannot run an organization with only 13 pages.' I said, 'We are. He said, 'I have 3,650 pages,' and I said, 'General, you cannot run an organization with 3,650 pages. "

—Robert Costello, Under Secretary of Defense for Acquisition⁷⁹

Documentation

Perhaps the most discussed problem with defense acquisition is the bureaucratic burden that individuals and companies involved in defense acquisition must carry to do their jobs. On the way to a DAB milestone review, a program manager may have to make as many as 100 briefings. Attention must be paid to thousands of regulations, specifications, and standards. As the Packard Commission described,

The program manager finds that, far from being the manager of the program, he is merely one of the participants who can influence it. An army of advocates for special interests descends on the program to ensure that it complies with various standards for military specifications, reliability, maintainability, operability, small and minority business utilization, and competition, to name a few. Each of these advocates can demand that the program manager take or refrain from taking some action, but none of them has any responsibility for the ultimate cost, schedule, or performance of the program.⁸⁰

Increasing complications in the job of the program manager have been accompanied by lengthening the time needed to complete contracting actions and increased regulation, oversight, and auditing of defense contractors.

⁷⁷"Making Defense Reform Work: The Project on Monitoring Defense Reorganization," op. cit., footnote 60, p. 48. This study argued that use of the term "requirements" itself introduces inflexibility into acquisition because it implies a minimum performance level below which a system would not be acceptable. "Meeting any military need or filling any deficiency," rather than "establishing a requirement," describes the desired process more accurately.

⁷⁸Ibid., p. 49.

⁷⁹"Reauthorization of the Office of Federal Procurement Policy," Hearing before the Committee on Governmental Affairs, U.S. Senate, Mar. 25, 1988, S. Hrg. 100-694, p. 18.

⁸⁰President's Blue Ribbon Commission on Defense Management, op. cit., footnote 49, p. 46.

A recent RAND Corporation study tried to quantify both the increased regulatory activity in recent years and the effects of those regulations on cost, schedule, and performance.⁸¹ They found near unanimity among those who work in acquisition that complying with regulations, management review, audits, etc. is much more difficult now than in the past. However, the indicators RAND chose to measure that difficulty—growth in staff sizes, requests for DoD testimony, numbers of DoD regulations, numbers of GAO reports, etc.—did not clearly confirm the increase.

Of the indicators sought to identify the *effects* of the regulatory burden—cost, schedule, and performance—RAND found that cost shows the clearest effects:

We conclude, on the basis of the sparse data available, that the sum of all incremental costs which can reasonably be charged to regulatory controls probably amounts to between five and ten percent of total program costs.⁸²

These numbers are lower than some that have been cited by defense contractors, possibly because they address only the incremental effects of recent regulation and not the cumulative effects. One contractor in a dual-use (military and commercial) business told OTA that the constraints imposed by doing business with the DoD are responsible for 20 to 50 percent of the total price of the defense product. Other estimates go even higher. The president of Grumman Corporation has stated that “only about a third of the time and money spent in developing new weapons systems has anything to do with design, development, and testing. The rest of it is the cost of review and oversight.”⁸³

This estimate is almost certainly high, since Grumman Corporation would surely conduct some review and oversight activities for its own use even if DoD did not mandate them. In fact, according to

a senior executive at another aerospace corporation, DoD imposes no administrative burden above what the company would want to do anyway. According to Albert D. Wheelon, for 16 years the head of satellite production at Hughes Corporation,

Our experience is that *similar* spacecraft cost about the same, whether they are bought under military or commercial arrangements Complying with DoD systems for cost and schedule control, contract management and quality control was not particularly burdensome. In fact, we used their procedures in our commercial programs by choice. In essence, DoD asked us to do no more for its programs than we would want to do for our commercial customers and ourselves.⁸⁴

Even if cost penalties can be unambiguously attributed to regulation, it is hard to consider them as measures of government waste. As the RAND report makes clear,

. . . to sustain an interpretation that all, or even most, of these costs are “wasted” money would require demonstrating that no benefits derive from the reporting and oversight activities that account for the bulk of the cost.⁸⁵

For reasons discussed earlier in this chapter, defense acquisition is clearly not managed solely to minimize cost and maximize efficiency. Congress, the Services, the OSD, and the regulatory agencies apparently have found the value of their respective involvement in defense acquisition to be worth the additional cost.

Analysis

Whether or not red tape can be quantitatively shown to affect defense procurement, and regardless of the degree to which it has increased over the years, it is unambiguously greater in government than in the private sector. The RAND study noted that:

Military program managers are frequently separated from the senior OSD-level acquisition execu-

⁸¹G.K. Smith, J.A. Drenzer, W.C. Martel, J.J. Milanese, W. Mooz, and E.C. River, “A Preliminary Perspective on Regulatory Activities and Effects in Weapons Acquisition,” RAND/R-3578-ACQ, prepared for the Under Secretary of Defense for Acquisition, March 1988.

⁸²*Ibid.*, p. 17.

⁸³Speech by John O’Brien, President and Chief Executive Officer, Grumman Corporation, before the Society of Automotive Engineers, Annapolis, MD, Apr. 19, 1988.

⁸⁴Albert D. Wheelon, “Dual Use Technologies: Satellites,” talk given to the Harvard Kennedy School of Government Study on Dual Use Technologies, October 1988, p. 10. Emphasis in original.

⁸⁵G.K. Smith et al., *op. cit.*, footnote 81, p. 46.

tive by five or six administrative layers. Each layer demands a right to review all progress reports and major program change proposals. Not so apparent from the literature is that some of those layers have an extensive horizontal structure, so that the views of several different offices must be accommodated in order to pass through a particular layer or “gate.”⁸⁶

Not only do program managers devote much of their time towards preparing for these reviews, but the regulations and their increasingly strict interpretation, a point not amenable to RAND’s analysis, have the effect of limiting the initiative and discretion that program managers are allowed to exercise.

Note, however, that if the present hierarchy requires five or six management layers between a program office and the senior Defense Acquisition Executive, any compression of the command chain will be accompanied by increasing the burden on those at the top—unless the total number of acquisition programs is cut proportionally. Bringing any one program to the attention of the most senior management will ensure that it moves rapidly ahead. Bringing every program to that level, without some way of ranking them to determine which ones truly deserve the attention, will create grid lock.

The 1985 DSB Summer Study on Practical Functional Performance Requirements devoted a considerable amount of analysis to the differences between the organizational environment of a DoD program manager and that of an equivalent position in non-defense-related private industry. Successful commercial programs examined during the summer study shared a number of features:⁸⁷

- A Program Manager (PM) who has continuity, authority, flexibility, accountability for decisions, and direct access to the key decision maker (CEO).
- A powerful executive (sometimes the CEO) who has authority to make unchallengeable decisions, settle disputes, and allocate additional resources. The CEO can directly support

the Program Manager and insulate him or her from external pressures as critical needs arise.

- Active user involvement. The commercial user, not committed to a single supplier, is free to purchase from other producers. Therefore, the Program Manager has a strong incentive to involve the user throughout product development, and emphasizes adherence to schedule (e.g., by modifying requirements with user concurrence) in the event of difficulties.

There are many “minor players” in this commercial model, including inside staffs, government regulators, consumer groups, etc., but “one of the major advantages of the Commercial Model is that the minor players play a minor role.”⁸⁸

In its planning stage, according to the DSB summer study, the commercial model is essentially a one-step procedure. The Program Manager, balancing user needs, foreseeable resources, and available technology, prepares a realistic proposal for the CEO to consider. The CEO, weighing this proposal against other alternatives such as having the proposal revised or rejecting it in favor of other uses for corporate resources, makes the decision to go ahead. “His future depends on whether programs he approves are ultimately successful, not on whether or not he goes ahead with them.”⁸⁹

The plan’s execution is marked by a close, direct working relationship between the PM and the CEO:

The CEO must be kept informed and the PM must be able to get help rapidly and reliably if he needs it. The principle is one of a joint activity towards a common goal. A program failure is a failure of both CEO and PM.

The staffs and inspectors, test groups and “ilities” [reliability, maintainability, supportability, etc.], groups exist, but are insulated from the PM by the CEO. The staffs can talk to the PM and comment and advise but cannot direct the PM without going through the CEO. Only the PM and the CEO can make decisions; they have the responsibility and therefore the authority.⁹⁰

⁸⁶Ibid., p. 15.

⁸⁷Defense Science Board, *op. cit.*, footnote 7, p. 2.

⁸⁸Ibid., p. 89.

⁸⁹Ibid., p. 91.

⁹⁰Ibid., pp. 92-93.

The summer study sought to emulate these practices within DoD acquisition programs. Specifically, they recommended that DoD establish what they called “surrogate CEOs”—individuals who have been delegated authority and responsibility to serve as the ultimate decisionmakers for one or a few programs. To implement this recommendation, the Military Departments would have to reduce the number of people involved in the decision processes, reduce the number of layers through which the program manager reports, and reaffirm program manager responsibility for all phases of program execution. They would also have to provide program managers with access to those senior managers (the surrogate CEOs) who would have the authority and resources sufficient to “make and enforce decisions regarding tradeoffs between performance, schedule, and cost.”

The Packard Commission cited this DSB study as the basis for its recommendations to streamline the acquisition process. In particular, the Commission called for “unambiguous authority for overall acquisition policy, clear accountability for acquisition execution, and plain lines of command for those with program management responsibilities.”⁹¹ At the top of the acquisition structure recommended by the Packard Commission would be a new position, the Under Secretary of Defense for Acquisition (USD(A)) who would serve as the Defense Acquisition Executive. Reporting to the USD(A) would be comparable to Service Acquisition Executives (SAEs) in the Army, Navy, and Air Force and equivalent positions in the defense agencies. Each SAE would appoint and oversee a number of Program Executive Officers (PEOs), who in turn would oversee Program Managers. The PEOs, “like group general managers in industry, should be responsible for a reasonable and defined number of acquisition programs. Program managers for these programs should be responsible directly to their respective PEO and, on program matters, report *only* to him.”⁹² It would be the responsibility of the Under Secretary for Acquisition to ensure that “no addi-

tional layers are inserted into this program chain of command.”

Through the Defense Reorganization Act of 1986 and concomitant Executive Orders and DoD Directives and Instructions, the organizational structure recommended by the Packard Commission was established. However, *the new structure supplemented and did not replace—any existing chains of authority and command.* According to a study of the implementation of the Packard Commission recommendations and associated legislation,

... the purposes of the legislation have not been met. Our sense is that the new positions were simply superimposed on top of the existing structure.⁹³

The new acquisition chain is at present a communications link, and does not control funds. Figure A-4 shows the new acquisition lines of authority along with the existing organizations for command and budget.

Regardless of how effectively the implementation of the Packard Commission recommendations within DoD captured the intent of those recommendations, it is clear that the actions taken to date do not address the original concerns of the DSB summer study.

Nor is it clear that they could. At the same time that it recommended changing DoD practices to put them more in line with commercial ones, the DSB summer study also acknowledged that:

There are inherent and basic differences between the DoD and non-DoD processes which certainly inhibit and may even prevent the direct mapping of lessons learned [from the commercial examples] into the DoD requirements process. For example, there is no counterpart to the role of Congress in industry, nor are there any unifying quantitative measures of success in DoD corresponding to profit or [return on investment]. Furthermore, some personnel constraints in DoD have no counterpart in industry. Finally, DoD does not operate in a free market as buyer or seller, and can only imperfectly approximate free market competitive conditions.⁹⁴

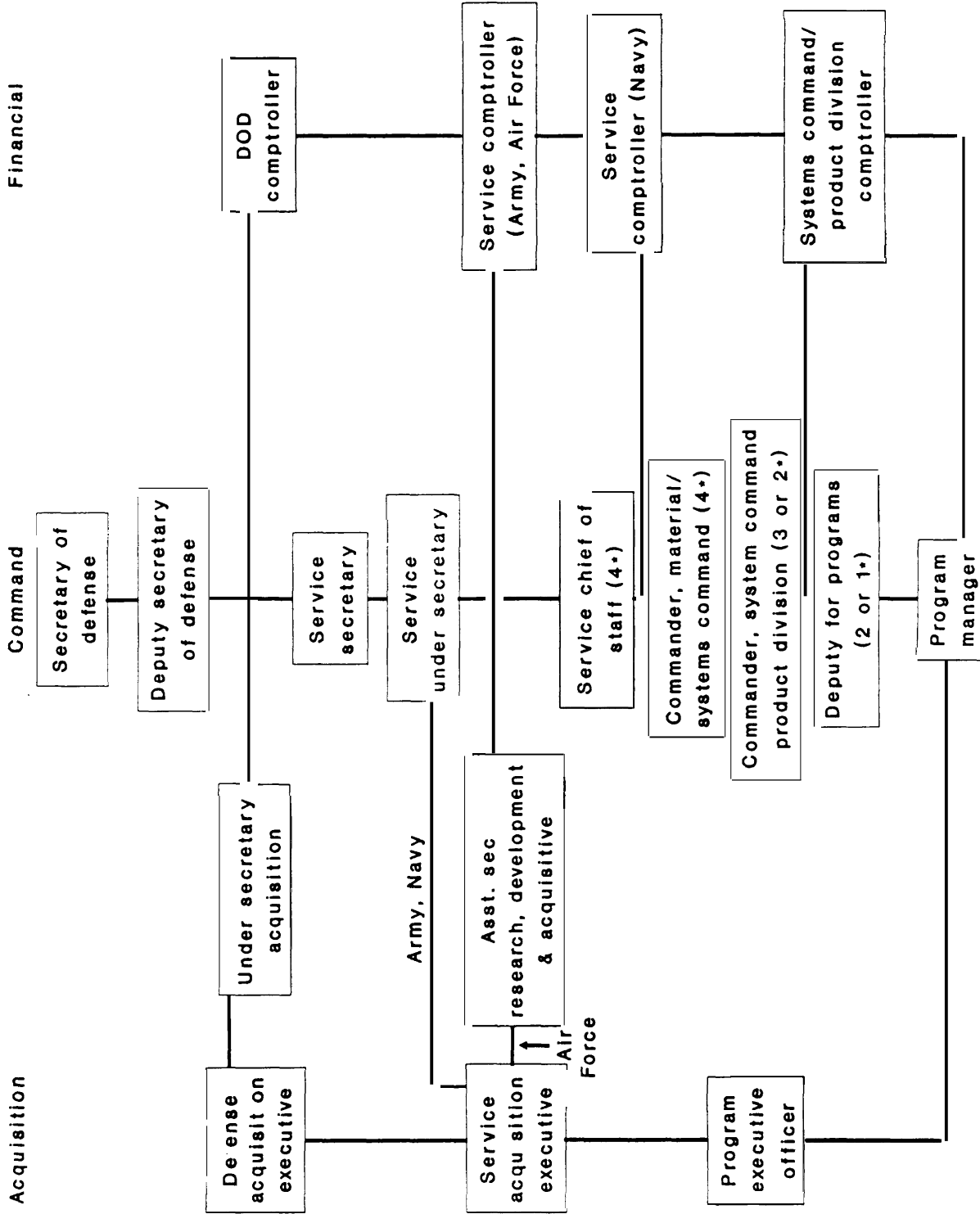
⁹¹President’s Blue Ribbon Commission on Defense Management, *op. cit.*, footnote 49, p. 53.

⁹²*Ibid.*, p. 54.

⁹³“Making Defense Reform Work: The Project on Monitoring Defense Reorganization,” *op. cit.*, footnote 60, p. 50.

⁹⁴Defense Science Board, *op. cit.*, footnote 7, p. 28.

Figure A-4—Chains of Authority



SOURCE: Defense Systems Management College, unpublished materials.

Neglecting the inherent and essential involvement of the political process, in particular, will lead to inappropriate solutions. Edwin Deagle's analysis, cited in the previous section of this appendix on "Program Variability," is particularly relevant to discussion of the acquisition (or, more accurately, the military R&D) process:

... organizational and procedural designs are unusually important. . . since they determine the structure within which massive managerial and political control problems intersect." Moreover, there can be conflict between organizational strategy designed to produce efficient political decision processes and managerial strategy designed to achieve coherent control of weapon system development. Yet the organization for control of military R&D inevitably is a mixture of both purposes. It is argued here that the failure to cope explicitly and well with this paradox is the central public policy problem of military R&D.⁹⁵

The DSB summer study acknowledges the importance, but not the inevitability, of political influences within DoD in a passage on DoD decision-making that could equally well describe Congress:

No one person has the authority to make firm decisions. Decisions are made by a large, diffuse group that acts something like an extended committee and that lacks clear-cut responsibility and accountability. The DoD itself exists in a political environment that further smears out the decision making process. As a result, decision-making is lengthy and uncertain. The players change and the decisions tend to change with them. The program Manager is separated from the top level of the DoD by many intermediate layers, all of whom must be dealt with, none of whom can say yes, but most of whom can say no. Decisions are late, inconsistent and untrustworthy.⁹⁶

And in an earlier passage,

Although the DoD is nominally a hierarchical authoritative organization, it is very difficult in a

democracy for anyone to make a controversial decision stick.⁹⁷

The key to the direct decisionmaking processes and lines of authority in the DSB summer study's commercial model is the close and direct link between the program manager and the CEO. However, the commercial programs analyzed by the summer study—the ESS-4 automated electronic switching system for long-distance communication developed by Bell Labs, the Boeing 767 airliner, a Satellite Business Systems communication satellite system, the IBM System 360 computer series, and the Federal Aeronautics Administration national air traffic control system—were not run-of-the-mill activities. They . . .

were of great importance to the companies involved and therefore to the CEO. There is hardly any single program in DoD of equivalent importance to Service Secretaries, let alone to the Secretary of Defense. DoD has too many important programs for such officials to keep track of them in detail.⁹⁸

Increasing the authority of the PM alone will not solve the problem. Attempts to streamline the process and to connect the PM more directly to the top of the DoD have not been successful except in extraordinary cases. There are too many programs for the top level to understand in detail. They must rely on their staffs and authority rediffuses in the bureaucracy.⁹⁹

This was to be the role of the "surrogate CEOs" which the DSB summer study called for establishing within DoD. The success of the Surrogate CEO . . .

will depend on how much authority he really has to adjust performance and schedule, provide additional resources if needed, make or approve tradeoffs.¹⁰⁰

It was this recommendation that led the Packard Commission to call for the establishment of Program Executive Officers. However, since the acquisition chain of authority established by the military Services in response to the commission's recommenda-

⁹⁵Edwin A. Deagle, *op. cit.*, footnote 28, p. 161.

⁹⁶Defense Science Board, *op. cit.*, footnote 7, p. 98.

⁹⁷*Ibid.*, p. 94.

⁹⁸*Ibid.*, p. 94.

⁹⁹*Ibid.*, p. 99.

¹⁰⁰*Ibid.*, p. 99.

tion has no real control over resources, it is questionable how well it fulfills the Commission's intent. In the Navy and the Air Force, the Commander of the System Command product division to whom a program manager reports has been designated as his Program Executive Officer—despite the conclusion of the DSB summer study that:

A supervisor or commander in the current DoD structure is not equivalent to a Surrogate CEO because he does not have the necessary delegated authority . . . He does not have any more authority over performance, cost, and schedule of his programs than his PMs do. He cannot transfer funds among programs and he has almost no discretionary money under his control. His control of staff and monitoring groups is minimal. He is overcommitted and has almost no flexibility.¹⁰¹

In the Army, PEO offices have been established separate from the commanders of the System Commands within Army Materiel Command, but even these offices have no real control over resources.

Truly implementing the recommendations of the DSB summer study and the Packard Commission would require drastic changes in the operation of DoD. Given the inherent involvement of the political process within defense acquisition, true implementation may not be possible at all. The essence of the Surrogate CEO/Program Executive Officer concept lies not in rearranging who reports to whom, but in concentrating real authority in an individual positioned to make decisions about a program and see that they are implemented. However,

The law of conservation of authority says that this delegated authority must come from somewhere and it must come, in fact, from the Surrogate CEO's superiors and from the staffs and regulatory bodies in the government. These people, in the manner of all human beings, will resist giving up authority even when they understand that their previous activities have been harmful rather than helpful. If the most senior people will really delegate their authority and insist that it be further delegated to Surrogate CEOs, there is a chance the idea will succeed. There will still be plenty of other things for the senior people to do.¹⁰²

“Successful” DoD Models

Certain programs within the Department of Defense—in particular, highly classified “special access” or “black” programs,¹⁰³ and high-priority strategic programs such as the Minuteman missile, the Air-Launched Cruise Missile, and the Navy's Strategic Systems Program Office that developed the Trident system—have been held out as models that have successfully conquered DoD bureaucracy. Special access programs, due to extreme security requirements, bypass much of the review and approval process that ordinary, “white” programs must contend with. Exempt from normal procurement and oversight operations, they are significantly less encumbered with bureaucracy.¹⁰⁴

According to Bernard McMahon, former Executive Director for the Director of Central Intelligence (responsible for reviewing all intelligence programs and operations) and subsequently staff director for

¹⁰¹Ibid., p. 100.

¹⁰²Ibid., p. 101.

¹⁰³Technically DoD does not use the term “black” program. A “special access program” is one in which additional restrictions beyond those available through the normal Confidential/Secret/Top Secret classification system are deemed necessary. The budgets and existence of these programs may or may not be classified. “Black” programs generally refer to those whose existence is kept secret.

¹⁰⁴Although the decision to operate a program on a special access basis is supposed to be made only on security grounds, many suspect that the reduced visibility and the freedom from procurement bureaucracy that special access programs enjoy also play a role. The phenomenal growth of special access programs over recent years, which is difficult to correlate with an equivalent growth in security requirements, lends support to this argument. However, official numbers documenting this growth are obviously difficult to come by. David Morrison, writing in the *National Journal*, uses what he calls conservative estimates to conclude that the “black” budget has nearly quintupled in recent years, from an estimated \$5.5 billion in fiscal year 1981 to \$24.3 billion in the fiscal 1988 request. *National Journal*, Apr. 11, 1987, p. 867.

The chairman and ranking minority member of the House Armed Services, who are certainly in a position to know, said in 1986 that “the amount of money in the “black” part of the defense budget has grown eight-fold in the last five years.” They did not disclose the absolute size of this budget, but stated that “fully 70 percent of all the funds that are now obscured under the “black” umbrella could be listed publicly in the budget without causing any harm to national security.” House Armed Services Committee News Release, for release May 12, 1986.

The growth in budget does not represent an equivalent growth in program numbers. Part of the black budget increase represents the growth in cost of major programs such as the B-2 Stealth bomber as they proceed into more costly stages of development.

the Senate Intelligence Committee, special access programs do have a number of advantages:¹⁰⁵

- speed of deployment—equipment is generally developed and deployed faster than in normal programs;
- exceptional stability, both in personnel and in concept and
- better program managers and personnel than normal programs of the same cost have.

Many senior officials with experience in both special access and ordinary program management report that the streamlined management approaches and freedom from bureaucracy that characterize special access programs make possible the speed with which these programs can field hardware. Others, however, argue that the advantages possessed by black programs are not necessarily due to bureaucratic shortcuts. McMahon argues that since management and oversight of these programs are tightly restricted, those who perform these functions tend to be the most senior management of the military Services:

Because special **access** programs are reviewed only by top management—their review boards are composed of flag officers and senior DoD civilian executives—they tend to get “special status” when funding priorities are established. Top managers tend to view the programs as their own, sponsor them, defend them, protect them in the competition for dollars with regular programs, and favor them in setting priorities. Seldom are they terminated, reduced, or stretched out nor is the economic rate of production considered.¹⁰⁶

The exceptional stability enjoyed by these programs is therefore due, at least in part, to their high priority and the high level at which they are reviewed. “Management obstacles are cleared for special programs in ways normal program managers never experience.”¹⁰⁷ Similarly, their advantages in per-

sonnel are partly due to their priority. Admittedly, managers also have the advantage of being able to spend more of their time managing and less handling bureaucratic overhead and advocacy.

The advantages enjoyed by special access programs also come at a price. Procedures used in special access programs “significantly increase the risk of failure, both of program hardware and of accomplishing what we paid the money to do.”¹⁰⁸ Part of the increased risk reflects the fact that special access programs tend to be technically riskier. However, risk is further increased by eliminating reviews and by short-circuiting the political process in which normal DoD programs operate:

The short cuts taken in the special access programs . . . are dangerous. In the special access world one hears horror stories of equipment that was too expensive, did not meet design expectations, was not supported, was unreliable, and duplicated other capabilities.¹⁰⁹

Those who attribute some of the successes of special access programs to their management approaches argue that these approaches should be extended to other DoD procurements. McMahon, however, argues that the model offered by black programs should not be extrapolated to the rest of defense procurement.

We simply cannot conduct a defense wide procurement system using special access program procedures. Top management does not have time to review all programs with the degree of oversight it must give to special access programs. Programs that have succeeded have done so because they were small and few in number. . . . Efficiency alone is not sufficient. In rare, important cases we may choose to take risks and skip important steps; it should not become general defense practice.¹¹⁰

The strategic systems also held out as examples of successful management share some of the same

¹⁰⁵Bernard McMahon, “Special Access Programs: A Model for Reform?,” a paper presented at the Center for Strategic and International Studies Conference on U.S. Defense Acquisition, November 1986, Washington, DC, pp. 8-9. (Commissioned for “U.S. Defense Acquisition: A Process in Trouble.” The CSIS Defense Acquisition Study.) Used by permission of the author.

¹⁰⁶*Ibid.*, pp. 5-6.

¹⁰⁷*Ibid.*, p. 9.

¹⁰⁸*Ibid.*, p. 6.

¹⁰⁹*Ibid.*, p. 9.

¹¹⁰*Ibid.*, pp. 10-11.

characteristics of successful special access programs: viz., high priority and high visibility to senior management. According to a critique of the Packard Commission report by an ad hoc committee of the American Defense Preparedness Association, these strategic programs use “high quality but rather large staff”—as opposed to the Packard Commission’s recommendation for small, streamlined staffs—and the programs have “established sufficient priority to avoid the normal budget drills and priority-setting disruptions.” The committee’s critique “questions the feasibility of achieving these objectives on all programs.”¹¹¹ In other words, given a long line of claimants, those at the head of the line move faster. This does not mean everyone should be at the head of the line.

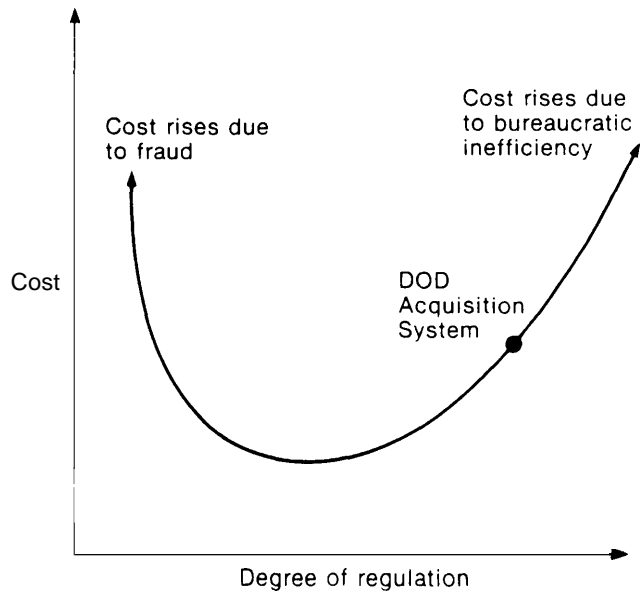
Overregulation and Public Opinion

Those who decry the inefficiencies imposed by regulation, audit, and oversight must realize that these penalties may be intentional; taxpayers place stringent requirements on expenditure of public funds. Figure A-5 illustrates the cost of doing business as a function of regulatory scrutiny. With minimal regulation or oversight, the government is dependent on the goodwill of contractors and public officials. Honest officials and corporations could operate very efficiently in this region, but dishonest ones would take advantage of the lack of oversight to defraud the government.

At the other end of the spectrum, tight regulatory controls deter or detect those defrauding the government, but they also drive up the cost of doing business for everyone else. As was noted earlier, analyses by the RAND Corporation and others imply that the existing regulatory regime imposes additional costs of between 10 to 50 percent on the cost of doing business with the Department of Defense. How much fraud this regulation deters is impossible to estimate, but it must certainly be less than the \$15 billion to \$75 billion represented by 10 to 50 percent of the procurement budget.

Most likely, the current regulatory regime is considerably more stringent than that which, accord-

Figure A-5-Cost v. Regulatory Intensity



SOURCE: Office of Technology Assessment, 1989.

ing to strict economic considerations, would result in minimal cost. It may be the case that the public would not demand such stringent controls if it fully understood the costs. If so, making the costs of overregulation clearer could lead to a relaxation of unnecessary constraints. It may be possible, however, that the American taxpayer prefers to pay the “tax” that overregulation imposes rather than permit those in positions of public trust to misappropriate lesser amounts. If public demands for overregulation constitute avoidable waste, then perhaps waste must be considered the price of curbing fraud and abuse.

Reducing Paperwork and Bureaucracy

Arbitrary measures to cut red tape or streamline the bureaucracy will fail unless they take into account the reasons for establishing a bureaucracy in the first place. For one thing, regulations area means of preserving institutional memory in an environment where presidential appointees have a median length of service of just over 2 years¹¹² and where military personnel are regularly rotated. They incorporate the political oversight and review procedures

¹¹¹“Quick Reaction Assessment of the President Blue Ribbon Commission on Defense Management,” an ad hoc Study conducted under the auspices of the Undersea Warfare Systems Division of the American Defense Preparedness Association, October 1986.

¹¹²“Leadership in Jeopardy,” National Academy of Public Administration, November 1985, p. 4. This figure applies to the entire Federal Government.

that come with the expenditure of public funds. They codify management procedures for large and unwieldy organizations. Finally, they further important policy objectives that may be in the Nation's or DoD's collective best interest even though they might interfere with the most efficient execution of individual programs. As has been stated before, the government has many goals—environmental protection, occupational health and safety, fair labor practices, equal opportunity, etc.—that may conflict with any individual program manager's ability to run a program. Just because a program manager does not believe his or her program is the appropriate vehicle to implement national policy does not mean that that policy should be ignored. Although regulations have been criticized as attempts to solve yesterday's problem by impeding today's progress, those problems are certain to be repeated in the absence of some way of institutionalizing the lessons learned.

A number of different approaches can be taken to reduce bureaucracy and regulation within DoD. Implementing any of them, however, presumes an atmosphere of trust among the DoD, the rest of the executive branch, and Congress. Our political system guarantees that the executive and legislative branches will compete for power and influence. However, this competition can be carried out in more or less confrontational terms. The relationship between DoD and Congress in the early 1980s was one of confrontation, substantially aggravating the level of mistrust.

In such an atmosphere, Congress chooses to legislate rather than persuade because it has no assurance that persuasion will have any effect. The DoD prefers to err on the side of strictness, for fear of incurring a congressional investigation and still stricter legislation.

Major Legislative and Administrative Reform—One approach would be to replace the existing statutory and administrative framework in which fraud and abuse are deterred by extensive reporting and auditing requirements with one in which greater responsibility is placed on voluntary compliance coupled with vigorous enforcement and severe

punishment for those who get caught. Enacting such a system would involve a major overhaul of the existing defense acquisition system and the environment in which it is conducted. Moreover, it would require (and also follow from) reducing what many in government and industry see to be the existing adversarial relationship between the two.

Bottom-Up Review—Since regulations (or at least guidelines) are inevitable in so bureaucratic an institution as DoD, one approach to alleviating the regulatory burden might be a bottom-up review of all regulations to ensure that only absolutely necessary ones are retained. However, the definition of "absolutely necessary" is highly subjective, and different groups or factions within the Department of Defense, the executive branch, and Congress are unlikely to agree. Every DoD regulation was originally instituted for what seemed to someone to be a worthy purpose. This point is acknowledged by the Packard Commission in describing the "army of advocates" for various special interests that beleaguer program managers:

None of the purposes they advocate is undesirable in itself. In the aggregate, however, they leave the program manager no room to balance their many demands, some of which are in conflict with each other and most of which are in conflict with the program's cost and schedule objectives. Even more importantly, they produce a diffusion of management responsibility, in which everyone is responsible, and no one is responsible.¹¹³

Before any of these advocates or excess regulations are eliminated, those who instituted them will have to be satisfied that the goals they advocate will be preserved. Moreover, those with the time to review the regulations would most likely not be the ones adversely affected by them, and it is unlikely that this approach would effect significant change.

Evolutionary Review—The DoD is testing an evolutionary process to relax unnecessary bureaucratic requirements. Pursuant to the Defense Acquisition Improvement Act of 1986, DoD has designated selected high-priority, major acquisition programs to be "Defense Enterprise Programs" having streamlined reporting procedures (table A-1).

¹¹³President's Blue Ribbon Commission on Defense Management, op. cit., footnote 48, p. 47.

Each Enterprise program is being reviewed to see what regulatory relief would be useful. As soon as these reviews are completed, it is expected that the Services will request waivers of certain regulations from the USD(A). Complicating these reviews, however, is the scale of the problem. Program officials can find it more trouble to petition for waiver of the numerous regulations that are thought to be inappropriate, inapplicable, or obsolete than it is simply to ignore them and see if anybody notices or cares.

Evaluating the success of these programs may be difficult because some of them are already among their Service’s highest priorities. At least one (the C-17) was the Air Force’s model program for a previous initiative on Acquisition Streamlining, and has therefore already received special attention towards streamlining.

The same approach of setting up a structure by which waivers to particularly obnoxious regulations can be solicited and acted on is used in two other DoD efforts, the Model Installations Program (MIP) and the Pilot Contracting Activities Program (PCAP). In each of these one aimed at DoD bases and installations and the other at organizations engaged in significant amounts of contracting—requests for waivers are forwarded to the individuals who can approve them, and if appropriate they are granted on an experimental basis. If the experiment shows that the waiver should be extended in time or to a wider audience, proposals recommending the appropriate change are prepared.

Note that none of these processes has the power to remove constraints originating outside DoD—such as legislation—because nobody within DoD has the authority to waive those constraints. However, in cases where outside constraints are identified, DoD can request relief from the outside agency or from Congress. Waivers to such outside constraints are encouraged so that the ones most limiting DoD activities can be identified.

Shifting the “Burden of Proof”—Another possibility, more along the lines of the Packard Commission and the DSB summer study recommendations, is to shift the “burden of proof” from the program manager to those who wish to overrule the program

Table A-I-Defense Enterprise Programs

Army	Multiple Subscriber Equipment (MSE) communications system TOW II missile ● ATACMS missile
Navy	Trident II missile T-45 trainer system SSN-21 submarine
Air Force	Medium Launch Vehicle C-17 Transport SRAM II missile Titan IV booster

The program has also been granted Milestone Authorization status by Congress. See preceding discussion of “Baselining,” beginning on pg. 21 of the appendix.

SOURCE: Office of the Secretary of Defense.

manager. In this approach, most regulations would be made advisory, rather than mandatory. Program managers would be free to decide which ones could be overridden in their particular circumstances. The “special interests” and “advocates” would still exist and would still be free to make recommendations to the program manager. However, the program manager would be free to disregard their advice—unless they could persuade the program manager’s superior.

This system could only work if program managers and their superiors were evaluated not only on how well individual programs fared but also on how well the programs on balance supported the intent of the regulations—which, after all, serve to incorporate DoD and national policies that senior policy makers have decided are important. Program managers would have to realize that their goal is not simply development and deployment of a weapon system but furthering national policy as well.

It is not clear that this approach could be pulled off successfully. First of all, it requires a stable and highly professional work force. Government by fiat and decree removes individual initiative, and for that reason can compensate to some extent for an untrained work force. The requirement for restoring initiative is having people capable of exercising it.

Another, more intractable, problem is deciding on the irreducible core of regulations that would remain mandatory. Discretion cannot be permitted in areas affecting safety, for example, or in regard to matters

that are specified by law.¹¹⁴ It is not clear that deciding on an irreducible set of minimum, absolute regulations would be any easier or more effective than the “bottom up” review of all regulations discussed above.

Any implementation of a program of this sort would have to be flexible. As time progressed, feedback as to which mandatory regulations needed revisiting or which advisory guidelines were being systematically ignored would be used to make adjustments. Every level of authority would have to support the program and cooperate to make it work. In an environment where tensions exist between Congress and the executive branch, between DoD and industry, between the military Services and the OSD, and within the Services, that maybe too much to ask for.

Reducing Delays

Many of the delays built into the acquisition process follow from the implementation of regulations and the operation of the bureaucracy as described above. No particular delay can be addressed in isolation. However, two problems in particular seem to be mentioned frequently. They are singled out for discussion below.

Reducing the Delays in Contracting—Much of the time and complexity of the contracting process stem from requirements and regulations that serve to enhance competition, to ensure that all potential bidders capable of doing the work are given an opportunity to bid on it, and to support socioeconomic goals. The last two of these items—fairness and socioeconomic goals—are policy goals that Congress has found worth pursuing even if they impede defense acquisition. Like any other political decisions, these judgments could be reversed if Congress were to find that the benefits of pursuing these goals did not justify their cost to the acquisition system.

The first factor, however, stems not so much from a political judgment that competition is inherently

good as from the fact that competition—at least in a commercial market—is the mechanism that provides the buyer better quality at a lower price. Competitive purchasing in defense procurement is often misinterpreted to mean competition on the basis of price alone. While this might have been true in the days of “formal advertising” or sealed bids that used to characterize government procurement, passage of the Competition in Contracting Act of 1984 extended the concept of competition to include non-price factors. Some argue that price is still too heavily weighted, but it is clearly not the only factor that can be considered.

The debate concerning competition in defense procurement concerns how well the concept can be extended from the free market—where it clearly makes sense—to the highly regulated defense industry, which is characterized by few sellers, a single buyer, and the requirement to create new systems that press the state of the art.

The Packard Commission very strongly endorsed the concept of competition:

Commercial procurement competition simultaneously pursues several related objectives: attracting the best qualified suppliers, validating product performance and quality, and securing the best price . . . we believe that DoD should greatly increase its use of truly effective competition, using as a model the competitive buying practices of major corporations and their suppliers.¹¹⁵

However, 2 years later, Commission chairman David Packard appeared to have changed his mind—at least as far as competing major acquisition programs is concerned—when he said, “One could do as good a job awarding major contracts by throwing darts at the names of qualified bidders.”¹¹⁶

The contracting and bid award process has come under increasing scrutiny recently amid allegations of serious improprieties in bid preparation and selection. This area will certainly be looked into further. However, nobody has yet come up with a mechanism by which all the benefits of competing

¹¹⁴Note that this statement does not imply that all existing laws should necessarily be retained under this approach. Indeed, to alter the present regulatory regime, substantial legislative change would be required. Nevertheless, those laws that remain in force cannot be waived at the discretion of a DoD official.

¹¹⁵President's Blue Ribbon Commission on Defense Management, op. cit., footnote 48, pp. 64-65.

¹¹⁶Quoted in James Flanagan, “Competition in Defense Buying Costly to U.S.,” *Los Angeles Times*, July 31, 1988.

major acquisitions can be preserved in a less cumbersome process.

Contracting mechanics should pose less of a problem in procuring research than in procuring systems. The Competition in Contracting Act exempts “research” from many of its provisions, and DoD had previously taken this exemption to apply only to budget category 6.1. However, a letter from Members of Congress to the Secretary of Defense made clear that this exemption applies to technology base activities—research and exploratory development—in general.¹¹⁷

Reducing the Delays in Review—Considerable time is taken in preparing for oversight reviews by the DAB or Service equivalents. With poor planning, activities of the program under review grind to a halt while the necessary documentation is prepared and analyzed. Appropriate planning should provide for delay, using the span between submission of documentation (3 months prior to the DAB meeting) and the review’s outcome for work that does not commit large sums of money to anticipated outcomes of the review.

These reviews almost never lead to program cancellation, so in practically every case, program officials can foresee activities to be conducted after the board review no matter what the review outcome is. Obviously, major full-scale development contracts should not be let pending the decision to proceed to full-scale development. However, many activities that would facilitate the FSD process—or that might occur during full-scale development but do not involve commitment to a major FSD contract—could be conducted while awaiting an FSD go-ahead.

Some funds might be jeopardized because managers conducted activities judged inappropriate in the light of subsequent oversight board decisions. However, these expenses would almost certainly be outweighed by the savings made possible by permitting large development teams to do useful work, rather than wait idly by, during the period pending an oversight review.

Organization

... *good* organizational design alone will not exorcise all the demons in the weapon system acquisition process, but the lack of it is almost sure to keep them there.

—Edwin A. Deagle¹¹⁸

So far this appendix has discussed acquisition procedures within the existing DoD organization. However, there are other organizational models, some of which were proposed in various pieces of legislation introduced in the 100th Congress. These bills run the gamut of acquisition structures from those similar to current practice to substantial departures from it:

- *H.R. 3898* (Kasich): Gives the USC(A) precedence over the Service secretaries. This precedence is asserted by DoD regulation in acquisition matters, but regulations do not make clear whether the Service Acquisition Executives report directly to the Under Secretary of Defense for Acquisition through the Service Secretaries.
- *S. 2621* (Dixon): Centralizes procurement authority under the USD(A) but permits it to be delegated back to the Services.
- *S. 2732* (Roth) and *H.R. 4950* (Hertel): Establishes under the USD(A) a Defense Acquisition Agency or Corps that receives requirements from the Services and then completes the acquisition process, giving the USD(A) final authority over procurements. Terminates the procurement authority of the Service Secretaries and prohibits delegation of certain USD(A) authority back to the Services.
- *H.R. 5048* (Boxer): Establishes an Independent Procurement Corps outside the Department of Defense to research, develop, and produce major weapon systems for DoD.

Not included in this list—yet—are even more far-ranging ideas such as regulating the defense industry as a public utility, or even nationalizing it.

¹¹⁷G.K. Smith et al., op. cit., footnote 81, p. 22. The letter referred to, dated Apr. 15, 1986, was addressed to Secretary of Defense Weinberger and signed by the Chairmen—and in some cases the ranking minority members—of the House Government Operations Committee, the House Science and Technology Committee, the House Armed Services Committee, and the Senate Armed Services Committee.

¹¹⁸Edwin A. Deagle, op. cit., footnote 28, p. 176.

The approach suggested under the third of these alternatives—consolidating all procurement activity under the USD(A)—was considered but rejected by the Packard Commission.

... such centralization would not serve the cause of reducing the bureaucracy, because it would tend to separate further the acquisition staff from the military user. We believe that it is important to maintain the Services' traditional role in managing new weapons systems.¹¹⁹

The program manager, argued the Commission, must understand the operational uses to which the system will be put and the environment in which it will operate.

However, some analysts share the viewpoint of Leonard Sullivan, a civilian writing for the CSIS Defense Acquisition study, who argues that military involvement in acquisition is far too extensive:

The U.S. acquisition system is laced with users . . . they are almost anyone in uniform except the equipment operators in the field. And they have done a poor job keeping the acquisition process on the straight and narrow.

A military person's judgment about technical feasibility, costing and budgeting, quantitative analysis, affordability, and supportability is no better than, and may be worse than, that of a professional civilian . . . The role of user is a convenient myth perpetuated by the military to increase its presence and by civilians to rationalize dubious decisions.¹²⁰

Proponents of a centralized civilian acquisition agency argue that only such a mechanism can foster the professional, stable, qualified work force needed to implement true reform.

Taking acquisition away from the Services and turning it over to a civilian agency would represent a radical change. Most individuals involved in defense procurement—within DoD and in industry, military and civilian—do not favor such a sweeping

change at present. Most studies of the issue have, like the Packard Commission, recommended against it. One major exception is the President's Private Sector Survey on Cost Control, or Grace Commission. The Grace Commission recommended that "consolidation of the management of the acquisition process within the Office of the Secretary of Defense (OSD) would improve efficiency and provide opportunity for significant cost savings."¹²¹

A somewhat more tenuous endorsement of the idea was provided by the Project on Monitoring Defense Reorganization, a study of the implementation of the Packard Commission recommendations. This study stated a preference for leaving acquisition authority with the Services, but recommended consideration of an independent organization under the USD(A) in the event that the Services refused to create specialized "acquisition corps." The study concluded that "radical steps, such as the establishment of a single procurement organization within the department [of defense], should not permanently be ruled out."¹²²

The GAO found that the prevailing opinion it encountered in a study of centralized acquisition lay against establishing such an agency.¹²³ Some of the advantages to such an agency cited by GAO were

- . reducing Service parochialism and fostering more common/joint system development;
- improving the quality and continuity of the acquisition work force; and
- . reducing the size of the work force and eliminating administrative layers by consolidating duplicate acquisition functions.

Some of the more significant disadvantages were:

- . Inability to address acquisition problems that were not organizationally related. Many problems with the existing system were thought to be in this category, such as those involving

¹¹⁹President's Blue Ribbon Commission on Defense Management, *op. cit.*, footnote 48, p. 54.

¹²⁰Leonard Sullivan, Jr., *op. cit.*, footnote 16, pp. 56-57.

¹²¹U.S. President's Private Sector Survey on Cost Control (Grace Commission), "President's Private Sector Survey on Cost Control—Report on the Office of the Secretary of Defense," Sept. 15, 1983. Quoted in David E. Lockwood, "U.S. Weapons Procurement: Should a Civilian Agency Be In Charge?" Congressional Research Service, Report 84-61F, June 13, 1984, p. 31.

¹²²"Making Defense Reform Work: The Project on Monitoring Defense Reorganization," *op. cit.*, footnote 60, p. 59.

¹²³General Accounting Office, "Defense Organization: Advantages and Disadvantages of a Centralized Civilian Acquisition Agency," GAO/NSIAD-87-36, November 1986, p. 1.

identifying what weapons to buy and trading off military requirements against cost.

- Possible disregard of military operational experience that could support claims that the new equipment is operationally suitable and effective for military use.
- Adding an additional layer of bureaucracy.
- The potential large size of such an agency, which could render it unmanageable.

If a centralized acquisition agency were formed, GAO recommended that it remain within the DoD. GAO reported the “overwhelming opinion” of those with whom it spoke that the Secretary of Defense should be accountable for all resources dedicated to defense.

A RAND Corporation study concluded that there is no reason to believe a centralized acquisition agency would operate more effectively than the existing system. Inputs from military users “probably receive insufficient attention even today, and it is difficult to believe that the interests of the users would be better represented by a more civilianized management.”¹²⁴ The study recommended changes in the acquisition process, rather than the acquisition organization.

Although study of European nations that use centralized procurement systems might illuminate the successes or failures of such a plan, factors besides their centralized procurement systems make such analyses difficult. One important difference is that their defense programs are small compared to that of the United States. Other differences, as presented in a recent study of European weapons acquisition practices by The Analytic Sciences Corporation,¹²⁵ are that:

- European military Services do not dominate acquisition.
- Multiyear defense plans dominate fiscal planning in Europe and make it impossible to obtain program funds not in the multiyear plan.

- The annual defense procurement budget is approved by the legislature with minimal changes.
- The government imposes minimal “how-to” requirements on the defense industry.
- Industrial policy is a major consideration in defense contracting.

According to this study, the U.S. approach to acquisition, when compared to the European one, results in considerably more sophisticated and capable weapons developed over a shorter period at higher cost, but with lower cost per unit performance. The advantages of the European model—early analysis of cost v. performance, adherence to long-range fiscal plans, and concern for affordability—do not require a centralized acquisition agency to achieve. Moreover, if U.S. acquisition activities were centralized in a single agency, that agency would have about 15 times the staff and budget of the largest European acquisition agency.

Personnel

There has always been an implicit assumption within the Defense Department that people with little or no advanced training and experience in the management of large industrial programs could function effectively at any management level. This assumption has been a key factor leading to the disappointing results of virtually every improvement program in the last twenty years.

—J. Ronald Fox, with James L. Field¹²⁶

Documentation

Successful implementation of many recommendations for improving defense acquisition—several of which have been cited in previous sections—requires a high-quality, stable, and well-trained acquisition work force. In a letter to President Reagan one year after the publication of the Packard Commission report, David Packard stated that:

Personnel policy is the keystone of virtually all of these reforms. With able people operating them, even second-rate organizational structures and pro-

¹²⁴Michael Rich and Edmund Dews, “Improving the Military Acquisition Process: Lessons From RAND Research,” R-3373-AF/RC, February 1986, p. 51.

¹²⁵Jacques Gansler, Charles Henning, and John Serlemitsos, “European Weapon Acquisition Practices: Implications for the U.S.,” The Analytic Sciences Corporation, TR-5341-1, prepared for the Ford Foundation, February 1988.

¹²⁶J. Ronald Fox with James L. Field, *The Defense Management Challenge: Weapons Acquisition* (Boston, MA: Harvard Business School Press, 1988), pp. 311-312.

cedures can be made to work; and without able people, even first-rate ones will fail.¹²⁷

Improvements recommended by the Packard Commission included reducing the barriers to recruiting senior-level executive branch personnel,¹²⁸ attracting qualified new personnel, improving the training and motivation of existing personnel at the middle management levels, and continuing the recent improvements in defining military career paths in acquisition.

The Commission thought that civilian acquisition personnel needed much more attention than military, and cited many of the deficiencies of the federal Civil Service system that are described in the context of national laboratory personnel in chapter 5 of the main report. Recommendations particular to the acquisition work force included enhancing the status of the contract specialist job classification. At present, this classification is an “administrative” series position, prohibiting establishment of any business education requirement; the Commission recommended moving this position to the “professional” series. The Office of Personnel Management, which classifies Civil Service positions, has resisted this change on the grounds that DoD is free to require a business-related college degree for any particular contract specialist position, but that requiring such a degree for *all* such jobs is arbitrary and unnecessary.

In a major study of defense acquisition, Professor J. Ronald Fox of the Harvard Business School distinguished between two prevailing attitudes towards the government’s role. Those holding what he terms the *liaison manager* view believe the government program manager seines primarily to promote a program, prepare progress reports, negotiate with various parties within DoD, and resolve conflicts between these parties and the contractor. Cost control is solely the responsibility of the contractor, and there is no need for the program manager to have extensive training or experience with industrial management and cost control methods. Program

management is therefore a reasonable rotation for military officers between operational assignments. Those holding the liaison manager view, according to Fox, are widespread in both government and industry. They see the present acquisition process as essentially well managed, with few problems.

Fox himself believes very strongly in an alternative that he terms the *active manager* view. In this formulation, the program manager’s role is one of planning, rigorous oversight, negotiation with, and control over the contractors. Responsibility for cost control is shared between government managers and the contractor; by establishing and implementing incentives, both formal and informal, the program manager has significant opportunity to reduce costs throughout the life of the program. The existing system of staffing and training military program managers cannot produce individuals capable of taking this role:

As in industry, the development of highly qualified program managers requires focused career paths, progressing from technical work to assignments at laboratories, program offices, and plant representative offices, to full program management responsibility for small programs, and ultimately for large programs. There is no time left to become expert in a military operational specialty as well.¹²⁹

Civil Service personnel share few similarities with military officers in acquisition assignments, according to Fox. Whereas the short tenure of officers in acquisition rotations severely impedes their ability to match their industrial counterparts, many civil servants “remain for so long that they resist innovation and change.”¹³⁰ Fox recommends reforming civil service regulations to establish higher standards and permit removal of mediocre performers. Absent these changes, “defense acquisition programs will appeal primarily to those satisfied with the present low level of responsibility.”

The DSB 1987 Summer Study on Technology Base Management recommended establishing a trial “Senior Scientific, Technical, and Acquisition Exec -

¹²⁷David Packard, letter to the President of the United States, July 10, 1987; cited by J. Ronald Fox with James L. Field, *ibid.*, p. 315.

¹²⁸Among those specified were simplifying financial disclosure forms and allowing appointees to defer capital gains tax liability incurred in divesting themselves of assets to satisfy conflict-of-interest provisions.

¹²⁹J. Ronald Fox with James L. Field, *op. cit.*, footnote 126, p. 312.

¹³⁰*Ibid.*, p. 314.

utive Initiative” to investigate means of improving the quality of personnel involved in defense acquisition and DoD technology base program execution and management. This program would provide up to 100 non-tenured positions for senior managers serving 3-year, renewable terms. One of the key features of this program would be to provide compensation comparable to equivalent positions in academia or industry through a special mechanism that would be outside conventional Civil Service regulations and limits. Poor performers would not be renewed. The summer study saw conflict of interest regulations, which restrict interchange of senior personnel between government and industry (the “revolving door”), as the most serious impediment to instituting such a program. “Some form of conflict of interest waiver-requiring legislative action—will be required to make the demonstration truly effective.”¹³¹

Analysis

All proposals for reforming personnel policies run into conflicts between competing objectives. Significantly increasing the tenure of military personnel in acquisition assignments, and weighing those assignments more heavily in promotion reviews, would probably improve acquisition. However, those actions would require making significant changes to what senior military officers now consider to be requirements for successful military careers.

Making fundamental reforms to Civil Service procedures—or even exempting groups from them—would also pose substantial difficulties. Federal employees already feel as if they have 240 million supervisors, and it sometimes seems—at least while reading “Letters to the Editor” columns when civilian pay raises are debated in Congress—that there is nothing so despised as a civil servant. proposals that would increase compen-

sation or other benefits of Federal employment in an effort to attract more senior and more highly qualified employees would be seen by others as adding slots to the Federal trough.

Conflict-of-interest regulations provide a case in point. Some argue, as did a panel of senior industry officials advising the Senate Armed Services Committee, that:

There can be no question about the need to attract competent industry-trained men and women into vital upper-middle level appointee positions in the Pentagon. “Revolving Door” legislation, however well intended, defeats this need. The stigma of evil associated with the “revolving door” issue is most unfortunate and largely unwarranted.¹³²

Contrast that attitude with the following:

Weapons makers and weapons buyers should have different perspectives, and therefore *different skills*. Thus, there should be no tendency to share the same labor pool . . . Whether or not these people [who go back and forth between government and industry] are bribed, or promised future employment, they will be caught up in a loyalty to the project(s) they work on. They have lost their consumer’s perspective.¹³³

It will be difficult, if not impossible, to reconcile these two points of view. Those insisting on strict “revolving door” legislation to prevent officials from consciously misusing their public office for private gain might be satisfied that extraordinarily severe penalties could deter blatant conflict of interest violations. However, those more concerned about the “loss of perspective”—the suspicion that the interests of government and those of industry should not be so closely aligned that individuals would be able to work just as effectively in one as in the other—would probably not agree that tougher penalties for violations of law would help clarify this more ambiguous situation.

¹³¹ U.S. Department of Defense, “Report of the Defense Science Board 1987 Summer Study on Technology Base Management,” prepared for the Office of the Under Secretary of Defense for Acquisition, December 1987, p. 21.

¹³² Report to the Subcommittee on Defense Industry and Technology, Senate Armed Services Committee,” by the Ad Hoc Defense Industry Advisory Group (13 senior defense industry officials), p. A-1.

¹³³ Project on Military Procurement, “Defense Procurement Papers: Campaign 88,” September 1988, p. 75.