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IMPROVING THE WAY THE PENTAGON ACQUIRES ITS WEAPONS

INTRODUCTION

Developing, manufacturing, and purchasing the hundreds of weapons by which the U.S. defends its interests is one of the most important responsibilities of the Department of Defense--and one of the costliest. In fiscal 1985 alone, weapon system acquisition will cost over $77 billion. Yet there is mounting agreement that the Pentagon's weapons acquisition process is in serious trouble. Recent indications of continuing cost growth in weapon programs, the increasing number of quality control problems in weapons systems, the Defense Department's difficulties in fielding systems quickly despite specially compressed acquisition strategies, and systemic indications of management breakdowns ranging from overpricing in spare parts procurement to poor management of technical manuals for aircraft maintenance and operation all point to an acquisition process strained to the breaking point.

These problems continue despite over two decades of management reform initiatives beginning with the McNamara era and running through the Defense Acquisition Improvement Program, launched in 1981 by then Deputy Secretary of Defense Frank Carlucci. The Grace Commission--the President's Private Sector Survey on Cost Control--concluded that "the underlying root problems must be continuing in nature."[1]

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1 President's Private Sector Survey on Cost Control, Report on Procurement/Contracts/Inventory Management, August 31, 1983, p. 64.

* This is the 7th in a series of papers prepared for The Heritage Foundation's Defense Assessment Project directed by Heritage Senior Fellow Lt. Col. Theodore J. Crackel (U.S. Army, Ret.).

Among these problems is the failure to deal effectively with the fundamental "people" issues--the training, motivation and experience of acquisition and contract management personnel, and the structure and staffing of the acquisition process. Effective programs require skilled and experienced career program managers. Producing them should become a key objective of the next Administration, but that will necessitate a new set of "people policies" including making program management an attractive career track and allowing program managers to exercise the decision-making authority commensurate with their responsibilities.

THE PROGRAM MANAGERS

Effective government program management is an essential element of program success. While program turmoil or delay are often said to be caused by hardware, schedule, or cost issues, the root problem is probably an inexperienced program management staff. In 1983 hearings before the Senate Governmental Affairs Committee, then Deputy Secretary of Defense Paul Thayer said that the lack of a career track and adequate training and experience for military acquisition personnel was a substantial part of the acquisition problem. "You can have all the best initiatives in the world," he added, "if you don't have the people to execute them, they are worthless."[2]

A program manager, usually with the rank of Colonel in the Army or Air Force or Captain in the Navy, theoretically has the authority and responsibilities of a top-level business executive. Department of Defense (DoD) Directive 5000.1, which guides major program development, provides that program managers "shall be given authority and resources commensurate with the responsibility to execute the program efficiently." Coupled with this authority, program managers supposedly are highly trained, experienced personnel. In truth, however, program managers and their staffs often are inadequately trained and inexperienced. Moreover, they frequently receive insufficient support from their Services in battles with contractors and defense agencies alike; are under pressure to develop systems on schedule; and work within a culture and organizational structure in each Service which obscures accountability for program success or failure. As a result, program managers often are unable to control or administer their programs effectively.

TENURE PROBLEMS

Short tenures for program managers, and for many of the acquisition support personnel in a typical weapon program office,

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[2] Hearings on Management of the Department of Defense, Part 1, Committee on Governmental Affairs, U.S. Senate, Washington, D.C., March 23, 1983, S. Hrg. 98-150, p. 135.

long has been a problem. It has become more serious, however, because program development cycles have lengthened. It currently takes more than a decade to develop a major new weapon such as the Patriot anti-aircraft missile and the Aquila--a small, remotely piloted reconnaissance aircraft. The Patriot took 20 years to field and the Aquila has been under development since 1973 with no promise of fielding any time soon. By contrast, the full development cycle for the B-52 bomber and the Minuteman I nuclear missile were roughly five years each.

Despite the current longer development cycle, the typical program manager on a major weapon program holds his post for an average of only about 30 months, an extremely short period of time in relation to the average life of such programs. Norman Augustine, a defense industry official, observes:

> The problem of personnel turbulence, troublesome in virtually all management situations, is particularly acute in the case of major research and development undertakings...as once pointed out by the Armed Forces Journal International, we are attempting to develop major new systems with ten-year technology, eight-year programs, five-year plans, three-year people and one-year dollars.[3]

The data indicate just how serious this problem has become. The average tenure for all program managers for the Army over the last decade is 30 months, for the Air Force it is 29 months, and for the Navy, 42 months. In many key projects, however, the tenure is even shorter (see Table 1). This same instability exists at the top of the commands. For the past 15 years, the average tour of duty for the Army's senior material procurement officer has been three years, for the Navy just under three years, and for the Air Force just two years.

The result of this volatility is that neither program managers nor their commands are given much of a chance to master the particular skills needed to become fully effective. A 1982 Army Audit Agency report discovered that four of the Army's largest programs had, on average, a new program manager every two years. Noted the study: "It normally takes a project manager at least a year to have a good understanding of a project."[4]

If the problem is obvious, the solution is not. Short program manager tenure is symptomatic of the culture and incentive system in the Services. Promotion practices necessitate rapid turnover. To be promoted, officers must rotate in and out of command at sea or in the field. Colonel Harry Summers of the

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3 "Augustine Laws and Major Development Programs," Concepts, 5 (Winter 1982):1, p. 64.

4 Army Audit Agency Report.

Table 1
Program Manager Tenure

Program	Typical or Average Tenure*
Army	
Abrams Tank (M-1)	28 months
Patriot Missile	28 months
Black Hawk Helicopter (UH60)	23 months
Sergeant York Anti-Aircraft Gun	40 months
Air Force	
F-16 Fighter	42 months
F-15 Fighter	23 months
B-1B Bomber	47 months
Peacekeeper (MX) Missile	31 months
Navy	
F/A-18 Fighter	41 months
Trident Missile	36 months
F-14 A/D Fighter	42 months
SSN-688 Submarine	48 months

*Army and Air Force figures are average Program Manager tenure over the life of the program. Navy figures reveal typical recent experience.

Army War College explains: "We have institutionalized a system where the only reward, the only measure of success, is promotion, and that's dumb, because we can't promote everybody. We need to stress other rewards."[5]

Recent data verify Summer's conclusion. In responses to Senator William D. Roth, Jr., Chairman of the Governmental Affairs Committee, for example, the Army admitted that it had "no career track for program managers," although it said that such a career track was being developed. The Navy stated that it had such a program but noted that in many cases "commanders select program managers based on their own best judgments as to the abilities of officers." Without a well-developed and rewarding career enhancement program for program managers, the Services will not be able to encourage bright, aggressive officers to take up careers in program management. The risks of system failure of complex weapons is just too great to allow mediocre program and contract management performance. This, however, cannot be avoided without greater incentives and career recognition.

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5 Nick Notz, Nancy B. and Nathan and Cathryn Donohue, "Where Have All the Warriors Gone?" The Washingtonian, July 1984, p. 130.

INADEQUATE TRAINING

The problem of rapid program management turnover is compounded by inadequate training. The Army Audit Agency reported that the acquisition strategies were "normally developed by management personnel who had limited project manager experience." It pointed out that "less than 60 percent of the contract specialists and price analysts [for the four programs under review] had completed the training which DoD has determined to be required."

Lack of adequate training plagues not only the highest levels in weapons program offices, but also a large number of support personnel in such specialties as contract pricing, technical evaluations and accounting. A 1984 audit by the Pentagon's Inspector General found that the training of many of the 26,000 procurement personnel did not meet even the Defense Department's own minimal standards; 67 percent of the senior and intermediate level contracting personnel checked by the audit had not completed the Department's mandatory schooling.

The Defense Systems Management College (DSMC) was established in 1971, in part to address this problem. However, even when program managers are provided with training, they are not given adequate time or a sufficiently broad training curriculum to do much good. Typically, acquisition personnel are rushed through DSMC course work in less than 20 weeks. In many cases, moreover, program managers cut this already limited training program short. Write management consultant J. Ronald Fox:

> Much of the training civilian and military personnel responsible for running large defense programs receive deals with government procedures, regulations and systems. While many military officers assigned to large program offices have master's degrees, their formal training often does not equip them with the tough negotiating skills required to deal with large contractors and higher level military officers throughout the lives of major defense program....
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> Formal training should extend for at least a year and should require that defense program managers face and make decisions through real life problems.[6]

PROGRAM MANAGERS AND THE SERVICES: "CATCH-22"

Program offices should be regarded as the "clearing house" for decision implementation, but too often are not allowed even the decision authority provided in DoD Directive 5000.1 that would allow them to execute their programs efficiently. The Services routinely override their authority and force program

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[6] J. Ronald Fox, "Revamping the Business of National Defense," to be published in the Fall issue of the Harvard Business Review.

changes even over vehement program manager objections. Program managers are often caught in the middle--between both conflicting internal Service demands, and the lack of separate Service cooperation on joint projects. These problems have led to false starts, cancelled procurements, and wasted resources by both military and industry. Additionally, program managers often are put into a "Catch-22" situation. Example: in a program's early stages they are told "don't criticize the program--or they'll cut off the money"; then later in the program's life, they are told "it's too late to criticize the program because we're already committed to it."

CULTURE AND ORGANIZATION

Better trained personnel is an essential first step toward creating an effective acquisition process, but other reforms also are necessary. Even if program managers have a well-trained support staff and themselves are experienced and motivated, cost overruns, inadequately tested weapons, lack of commonality among systems and poorly planned procurements would likely continue. The individual Services dominate the current process by which the U.S. buys weapons. This discourages cost consciousness; discourages joint projects; encourages procedures built on a strong foundation of loyalty to the Service; and obscures lines of authority and accountability. These tendencies make real improvements in the acquisition process difficult within the existing Service-dominated system.

For example, the individual military Services balk at cooperating in the development and production of common weapon systems. Sometimes the Services feel they will lose top jobs--and billets for admirals and generals--if programs are combined; at other times they genuinely doubt that another Service can perform the job adequately. An Army-Air Force program to develop a Joint Tactical Missile System (JTACMS)--the next generation of tactical missile--has joined a long list of programs on which independent-minded Services have successfully resisted DoD efforts to encourage money-saving cooperation. Even successes lack luster. A General Accounting Office (GAO) report on Joint Major Systems Acquisition notes that when the Navy was forced to procure an Air Force aircraft--the YF-17 lightweight fighter--they completely redesigned it and produced the F-18. The Air Force, when required to buy the Navy's A-7, so customized it that they doubled its cost and reduced common parts to 40 percent.

The same GAO report found that Services often simply cannot agree on a list of requirements and features they want on new weapons. The report concluded that joint programs are a good concept and one that will probably become increasingly necessary due to the tremendous costs of producing modern weaponry. However, the GAO found the "idea not working...no combined system [is] operating in the field and a number of developing programs [are] in trouble." Concluded the GAO: "Fundamentally, the services are opposed to joint programming."[7]

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[7] General Accounting Office, "Joint Major Systems Acquisition By the Military Services: An Elusive Strategy," December 23, 1983, p. 8.

This reluctance to cooperate and the resulting highly decentralized control has made it extremely difficult for the Secretary of Defense adequately to control and ensure the efficient management of weapon acquisition programs. Stated the Grace Commission's final report on the Office of the Secretary of Defense:

> Many of the people who spoke with us noted that, in many respects, the Services have never really accepted the need for the existence and long term viability of the Office of the Secretary of Defense. In the view of many observers, the services simply do not accept the statements of the Secretary of Defense as final, and mnagement throughout OSD does not believe the Secretary of Defense has effective authority over the services.

CONCLUSION

If people are at the heart of the acquisition process, the controlling arm of acquisition should be the program manager. The program manager must have a broad acquisition background. To ensure this, multi-disciplined career paths must be instituted. This would allow four to five year program management tours and would help create a "winners culture" that allows people to be utilized to their full potential. Acquisition management is an area, moreover, where it is essential that military officers be allowed to specialize. At mid-career, after ten to fifteen years in uniform and after having qualified in the combat or support specialties, selected officers should be invited to specialize in acquisition management. They should expect to work in that discipline for the balance of their careers, looking forward to promotion to higher ranks in the acquisition area. As in the private sector, program managers should be allowed to grow with their programs. Noted the Grace Commission:

> We have determined from private sector sources that industry keeps employees in positions on an average of 8 years for projects and operations of less financial magnitude and complexity than major defense systems.

Currently the average military program manager has one-third the experience of his industrial counterpart. For the government to assure that they are dealing on equal footing with industry, they must provide program continuity and career acquisition positions. A Navy report highlighted the importance of this and noted industry "disappointed at the naivete of these personnel in the business management arena."[8]

Program managers must become the focal point for program decisions. In addition to career paths in acquisition and longer assignment periods, both the present acquisition policy and the functional elements of the acquisition policy need to be restructured.

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[8] J.F. Groson and J. Augusta, "Navy Acquisition Cost Study," March 10, 1981, p. 5.

Specifically, the Services should reexamine their selection procedures, career training, and in-job tenure of their program organizations. Program managers, to be effective, need knowledge of the Pentagon acquisition process, experience in dealing with industry, and systems engineering and management capability. Moreover, they must be granted the authority already provided by DoD to make schedule/cost decisions that will insure that the program office is the key decision-making nexus.

If the Services do not address this issue adequately, the Congress and DoD should consider the creation of a civilian acquisition agency or agencies, such as recommended by Senator Roth and the Grace Commission.

RECOMMENDATIONS

- Effective and efficiently run programs require program management that comes from practical experience and training. Program management must be made a major career path for both military and civilian personnel with promotion within the assignment possible and encouraged.
- Progressive assignments in procurement and technical work should precede assignments as deputy program manager or program manager. This provides not only experience, but is a method for identifying the most capable program managers.
- Assignment duration must be lengthened. Program managers must be involved in the formulation of the requirements and be retained through full-scale engineering development or some other logical program break point. Assignment tenure must be related to logical milestones in the program rather than to a calendar time or promotional reassignment. Qualified officers must spend enough time on the job to have their impact felt and to be accountable for the results.

Prepared for The Heritage Foundation by
C. Lincoln Hoewing
Legislative Assistant to
Senator William V. Roth, Jr.

Defense Assessment Project Papers:

No. 1. Theodore J. Crackel, "Reforming 'Military Reform,'" Heritage Backgrounder No. 313, December 12, 1983.
No. 2. Robert K. Griffith, "Keeping the All-Volunteer Force Healthy," Heritage Backgrounder, No. 353, May 18, 1984.
No. 3. J.A. Stockfisch, "Removing the Pentagon's Perverse Budget Incentives," Heritage Backgrounder No. 360, June 19, 1984.
No. 4. Mackubin Thomas Owen, "The Utility of Force," Heritage Backgrounder No. 370, August 1, 1984.
No. 5. Richard L. West, "Military Compensation: A Key Factor in America's Defense Readiness," Heritage Backgrounder No. 387, October 18, 1984.
No. 6. Anonymous, "The Advantages of Two-Year Budgeting for the Pentagon," Heritage Backgrounder No. 391, November 5, 1984.