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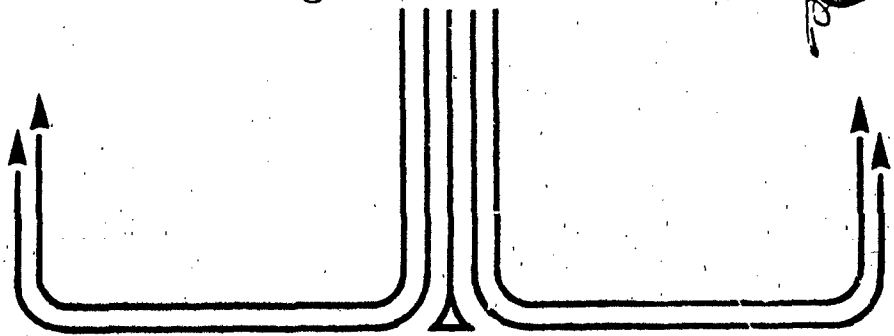
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STUDENT REPORT
IMPACT OF PERSONNEL UTILIZATION ON
PROGRAM MANAGER EXPERTISE
MAJ JOHN E. MEEUWISSEN 85-1845
"insights into tomorrow"

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REPORT NUMBER 85-1845

TITLE IMPACT OF PERSONNEL UTILIZATION ON
PROGRAM MANAGER EXPERTISE

AUTHOR(S) MAJOR JOHN E. MEEUWISSEN, USAF

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Submitted to the faculty in partial fulfillment of
requirements for graduation.

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<p>The purpose of this Staff Analysis Project is to define a balanced and standardized mix of experienced military and civilian personnel in program/functional management positions at Aeronautical Systems Division (ASD). Effective program manager (PM) characteristics and DoD program management philosophy are examined. The current military/civilian mix of program/functional managers at ASD is analyzed. And some military and civilian PM constraints are discussed. Recommendations are that ASD should attempt to "balance" the military/civilian acquisition managers at approximately 60/40; while attempting to "maintain" the functional manager mix at 40/60.</p>			
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PREFACE

1. This Staff Analysis Project responds to a research topic found in the Air Force Business Research Management Center (AFBRMC) FY 84 booklet of proposed research topics.

2. The author requested and received sponsorship of AFBRMC. Management Center personnel provided contacts and assisted in developing data sources for which the author is grateful. The mission of AFBRMC is not only research assistance, but also the coordinating and marketing of research results to Air Force and DoD policy makers.

3. Although the author contacted the initiator of the research topic prior to commencing this project, it was later discovered that the initiator had wanted a study of middle and lower level program managers versus upper level program management. This Staff Analysis addresses only the senior level program managers (AFSC 29XX military equivalent). However, a Reservist study being conducted at Electronics Systems Division is focusing on middle and lower level program managers. The Reservist study headed by Major Gates is also under the sponsorship of AFBRMC, and it is hoped that these two studies in concert will address the topic in sufficient detail.

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ABOUT THE AUTHOR

Major Meeuwissen has had assignments in Air Training Command, Air Force Systems Command, and Military Airlift Command. A senior pilot with over 2400 hours flying time, he has flown the T-37, T-39, and C-141 aircraft. He has served as a T-37 instructor pilot, an acquisition project officer, a C-141 aircraft commander and research pilot, and most recently as a Test Wing Chief of Safety. Major Meeuwissen graduated from West Virginia University with a Bachelors Degree in Aerospace Engineering and a Masters Degree in Industrial Relations. He has completed Squadron Officers School and Air Command and Staff College by correspondence; is presently attending Air Command and Staff College in residence; and is enrolled in the Air War College correspondence program.

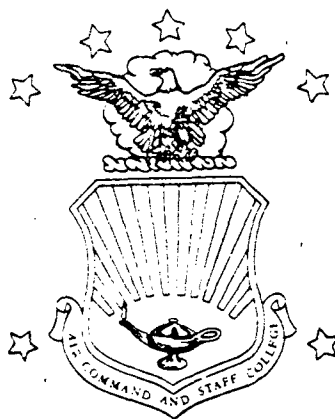
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EXECUTIVE SUMMARY

Part of our College mission is distribution of the students' problem solving products to DoD sponsors and other interested agencies to enhance insight into contemporary, defense related issues. While the College has accepted this product as meeting academic requirements for graduation, the views and opinions expressed or implied are solely those of the author and should not be construed as carrying official sanction.

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REPORT NUMBER 85-1845

AUTHOR(S) MAJOR JOHN E. MEEUWISSEN, USAF

TITLE IMPACT OF PERSONNEL UTILIZATION ON PROGRAM MANAGER EXPERTISE

I. Purpose: To define a balanced and standardized mix of experienced military and civilian personnel in program/functional management positions at Aeronautical Systems Division (ASD).

II. Problem: There is a genuine concern within the ASD community that military personnel mobility requirements negatively impact the development and production phases of the acquisition life cycle of ASD programs.

III. Data: Effective program manager (PM) characteristics can best be summarized by having the proper mix of experience, education, management and technical expertise, and solid personal characteristics. DoD program management philosophy sets up a PM career field for military and civilian personnel based upon management principles and positive personal characteristics. The present breakout of acquisition management PMs at ASD is 62 military and 23 civilian. The functional management mix is 20 military and 29 civilian. The major military PM constraints are tenure, bureaucracy, and advancement; while for the civilian PM it is mobility, operational experience, and background.

IV. Conclusions: A successful DoD PM has integrity, intelligence, emotional stability, drive, motivation, and basic

CONTINUED

managerial aptitude. The current ASD mix of military/civilian acquisition managers is 73 percent military and 27 percent civilian. The current ASD mix of functional managers is 41 percent military and 59 percent civilian.

V. Recommendations: ASD should attempt to "balance" the mix of military/civilian acquisition managers towards 60 percent military and 40 percent civilian. ASD should attempt to "maintain" the mix of military/civilian functional managers at 40 percent military and 60 percent civilian.

Chapter One

INTRODUCTION

BACKGROUND

The idea for this Staff Analysis Project came from the Air Force Business Research Management Center FY 84 booklet of proposed research topics. The topic contained the following information:

Title: Impact of Military Personnel Utilization on Program/Functional Manager Expertise in Aeronautical Systems Division (ASD) Program Offices.

Objective: Develop standard guidelines and a methodology for forecasting the optimum mix of military and civilian program/functional managers required to maintain an effective level of expertise within ASD. Assess the impact of military personnel mobility on ASD's manpower resources and ability to provide effective and timely mission support.

Background: A balanced and standardized mix of experienced military and civilian personnel in program/functional management positions is essential to the ASD mission. However, military personnel mobility requirements have decreased the growth and availability of experienced personnel to support the ASD mission. There is evidence that the loss of experienced military personnel through reassignment and retirement has degraded the support required to manage the development and production phases of the acquisition life cycle of ASD programs.

Further analysis by the author indicated that the Directorate of Program Control in the Deputy for Aeronautical Equipment (ASD/AEPP) proposed the research topic. In conversing with the topic originator, the author determined topic validity. There is a genuine concern within the ASD community that military personnel mobility requirements negatively impact the development and production phases of the acquisition life cycle of ASD programs. It takes a long time to fully train an experienced program manager according to various DoD sources -- approximately 24 months. (8:2-15; 9:--; 13:--; 15:12-13) The normal chain of events reveals that the

program manager will be reassigned or possibly retire to civilian industry at about the 24-month point. It should be noted that this study is not merely another attempt to resurface the question of more civilian program managers; but rather analyzes the ASD situation and suggests some viable approaches.

In his request for sponsorship to the Air Force Business Research Management Center, the author cited not only an interest in this particular subject, but the inclusion of a "lessons learned" aspect as well. Serving as a Configuration Management Officer (AFSC 2724) in both the F-15 and F100 Engine System Program Offices (SPOs) and a Country Program Manager (AFSC 2724) in the F-16 SPO, the author understands the ASD community. Working directly for five program managers (PMs) over a span of almost six years, and being acquainted with the way in which other countries perceive program management, the author uses this experience to research and analyze the topic.

PROBLEM STATEMENT

To fulfill the requirements for the Staff Problem Solving Project, the author defined the problem statement. Careful analysis of the proposed research topic, objective, and background yielded the following problem statement:

Can a balanced and standardized mix of experienced military and civilian personnel in program/functional management positions within Aeronautical Systems Division (ASD) be developed?

The logical flow to solve the problem involved: (1) analyzing effective program manager characteristics, (2) determining the current ASD scenario, (3) examining the constraints and options available, and (4) deriving the optimum mix. Remaining chapters of this Staff Analysis Project discuss these elements in detail. The objectives of the study, however, will be introduced here.

ANALYSIS OBJECTIVES

The first objective involves analyzing effective program manager characteristics of military and civilian program managers. Chapter 2 examines various management books and periodicals to ascertain effective program manager characteristics vis-a-vis Department of Defense Directives.

The second objective involves analyzing data to determine the current ASD scenario of program/functional managers. Chapter 3 provides the current military/civilian mix for both management categories and examines three ASD program manager

profiles. These data are specific to the ASD organizational chart, and include (85) acquisition program managers, (14) specialized support program managers, and (35) functional program managers.

The third objective examines the constraints to effective program management. Chapter 4 provides the constraints of military, civilian, and proposed "superagency" program management; and lists options to include "lessons learned" data.

The final objective selects and substantiates an optimum mix of military and civilian program/functional managers within ASD. Chapter 5 presents the conclusions, findings, and recommendations of the research.

Chapter Two

PROGRAM MANAGER (PM) CHARACTERISTICS

MANAGEMENT PRINCIPLES

Peter F. Drucker stated that the job of the executive is to be effective, and effectiveness is getting the right things done. (1:23) He assured his readers that effectiveness can be learned through five practices or habits of the mind: know where time goes, focus on outward contribution, build on strengths, set priorities, and make effective decisions. The first two items -- managing the little time the manager can control and focusing on the manager's particular contribution -- have special relevance for program managers. Due to briefings, reporting, and budget presentations, the program manager has a negative time control factor but a positive program image capability. One PM put it this way, "The program manager's main job is to make the program look good. The program manager has to be the outside man -- the salesman, if you wish to call him that -- and his deputy should run the in-house work." (13:33)

Transitioning from the "executive view" of program management to basic principles, Robert E. Donovan succinctly presented his Ten Principles of Program Management in a recent issue of The Military Engineer.

(1) The PM's authority is clearly recognized by all organizations with which he is involved. This should prevent co-located project employees from being home office influenced (i.e. engineers assigned to a Systems Program Office or SPO would be responsible to the PM). (5:339)

(2) The PM has over-all technical, cost, and scheduling responsibility for the project. This does not mean that the PM has to be a technical expert or a professional logistician, but needs to be well enough versed in these disciplines to be effective. (5:339)

(3) The PM breaks the project down into subprojects that can be assigned to various subordinate individuals. The PM's management team derives a "work breakdown structure" and assigns responsibilities to individuals. (5:340)

(4) The PM obtains the necessary technical, cost, and scheduling commitments to support the project. The rule is to establish milestones through scheduling and obtain supporting commitments. (5:340)

(5) Project commitment accomplishment is a measure of performance, and poor performance should be penalized. The PM stresses punctuality from the beginning, whether dealing with the contractor or an employee -- continual feedback is the key. (5:341)

(6) Unsatisfactory performance is immediately highlighted to the responsible manager. The PM can more easily solve problem issues when they first appear rather than waiting for a formal or informal review. (5:341)

(7) Persons responsible for any part of the project stay on it long enough so that their commitments are meaningful. This particularly applies to the PM and key management personnel. Mr. Donovan feels that on major projects such as the development of a new weapons system, assignments of three to five years are desirable. "Success is dependent on ensuring that responsible personnel stay long enough that the accomplishment of their assignments can be used as input to performance measurement. This evaluation applies to the PM as well as to other key personnel." (5:341)

(8) The PM establishes priorities in case of conflicting work requirements, is aware of the schedule versus requirements, and makes appropriate decisions. (5:341)

(9) "The schedules and budgets established for control of the project must be realistic." (5:342) The PM is responsible for the accuracy of the schedules and budgets briefed both internally and externally. (5:342)

(10) "The PM must have the necessary administrative support to allow him to monitor and control schedules, budgets, and technical changes." (5:342) It is important that timely administrative support keeps the PM highly informed. (5:342)

DoD PROGRAM MANAGEMENT PHILOSOPHY

Drucker's views and Donovan's principles of program management relate logically to Department of Defense philosophy on the subject. DoD Directive (DoDD) 5000.23 establishes policies for selection, training, and career development of DoD personnel who are required for the management of major defense systems acquisition. The directive requires that career fields be developed and

maintained within the field of system acquisition management. The directive also requires that career opportunities be established by the Military Departments to attract, develop, retain, and reward outstanding military or civilian program managers and their principal assistants. Furthermore, opportunities for advancement for those in this career program must be equivalent with those of contemporaries in operational, line, and command positions. The professional education and training program for the program manager includes attendance at the Defense Systems Management College (DSMC) 20-week Program Management Course. (15:01)

A DoD Audit Report of the DoD Systems Acquisition Management Career Programs, dated 7 June 1983, reported that the Air Force's military officer program fully implemented DoDD 5000.23 and its civilian personnel program partially implemented the directive. The report also noted that the Air Force had a separate systems acquisition career field in the Air Force Systems Command (AFSC) for attracting, developing, retaining, and rewarding program managers. The Air Force used the term Systems Program Director (SPD) for this field rather than program manager. AFSC developed officers in numerous career fields for systems acquisition management. Officers seeking careers in systems acquisition management usually started out in a scientific-related specialty or a development engineering specialty. The officers generally remained in those specialties until they reached the rank of major or lieutenant colonel. After that, the officers usually transferred to an acquisition program management specialty, which trained them in managerial and leadership roles needed to become an SPD. AFSC provided training for its potential acquisition managers through the Air Force Institute of Technology and the Program Management Course at the DSMC. (8:3-5; 15:12)

In late 1978 and in response to DoDD 5000.23, AFSC established the Systems Acquisition Career Management Program for Civilians (SACMPC). The SACMPC recruited civilians with systems acquisition-related experience or education into senior program management positions at the GS-12 or GS-13 grade entry levels. Recruited individuals had prior experience in either engineering, science, contracting, or budget analysis. Prior to the SACMPC program, the Air Force had no system of career progression for civilian employees in acquisition management. (15:13,14)

PROGRAM MANAGER CHARACTERISTICS

Effective program manager characteristics can best be summarized by having the proper mix of experience, education, management and technical expertise, and solid personal

characteristics. A May 1974 AFSC study concluded that the most desirable career experience and education are program office experience, an Air Staff assignment, a Master's degree in management or engineering, and corresponding PME. (9:--)
The DSMC Program Management Course is the most desirable form of specialized training. For rated officers interested in acquisition management, they should spend all supplement tours in jobs that contribute to their development as acquisition managers. (9:--). In the area of personal characteristics, a DSMC study asked program managers to rank order their choices. The following depicts their choices ranked in order of importance: (19:--)

- (1) Ability to identify problems.
- (2) Overall high communication skills abilities.
- (3) Ability to think imaginatively.
- (4) Ability to think in very wide ranges.
- (5) High ability in interpersonal relations.
- (6) Ability to interface with high ranking officers/officials.
- (7) High persuasive abilities.

Simply stated, in order to be an effective program manager, one must have integrity, intelligence, emotional stability, drive and motivation, and basic managerial aptitude. (22:7-8)

SUMMARY

The focus of this chapter is to establish some basic management principles relative to program management; play these against DoD program management philosophy; and arrive at some viable PM characteristics. DoD program management philosophy is the key in that it sets up a PM career field based upon management principles and positive personal characteristics. Chapter 3 examines the current Aeronautical Systems Division management scenario, highlights three PM profiles, and determines the current mix of military and civilian program/functional managers.

Chapter Three

CURRENT ASD SCENARIO

BACKGROUND

Information for this chapter is reflective of three primary sources -- ASD Management Roster (Jan 84), ASD Organizational Chart (Apr 84), and ASD Data Book (Jul 84). The Aeronautical Systems Division organizational structure is composed of: Command, Specialized Support, Acquisition Management, Operations, Functional Management, Organizational Support, and the Wright Aeronautical Labs. The scope of this study is to key on program/functional management positions. Therefore, the areas of concern are Acquisition Management and Functional Management, to include Specialized Support.

ACQUISITION MANAGEMENT

The nine deputates which make up the ASD Acquisition Management organization are:

- Deputy for Aeronautical Equipment
- Deputy for Airlift and Trainer Systems
- Deputy for B-1B
- Deputy for Recon/Strike and Electronic Warfare Systems
- Deputy for Tactical Systems
- Deputy for F-16
- Deputy for Simulators
- Deputy for Strategic Systems
- Deputy for Propulsion

Each of these offices is not only managed by a highly successful PM, but very often contains additional program offices within the deputation. For example, in the Deputy for Aeronautical Equipment, there is the Life Support SPO, the Subsystems/Support Equipment SPO, the PRAM Program Office, and the Combat Identification SPO. Therefore, there are nine PM positions within the Deputy for Aeronautical Equipment -- three in the front office and the others in the four separate programs

Analyzing the nine deputates in the same fashion as the previous example, a military/civilian mix of PMs can be established. The format is as above but by two-letter

organization. See Appendix A.

ASD/AE	7 mil/2 civ
ASD/AF	9 mil/4 civ
ASD/B1	4 mil/1 civ
ASD/RW	7 mil/3 civ
ASD/TA	9 mil/5 civ
ASD/YP	7 mil/1 civ
ASD/YW	4 mil/1 civ
ASD/YY	9 mil/2 civ
ASD/YZ	6 mil/4 civ

This shows a present scenario of Acquisition Management PMs at ASD of 62 military and 23 civilian -- 73 percent versus 27 percent.

FUNCTIONAL MANAGEMENT

ASD Functional Management positions (to include Specialized Support) are more closely aligned to specific areas of expertise. The PM's responsibility could be considered as vertical management whereas the functional manager's responsibility equates to horizontal management. Analyzing the current ASD scenario of functional managers in the same fashion as with the Acquisition Management organizations, the following information was obtained.

ASD/AC	Comptroller	3 mil/4 civ
ASD/EN	Deputy for Engineering	6 mil/2 civ
ASD/PM	Deputy for Contracting and Manufacturing	2 mil/7 civ
ASD/XR	Deputy for Development Planning	5 mil/6 civ
ASD/AV	Assistant for Acquisition Management	0 mil/1 civ
ASD/AW	Deputy for Acquisition Support	0 mil/3 civ
ASD/AX	Deputy for Avionics Control	2 mil/4 civ
ASD/AL	Deputy for Acquisition Logistics	2 mil/2 civ

The ASD Functional Management mix is 20 military and 29 civilian -- 41 percent versus 59 percent.

SELECTED PM PROFILES

Three military PM profiles are presented here for analysis. They are considered representative of successful SPO directors and chosen due to availability.

Educ	Airlift/Trn	Tactical Sys	F-16
	BS Math	BS Arch Engr	BS Mil Science
	MBA	BS Aero/Mech Engr	MS Systems Mgmt
PME	SOS	SOS	DSMC
	ICAF	ACSC	ICAF
		ICAF	

Assign	HQ SAC	HQ AFSC	HQ AFSC
	SAC test force	B-1 SPO	A-10 SPO
	Air Staff	Minuteman SPO	F-16 PEM
	OSD(test)	M-X SPO	F-15 dep PM
	ASD	ASD/EN	F-15 PM
	C-X PM	AMRAAM PM	Dep for Tac Sys
Notes	Mgmt Medal for		test pilot
	Excell/EW 1978		
Tenure	Sep 80	Sep 83	Aug 83

In Chapter 2, AFSC philosophy on systems acquisition management careers stressed a scientific-related specialty, an MS in management or engineering, corresponding PME, an Air Staff assignment, and program office experience. Two additional notes were that DSMC is the most desirable specialized training and that rated officers who want to be PMs should spend all supplement tours in the acquisition management field. The three PM profiles analyzed above conform closely to the AFSC philosophy.

SUMMARY

This chapter is an attempt to acquaint the reader with the current ASD program/functional manager scenario. Emphasis is given to the various PMs in ASD acquisition management organizations. An analysis of the military/civilian mix of program/functional managers is presented and will be further addressed in Chapter 5. Three military PM profiles were examined vis-a-vis AFSC philosophy; civilian PM profiles were not available. Chapter 4 will determine the constraints and options on both military and civilian program managers, and begin the process of arriving at a balanced and standardized mix.

Chapter Four

CONSTRAINTS AND OPTIONS

OVERVIEW

The purpose of this chapter is to assimilate and examine known or perceived constraints on effective program management. Constraints are categorized under military, civilian, and Acquisition Superagency topics. Options suggested by various sources and the author are also introduced.

MILITARY PM CONSTRAINTS

Tenure -- "To get the best technical decisions from its program managers the Air Force must realize that these people need more time to learn their jobs." (21:95) This is by far the most criticized factor of military PMs. In a study that compared management tenure in a corporation versus an Air Force base, it was found that at mid-level positions 97 per cent of the corporation managers had over two years on the job, whereas only 49 per cent of the military managers had over two years on the job. (21:28) A more recent study of successful programs determined that continuity of key individuals is necessary, but not necessarily the continuity of the PM. (3:33)

OPTIONS: (1) Design of an effective job overlap program for the incoming PM (21:90) (2) Encourage associated follow-on assignments (21:90; practice of numerous allied Air Forces) (3) PM assignment rotation in concurrence with major program milestones (21:90)

Bureaucracy -- The aforementioned short tenure and subsequent high turnover of military PMs leads to more management dependence upon the directives, rules, and formal procedures typical of large bureaucratic organizations. (18:109) In his study, David I. Cleland asserted that the PM is positioned too low within DoD's organizational structure to be a true focal point for major program decisions. (4:289) Lack of program fiscal control, increased management layers, and overpowering evaluation-type agencies are further reasons why a PM cannot perform as the boss. (21:20) The layers of

management and numerous interfacing, but non-program related, agencies place a huge burden upon the military PM's limited time on the program. The energy and time devoted to satisfying the requests of outside agencies subtracts from the time available to actually run the program.

OPTIONS: (1) Increase military PM tenure as much as possible (2) Assign civilian deputy PMs to work the bureaucracy while the PM runs the program (3) Development of an Acquisition Superagency

Advancement -- A DSMC report indicated that military PMs are a very positive group of people who feel that program management is an extremely challenging and risky career field. (17:1) The respondents to this report felt they competed with Air Force contemporaries up to and including O-6, but they did not compete well for O-7 and above. This ties in directly to the fact that many military PMs consider their PM assignment to be more beneficial to their second career than to their Air Force career.

OPTIONS: (1) Assign more civilian PMs (2) Increase the retention of military PMs through promotion or job satisfaction (3) Pursue, to the maximum extent practical, a Logistics Management Institute formal recommendation that the services continue the upgrading of the rank of their PMs with special emphasis on assigning general/flag officers to manage the most significant programs (14:v)

CIVILIAN PM CONSTRAINTS

Mobility -- Various civilian personnel regulations denote a DoD encouragement of maximum assignment flexibility for civil servants to include mobility agreements. However, the common perception is that civilians have become extremely adept at homesteading. "In the private sector managers are expected to move as advancement opportunities open in the hierarchy of the corporation; failure to do so finishes your career as far as advancement is concerned." (20:31)

OPTIONS: (1) Assign civilian PMs through a six-year contract (25) (2) From the start, mobility would be a condition of acceptance for civilian PMs (20:32)

Operational Experience -- A statement of fact is that unless the civilian PM is retired military, he does not have user or operational experience. The military PM has a political advantage since the user feels that he is one of them. "The user seems to have stereotyped civilians as non-responsive, non-empathetic, and having no understanding of operational requirements." (20:32)

OPTIONS: (1) Assign a military deputy PM to satisfy interface deficiencies (20:32) (2) A professional civilian PM would be responsive and have empathy to the user's requirements (20:33)

Background -- This includes the educational, developmental, and managerial aspects of program management. As far as education, either the military or the civilian PM can acquire the accepted degrees in the technical and management fields. Developmental background is in favor of the military PM in that he would be able to be assigned to various functional areas to gain expertise. The civilian PM is normally entrenched within a particular functional area for the biggest part of his career. The managerial aspects of program management can be learned by either PM, but here again the military PM has a better chance of gaining management expertise due to unwritten DoD policy.

OPTIONS: (1) Development of a civilian PM career profile to include various assignments and managerial opportunities (24)

ACQUISITION SUPERAGENCY

"In these days of ever reducing DoD budgets, the rising costs of future weapons systems and the erosion of the services' laboratory systems, centralization provides a viable solution." (20:40) These words out of a 1977 report are taking on a new meaning with the current talk of an "acquisition superagency." It would be a centralized defense acquisition agency, run by a stable and elite corps of civilian procurement experts; and is billed as the best way to bring the spiraling costs of defense systems under control. The concept is viable BUT... Centralized management has seldom led to improved efficiency and soon loses its identity with both requirements and performance. Military backgrounds, experience, and know-how are at least as important as procurement skills for the acquisition manager making tradeoff decisions. A superagency concept would force valid differences in service requirements into a "one size fits all" joint program mold. The bottom line of all this is that given Congressional problems of program approval and support, a centralized defense superagency for acquisition promises to be far less effective, efficient, or attuned to either joint or service needs. (6:4)

SUMMARY

There are constraints to either military or civilian program management of DoD acquisition programs. Is it conceivable to counter the military PM tenure problem by simply assigning civilian PMs? For how long? Does the program manager need operational experience or should he be a strict bureaucrat? This chapter did not presume to answer all these questions, but is an attempt to examine the pros and cons of military versus civilian DoD program management. Chapter 5 interprets these constraints into the ASD scenario.

and suggests a possible approach to defining the optimum mix of military and civilian program/functional managers.

Chapter Five

CONCLUSIONS/FINDINGS/RECOMMENDATIONS

There is a natural tendency for the functional managers to standardize their operations or efforts, to perform to standards, or to build a standard model. A project (program) manager must, through his influence, force his functional areas to depart from a standard and build something that fits in with the other parts of the (program). Someone has to force these people to take action when these actions increase a functional manager's risk or use his resources at a greater rate than he would otherwise. The (program) manager's role is to balance this risk over all portions of the (program). Therefore, he must have authority to move quickly to balance his risk. (13:29)

OVERVIEW

The problem statement asked if a balanced and standardized mix of experienced military and civilian personnel in program/functional management positions within ASD could be developed. Realizing that this would be a highly subjective examination of the topic, the author chose to apply program management philosophy to the ASD scenario as much as possible. The first parameter was to examine the discipline of program management, both from a textbook perspective and a DoD perspective. The second parameter was to analyze the current ASD scenario of acquisition and functional managers. Next was an examination of the pros and cons of military versus civilian versus superagency PMs. The research answered the following questions:

What makes a successful DoD PM?

What is ASD's mix of military/civilian acquisition managers? Functional managers?

What are the benefits/drawbacks of military PMs? Civilian PMs?

CONCLUSIONS

A successful PM is "bright, flexible, intent on results, able to make right but timely decisions, (is in) good health, (has) business acumen, ... and should have some type of technical background." (3:36) A recent survey (7:23) asked government PMs what attributes or capabilities they felt were important for effective program management. Experience and technical background were tied for the number one answer. Experience includes schooling, job knowledge, understanding organizations, having Pentagon experience, and prior jobs in program offices or headquarters. The technical background referred to formal schooling. Leadership, integrity, intelligence, and drive were next. Also high on the list were decisiveness and operations experience. DoD PMs are often called upon to make decisions with limited data, and research indicates that functional managers cannot adapt to this role. (18:21) A successful DoD PM is all of the above.

The current ASD mix of military/civilian acquisition managers is 73 percent military and 27 percent civilian.

The current ASD mix of functional managers is 61 percent military and 39 percent civilian.

FINDINGS

The three military PM constraints of tenure, bureaucracy, and advancement are definitely interdependent with the three civilian PM constraints of mobility, operational experience, and background. It would be illogical for DoD to assign a civilian PM who has a limited background simply to overcome the military tenure constraint. In a similar fashion, the assignment of a military PM with operational experience does not guarantee success in the acquisition bureaucracy. And the lack of promotion potential or advancement does not translate into assigning a homesteading civilian PM to that position. Options presented with each constraint are not meant to be the only solutions. Neither is the formulation of an acquisition superagency the only solution. The purpose in listing options is simply to show that the constraints are not insurmountable.

RECOMMENDATIONS

ASD should attempt to "balance" the mix of military/civilian acquisition managers towards 60 percent military and 40 percent civilian. This statement is solely based on the current acquisition program profile at ASD. Realizing that a 60/40 split cannot be immediately achieved nor continuously kept due to particular program requirements,

this should be looked upon as a planning factor. The primary objective, in the author's opinion, is to make available to the ASD community a group of qualified, experienced, and motivated program managers. It has been shown that effective DoD PMs can be either military or civilian. At the present time, however, the balance is definitely in favor of the military PM. Civilian PM constraint can be overcome and civilian PMs must be afforded an opportunity to gain PM experience. Appendix B suggests possible PM positions which could lend themselves as a training environment for the civilian PM (or military). Applying the changes suggested in Appendix B will yield a perfect 60/40 split. It must again be stressed, however, that this recommendation is based upon the current workload of ASD programs. Program workload, program sensitivity, military requirements, etc. most definitely impact the suggested balance.

ASD should attempt to "maintain" the mix of military/civilian functional managers at 40 percent military and 60 percent civilian. The author's research indicates that this is not as volatile a topic as acquisition management. The trend is that civilian managers within DoD are accepted as functional managers primarily due to the fact that they remain in certain occupational areas for most of their career and become highly qualified experts. Research indicates that this is not a problem within DoD or at ASD.

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APPENDICES

Appendix A - PM Military/Civilian Mix

Appendix B - PM Military/Civilian Mix
Proposed Changes

Appendix A

PM MILITARY/CIVILIAN MIX

Deputy for Aeronautical Equipment (AE)	2 mil/1 civ
Life Support SPO	1 mil
Subsystems/Support Equipment SPO	1 mil
PRAM Program Office	2 mil
Combat Identification SPO	1 mil/1 civ
Deputy for Airlift and Trainer Systems (AF)	2 mil/0 civ
Directorate of Rescue/Special Ops	1 mil/1 civ
Directorate of Tanker Systems	2 mil
Directorate of C-5B	2 mil
Directorate of Specialized Systems	2 civ
Directorate of T-46A	2 mil/1 civ
Deputy for B-1B (B1)	2 mil/1 civ
Directorate of Projects	2 mil
Deputy for Recon/Strike and Electronic Warfare Systems (RW)	1 mil/1 civ
EF-111A TJS Program Office	2 mil
Strike Systems Program Office	1 mil/1 civ
Recon Programs Directorate	2 mil
Electronic Warfare SPO	1 mil/1 civ
Deputy for Tactical Systems (TA)	2 mil/1 civ
F-15 Systems Program Office	2 mil/1 civ
Fighter Attack Systems Prog Office	1 mil/1 civ
Maverick System Program Office	1 mil/1 civ
Tactical Programs Integration	1 mil/1 civ
Directorate of Tac Dvlp Plan	2 mil
Deputy for F-16 (YP)	4 mil/1 civ
Directorate of Dvlp Programs	2 mil
Directorate of Multinational Prgms	1 mil

Deputy for Simulators (YW)	2 mil/1 civ
Directorate of Strat and Arift Prgms	1 mil
Directorate of Tac and Trn Programs	1 mil
Deputy for Strategic Systems (YY)	2 mil/1 civ
Directorate of ALCM	2 mil
Directorate of B-52 Modernization	1 mil/1 civ
Directorate of Plans/Projects/Analysis	2 mil
Directorate of F-111 Avionics Mod Prgm	2 mil
Deputy for Propulsion (YZ)	2 mil/0 civ
New Engines Program Office	1 mil/1 civ
Arift and Trn Engines Prog Office	1 mil/1 civ
Tactical Engines Program Office	1 mil/1 civ
Strategic Engines Program Office	1 mil/1 civ

Appendix B

PM MILITARY/CIVILIAN MIX

PROPOSED CHANGES

Deputy for Aeronautical Equipment (AE) PRAM Program Office	fr 2 mil/0 civ to 1 mil/1 civ
Deputy for Airlift and Trainer Systems (AF) Directorate of Tanker Systems Directorate of C-5B	fr 2 mil/0 civ to 1 mil/1 civ fr 2 mil/0 civ to 1 mil/1 civ
Deputy for B-1B (B1) Directorate of Projects	fr 2 mil/0 civ to 1 mil/1 civ
Deputy for Recon/Strike and Electronic Warfare Systems (RW) EF-111A TJS Program Office Recon Programs Directorate	fr 2 mil/0 civ to 1 mil/1 civ fr 2 mil/0 civ to 1 mil/1 civ
Deputy for Tactical Systems (TA) Directorate of Tac Dvlp Plan	fr 2 mil/0 civ to 1 mil/1 civ
Deputy for F-16 (YP) Directorate of Dvlp Programs	fr 2 mil/0 civ to 1 mil/1 civ
Deputy for Simulators (YW)	NO CHANGE

Deputy for Strategic Systems (YY)

Directorate of ALCM

fr 2 mil/0 civ

to 1 mil/1 civ

Directorate of Plans/Projects/Analysis

fr 2 mil/0 civ

to 1 mil/1 civ

Directorate of F-111 Avionics Mod Prgm

fr 2 mil/0 civ

to 1 mil/1 civ

Deputy for Propulsion (YZ)

NO CHANGE

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