



**IMPLEMENTATION OF PERFORMANCE-BASED ACQUISITION IN
NON-WESTERN COUNTRIES**

THESIS

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AFIT/GLM/ENV/09-M01

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THESIS

Presented to the Faculty

Department of Systems and Engineering Management

Graduate School of Engineering and Management

Air Force Institute of Technology

Air University

Air Education and Training Command

In Partial Fulfillment of the Requirements for the
Degree of Master of Science in Logistics Management

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March 2009

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Abstract

“Performance-based acquisition (PBA)” means an acquisition structured around the results to be achieved as opposed to the manner by which the work is to be performed. Performance-based acquisition is a results-oriented acquisition strategy used to achieve innovative solutions in agency programs. Most military systems have been used for decades, so future planning of defense procurement is critically important. Performance-based acquisition is a strategic method to manage business by promoting flexibility and innovation and creating win/win solutions through effective communication, organizational goal alignment, and clear accountability among the buyer, seller(s), and subcontractors.

In this century, many governments are transitioning their acquisition strategy from traditional methods to performance-based methods. In 2000, the U.S. Department of Defense set a goal that a minimum of 50% of the service acquisitions would use performance-based acquisition methods by 2005. Do cultural differences have significant importance to the success of this new acquisition method? Applying PBA methods in those Western countries have shown successful results. What results can be obtained from applying this new strategy in non-Western countries? This study focuses on the success of performance-based acquisitions in non-Western countries.

I would like to dedicate this work to my grandmother who always told me the importance of education and prayed for me to get higher education.

Acknowledgments

I would like to express my sincere appreciation to my thesis advisor Lt. Col. R. David Fass, thank you for your continued support and encouragement throughout this research process. I would also like to thank Dr. Martha A. Cooper for your guidance and suggestions.

To my classmates, it has been a pleasure and a privilege to know and work with you. Thank you for making the experience of going “back to school” a memorable one. Best wishes to you all for happiness, health, and success in the future.

I am indebted to the Turkish Air Force and the great Turkish nation for providing me this wonderful Master’s program opportunity. My words of gratitude cannot express the feelings I carry for them.

Finally, I would like to thank my family for raising and supporting me all my life. My gratitude will be forever.

Fatih Cebeci

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IMPLEMENTATION OF PERFORMANCE-BASED ACQUISITION IN NON-WESTERN COUNTRIES

I. Introduction

Background

“It is the policy of the Department of Defense that, in order to maximize performance, innovation and competition, often at a savings, performance based strategies for the acquisition of services is to be used wherever possible. While not all acquisitions for services can be conducted in a performance-based manner, the vast majority can. Those cases in which performance-based strategies are not employed should become the exception. In order to ensure that the Department continually realizes these savings and performance gains, the DoD establishes, at a minimum, that 50 percent of service acquisitions, measured in both dollars and actions, are to be performance-based by year 2005.”

– Under Secretary of Defense, Acquisition, Technology & Logistics (USD (AT&L), April 5, 2000).

The trend toward the use of performance-based acquisitions (PBA) for U.S. government programs began in the late 1970's and early 1980's and has accelerated ever since. In September 1979, the U.S. Air Force adopted a comprehensive performance-based approach to contracting for base support services. Soon after, the Office of Federal Procurement Policy (OFPP) adopted the performance-based approach for government-wide use. In 1991, the OFPP issued a policy letter in response to growing concerns about the amount of money that agencies were spending to buy services and the quality of the

services they were receiving. In 1997, the Federal Acquisition Regulation (FAR) was amended to include formalized rules for PBA. Finally, in 2001, the Office of Management and Budget (OMB) issued a mandate that directed government agencies to increase their use of performance-based techniques on an aggressive schedule (Table 1).

Table 1. Office of Management and Budget Goals

Fiscal Year 2002	20%
Fiscal Year 2003	30%
Fiscal Year 2004	40%
Fiscal Year 2005	40% (Changed from 50% to 40% by OFPP)
Fiscal Year 2006	40%

Source: OMB Memorandum M-01-11 (2/14/01 memo) and M-01-15 (3/9/01 memo)

Since the publication of the Office of Federal Procurement Policy's (OFPP) policy letter 91-2, *Service Contracting*, on April 15, 1991, Performance-based services acquisition (PBSA) has been the U.S. government's preferred approach to service contracting.

Problem Statement

In this century, shrinking government budgets encourage agencies to find more cost-effective ways to obtain services. One way to do this is to focus on the results to be achieved (e.g. "statements of objectives") as opposed to the manner by which the work is to be performed (e.g. "statements of work"). Performance-based acquisition (PBA) is a

relatively new contracting method in the acquisition area designed to achieve this focus shift. Theoretically, programs using PBA methods ought to achieve greater performance at a lower cost than they would have otherwise. For instance, current expectations are that the F-35's life-cycle cost will be about 20% lower when compared to that of legacy systems such as F/A-16 and F/A-18 (Sols, Nowick, Verma, 2007). Additionally, the United Kingdom's Royal Air Force (RAF) is expecting to reduce the maintenance costs of E-3D Sentry Airborne Warning and Control System (AWACS) aircraft by 12 percent over previous similar systems. Finally, other countries such as Spain, Argentina, and Chile have been using PBA with the expectation of cost savings and performance improvements.

A key question, however, is whether all countries may apply PBA methods equally well, or in the same manner. Given cultural and socioeconomic differences between countries, is it even appropriate to use PBA in non-Western countries? Perhaps applying PBA methods in different countries will result in different outcomes. Before non-Western countries (such as Turkey) attempt to adopt PBA methods, acquisition professionals ought to analyze whether cultural and socioeconomic differences could hinder successful implementation.

The universality of business practices and employee attitudes has been the focus of most cross-national studies in recent decades. Since performance-based acquisition is relational and interactive compared to traditional acquisition methods, understanding cultural differences may give acquisition professionals insight for developing and managing the PBA environment in different countries. A better understanding of the effectiveness of managerial practices and the differences in employee attitudes could

make management of international organizations more effective (Ronen & Kraut, 1977). Countries or nations can be clustered by comparing on general attitudes towards work, or by using variables such as language, religion, or level of industrialization (Ronen & Shenkar, 1985). Clusters can be generalized to other nations or countries. Clusters can also be used to facilitate the success of PBA environment by explaining the variance in work goals and managerial attitudes. After a thorough literature review, Ronen and Kraut (1977) found eight cultural clusters based on variables such as work goals, need deficiency, fulfillment, and job satisfaction. Work goals are less constrained and they best represent the cultural environment of individuals, while work values are linked to cultural milieu and job individual's job behavior (Ronen & Shenkar, 1985). Additionally, each country has different regulations, different steps to execute the contracts, and different thresholds according to time, length, and urgency of the contract. To add to the complexity of this issue, many countries from different cultural clusters are acquiring the same weapon systems through joint venture acquisitions such as F-35 Joint Strike Fighter (JSF) and A-400M military transport aircraft. How will this affect the success or failure of the acquisitions?

Research Objectives/Research Questions & Hypotheses

The objective of this research is to examine the results of the performance-based acquisition (PBA) contracts in various countries and assess whether it would be beneficial to transition to PBA in countries that are currently using traditional (non-PBA) acquisition methods. Specifically, this research will attempt to identify: 1) key factors for

successful PBA implementation, and 2) problems and challenges to successful PBA implementation. The study is designed to help predict the success or failure of PBA methods in countries that are still using traditional (non-PBA) acquisition methods. To meet this research objective this study will focus on the following question:

➤ *Can performance-based acquisition methods be successfully used in non-western countries that are currently using traditional acquisition methods?*

To help to develop the main research question, this study will address the following investigative questions:

➤ *Q1: Which variables should be considered to monitor whether a contract is successful or not?*

➤ *Q2: Do cultural differences affect the success of PBA implementation?*

Research Focus

The focus of this research is to determine the key metrics for performance-based acquisition contracts and examine the applicability of the PBA contracts in different country's acquisition systems' (especially Turkey). In order to discover actual consequences of the PBA contracts this study will look into the completed contracts' results from different cultural clusters. What variables affect the PBA process and how those variables are implemented in different countries will be the focus of this study.

Methodology

This study will use qualitative methods, such as the grounded theory approach to theory development (Glaser & Straus, 1967), and the case study method of research (Yin, 2003). Using guidance from qualitative research literature, a semi-structured questionnaire was used as the data collection tool for the target question of the study. This questionnaire includes seven open-ended exploratory discussion questions. These questions were asked to program managers, contracting officers, project managers, and liaison officers. Data gathered from the interviews were transcribed into a Microsoft Excel spreadsheet and each sentence given a code in order to enable prediction and explanation of the answers. The results which will emerge from the categorized sentences will be analyzed using open coding.

Assumptions/Limitations

Although this study attempts to research whether performance-based contracts can be used or not in different countries, there are some gaps and limitations in the PBA field. The major limitations on this study are the difficulty of determining the success of the contract and collection of data on the PBA field. In order to set the success points of a contract there should be reference points or cost estimates about the contract. No one can say that a contract is successful or not by just looking at the cost of the contract. The second limitation is the difficulty of collecting data about the contracts. As the PBA contracts are “structured around the results to be achieved as opposed to the manner by which the work is to be performed,” those contracts are mostly huge contracts consisting

of hundreds, and sometimes thousands of pages (FAR Subpart 2.101). Performance-based acquisition is a new strategy in the acquisition field so implementing the performance is another difficulty for this study.

Implications and Summary

This study will provide insight to different countries' acquisition officers about the applicability of the PBA in their acquisitions. Because of the diminishing budgets, increasing defense expenditures, and goal oriented acquisitions focused on the results, agencies are transitioning their acquisition strategy into PBA. Determining the factors that are leading to success in acquisition environment will create rigorous environment for PBA. Determining the factors of the applicability of this new strategy will also make the acquisition officers decide whether to continue with the PBA or not.

This chapter provided a brief introduction to performance-based acquisition and articulated the research problem addressed by the study. A limited background concerning the study was presented and the basic methodology applied to the research was discussed. Chapter 2 provides a detailed literature review of applications of PBA, the importance of implementing PBA, and cultural issues related to PBA. Chapter 3 presents a full description of the methodology used for data collection and data analysis. Chapter 4 illustrates the results of this study and presents the analysis of data and findings. Finally, Chapter 5 provides the resulting conclusions of the study and outlines the limitations and recommendations for future research.

II. Literature Review

Introduction

This chapter reviews the literature relevant to the creation, implementation, and evaluation of performance-based acquisition (PBA). Because the U.S. Federal Government has mandated that agencies and departments comply with performance-based guidelines and requirements, particularly those outlined in the Federal Acquisition Regulation (FAR) and agency supplements, understanding and using performance-based acquisition methods is now required of acquisition professionals. The chapter begins with a definition of performance-based acquisition and then provides an overview of Federal acquisition regulations, laws, and policies. Next, the chapter explains the essential elements of performance-based acquisition. After discussing how cultural differences may affect the implementation of performance-based acquisitions outside of the United States, the chapter ends with a discussion of the benefits of PBA.

Definitions, Federal Regulations, Law, and Policies

According to the Federal Acquisition Regulation (FAR) Subpart 2.101, “Performance-based acquisition (PBA)” means an acquisition structured around the results to be achieved as opposed to the manner by which the work is to be performed. “Performance Work Statement (PWS)” means a statement of work for performance-

based acquisitions that describes the required results in clear, specific, and objective terms with measurable outcomes.

The U.S. Department of Defense (DoD) spends billions of dollars every year for acquisition of new major systems, and for the continuing maintenance, supply and support materials, transportation, construction, and employment of existing systems. According to the “National Defense Budget Estimates for FY 2009” book, DoD has planned to spend \$104.22 Billion for “Procurement” and \$180.42 Billion for “Operation & Maintenance” (NDBE FY2009, 2008). Because there is a great deal of political oversight of their spending from Congress, government agencies have incentive to try to control their costs and improve their acquisition outcomes. During the last couple of decades, there have been many changes in the U.S. government acquisition system designed to increase its efficiency. One such change is the shift toward performance-based acquisitions for services.

Since the publication of the Office of Federal Procurement Policy’s (OFPP) policy letter 91-2, *Service Contracting*, on April 15, 1991, Performance-based services acquisition (PBSA) has been the government’s preferred approach to service contracting. It requires specification of the results that contractors must produce instead of the processes that they must use. Acquisition managers, working-level agency acquisition personnel and contractors have spent a lot of energy on PBSA since 1991. The Federal Acquisition Regulation provides that when using PBSA, agencies must specify the service results (outputs, outcomes) they want in “clear, specific, and objective terms with measurable outcomes.” They must prepare performance work statements and quality assurance surveillance plans, use performance incentives when appropriate, and inspect

and compensate contractors based on their work products rather than their work processes (Edwards et.al, 2007).

The 1991 OFPP policy letter was a response to growing concerns about the huge amounts of money that agencies were spending to buy services and the perceived low quality of the services they were receiving. Agencies were slow to respond to the policy letter. Although the letter called for FAR implementation before the end of 1991, it was not until 1997 that the FAR was amended to include rules for PBSA. Since then, agencies have tried to use the technique, but the results have been disappointing. Government acquisition officials and industry representatives have expressed doubts about the success of PBSA. In July 2003, an interagency team assembled by OFPP recommended additional minor changes to the FAR, which were published in December (Edwards et al., 2007).

Federal Regulations

Federal Acquisition Regulation (FAR) Part 37 provides the policies and procedures for service contracting and performance-based acquisition (PBA). FAR Subpart 37.101 defines a service contract as “a contract that directly engages the time and effort of a contractor whose primary purpose is to perform an identifiable task rather than to furnish an end item of supply.” This part also notes that service contracts may be either a nonpersonal or personal contract, and can also cover services performed by either professional or nonprofessional personnel whether on an individual or organizational basis.

Importantly, the FAR indicates that performance-based acquisition is the preferred method for acquiring services according to “Public Law 106-398, section 821.” FAR 37.102 obligate agencies to use performance-based acquisition methods to the maximum extent practicable when acquiring services, excluding:

- (1) Architect-engineer services acquired in accordance with 40 U.S.C. 1101,
- (2) Construction,
- (3) Utility services,
- (4) Services that are incidental to supply purchases.

In addition, FAR Subpart 37.102 establishes that the agencies must use the following order of precedence when acquiring services:

- (1) A firm-fixed price performance-based contract or task order.
- (2) A performance-based contract or task order that is not firm-fixed price.
- (3) A contract or task order that is not performance-based.

This order of precedence shows that DoD gives top priority to PBA contracts and preferably using firm-fixed price. The last resort for awarding contracts or task orders is non-performance based acquisition.

Finally, FAR Subpart 37.106 further prescribes the policies and procedures for acquiring services using PBA methods. This part indicates that performance-based contracts for services shall include the following:

- (1) A performance work statement (PWS);
- (2) Measurable performance standards (i.e., in terms of quality, timeliness, quantity, etc.) and the method of assessing contractor performance against performance standards; and

(3) Performance incentives where appropriate. When used, the performance incentives shall correspond to the performance standards set forth in the contract.

DoD Guidance - Seven Steps to Performance-Based Services Acquisition

Over the last decade and a half, innovators in Congress and the executive branch have reformed the laws and policies that govern Federal acquisition. Among the most important of these reforms are the Government Performance and Results Act of 1993, the Federal Acquisition Streamlining Act of 1994 (FASA), and the Clinger-Cohen Act of 1996. All of these laws send an important message about performance in federal programs and acquisitions. The aforementioned OFPP Policy Letter 91-2, Service Contracting,” established that:

It is the policy of the Federal Government that (1) agencies use performance-based contracting methods to the maximum extent practicable when acquiring services, and (2) agencies carefully select acquisition and contract administration strategies, methods, and techniques that best accommodate the requirements.

The intent is for agencies to describe their needs in terms of what is to be achieved, not how it is to be done. These policies have also been incorporated in the Federal Acquisition Regulation Subpart 37.6 (Performance-Based Contracting).

Performance-based service acquisition has many benefits. These benefits are listed in Table 2:

Table 2. Benefits of Performance-Based Acquisition

1	Increased likelihood of meeting mission needs
2	Focus on intended results, not process
3	Better value and enhanced performance
4	Less performance risk
5	No detailed specification or process description needed
6	Contractor flexibility in proposing solution
7	Better competition: not just contractors, but solutions
8	Contractor buy-in and shared interests
9	Shared incentives permit innovation and cost effectiveness
10	Less likelihood of a successful protest
11	Surveillance: less frequent, more meaningful
12	Results documented for Government Performance and Results Act reporting, as by-product of acquisition
13	Variety of solutions from which to choose

(Source: www.acqnet.gov/comp/seven_steps)

The federal acquisition workforce has not fully embraced performance-based acquisition (www.acqnet.gov). The main reason is that traditional “acquisition think” is entrenched in the workforce of the acquisition staff. Performance-based acquisition is a collective responsibility that involves representatives from budget, technical, contracting, logistics, legal, and program offices. It is difficult for an agency to assemble a team of people who together have the knowledge to drive such an acquisition through to successful contract performance. Performance-based service acquisition can be daunting, with its discussion of work breakdown structures, quality assurance plans, and contractor surveillance.

The foundation for a successful acquisition involves a clear answer to three questions: *what do I need, when do I need it, and how do I know it is good when I get it?*

DoD's virtual guide (www.acqnet.gov) breaks down performance-based service acquisition into seven simple steps, complete with "stories" (case studies). These steps are:

1. Establish an integrated solutions team
2. Describe the problem that needs solving
3. Examine private sector and public sector solutions
4. Develop a performance work statement (PWS) or statement of objectives (SOO)
5. Decide how to measure and manage performance
6. Select the right contractor
7. Manage performance

The intent is to make the subject of performance-based acquisition accessible for all and shift the paradigm from traditional "acquisition think" into one of collaborative, performance-oriented teamwork with a focus on program performance, improvement, and innovation. Performance-based acquisition offers the potential to dramatically transform the nature of service delivery, and permit the federal government to tap the enormous creative energy and innovative nature of private industry.

Essential Elements of Performance Based Acquisition

In both public and private sectors, performance-based acquisition is viewed as a strategic method to manage business by promoting flexibility, innovation, and creating win/win solutions via improved communications, organizational goal alignment, and clear accountability, between the buyer, seller(s), and subcontractors (Garrett, 2005).

Acquisition professionals in both industry and government accept performance-based acquisition as a desired method in order to increase performance by promoting flexibility through effective communication. According to experts in US federal government contracting and acquisition management, the essential elements of PBA are: performance requirements, performance standards, performance measures and metrics, contractual incentives, and appropriately tailored terms and conditions that are specific to the unique acquisition environment (Garrett, 2005).

Performance-based acquisition is sometimes referred to as performance-based services acquisition, performance-based contracting, or performance-based services contracting. As previously stated, performance-based contracting is an acquisition method that structures all aspects of an acquisition around the purposes of the work to be performed as opposed to either describing the manner by which the work to be performed, or with broad or imprecise statements of work (Straight, 2006). Ronald L. Straight explains the primary essential elements of performance-based contracting as:

- Describing the requirements in terms of results rather than methods of performance,
- Using measurable performance standards (e.g., terms of quality, timeliness, etc.) and quality assurance surveillance plans,
- Including performance incentives where appropriate (positive and negative).
- The Federal Acquisition Regulation also cites four elements of

Performance Based Services Acquisition:

- (1) Describing results in terms of results rather than methods of performance

- (2) Using measurable performance standards and quality assurance plans
 - (3) Specifying procedures for price or fee reductions when requirements are not met
 - (4) Including performance appropriate incentives where necessary
- Finally, Garrett's text defines clear and simple elements for performance-based acquisition. .Garrett presents these elements as essential to success (Figure 1).

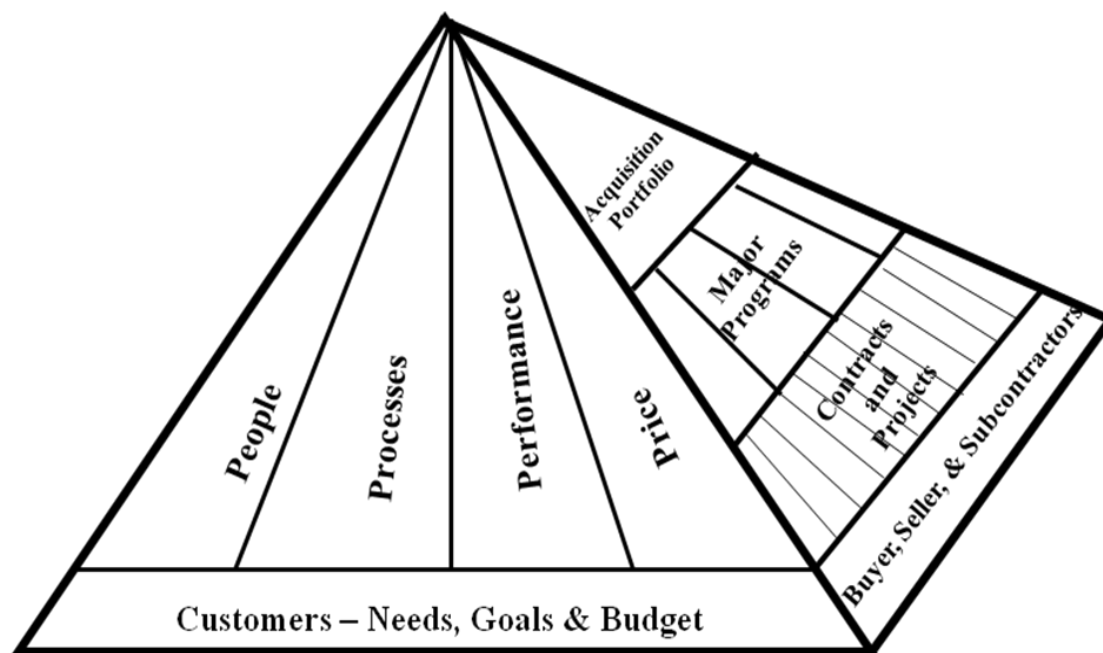


Figure 1. Model of Essential Elements of PBA (Garrett, 2005)

The first element of Garrett's model is *people*, and he emphasizes that the quality of people is much more important than the quantity. Obviously, the quality of an acquisition team is important, but if there are not enough people to execute the acquisition, the program might fail. Therefore, there is always trade-off between the

quality of the team and the quantity of the team. Garrett's second element is *processes*, as many acquisitions are complex, challenging, and need to be well organized. In a complex acquisition environment, it is critical to have and develop well-defined, documented, communicated, and effectively implemented processes for leveraging competitive advantages, managing opportunities and risks, and integrating various functional areas. Using enterprise software applications, many companies facilitate more disciplined and integrated use of business processes. The third essential element of performance-based acquisition is *performance*. Organizations use various performance report cards or balanced scorecards to evaluate or assess the ability of their organization, their suppliers so they can meet or exceed their diverse acquisition-related goals. In a performance-based acquisition, defining the performance metrics is critical for the success of the acquisition program. The fourth and final essential element of performance-based acquisition according to Garrett is *price*. In an acquisition program, the right people will develop the right processes, those elements will drive the right performance, and performance will drive the right pricing strategy, methods, and arrangements. The pricing strategy is usually determined according to the performance measures and market related factors.

The Performance-based management process/handbook (1997) presents another model of successful performance-based acquisition programs consisting of six disciplines as shown in Figure 2.

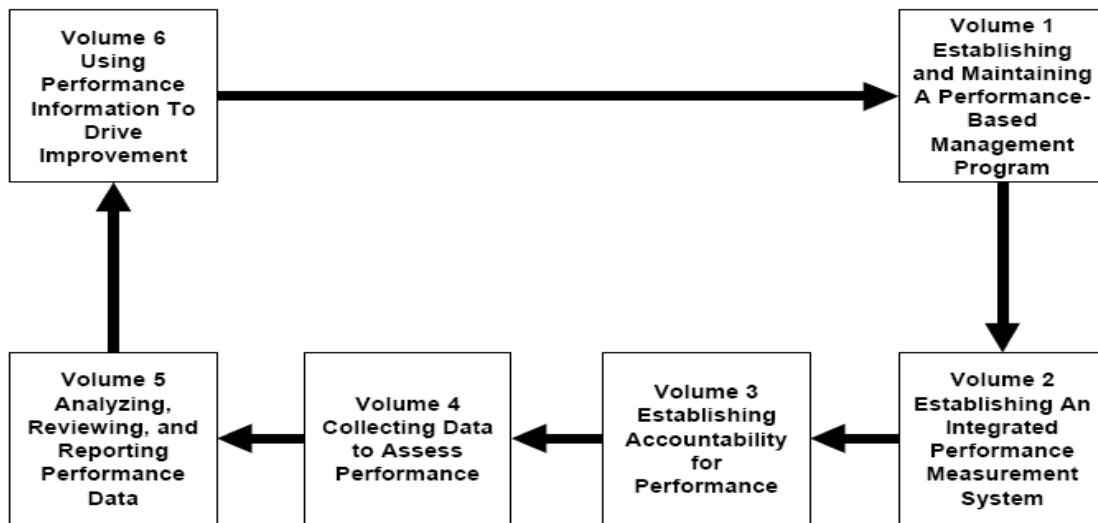


Figure 2. Performance-Based Management Process/Handbook Model (1997)

Applying these six disciplines of performance-based management to contract management helps drive performance and results throughout an agency's culture and business operations and enhances the achievement of mission results (Reed & Carter, 2004). Specifically, the steps outlined in the handbook are as follows:

1. Cultural Transformation: Proactively manage the organizational and cultural changes integral to the success of the initiative,
2. Strategic Linkage: Provide a consistent vision throughout the organization, making sure the desired results reflect organizational strategic goals,
3. Governance: Establish roles, responsibilities, and decision-making authorities for project implementation,
4. Communications: Identify the content, medium, and frequency of information flow to all stakeholders;

5. Risk Management: Identify, assess, monitor, and manage risks; and
6. Performance Monitoring: Analyze and report status--cost, schedule, and performance--on a regularly scheduled basis during project execution (PBM Handbook, 2001).

The National Performance Review (NPR) Performance Measurement Study Team built a Performance Measurement Process Model that was published in a June 1997 report. This report provided a useful frame of reference for performance measurement in government organizations. The intergovernmental benchmarking team was comprised of representatives from 14 U.S. federal agencies, six Canadian government agencies, the United Kingdom, and two local governments in the United States. The team worked with 32 study partners drawn from more than 100 organizations considered best-in-class in the area of performance measurement (NPR Report, 1997). Based on the survey results, the NPR report recommends that organizations should measure performance in the following ways:

- setting goals and standards,
- detecting and correcting problems,
- managing, describing, and improving processes,
- documenting accomplishments (NPR Report, 1997)

Additionally, the report analyzed performance management and various public agencies' management processes. The report also developed a performance measurement model that explains the steps, phases, and considerations involved in performance measurement. The model, presented in Figure 3, illustrates the basic stages and flow of the performance measurement process.

Performance Measurement Process Model

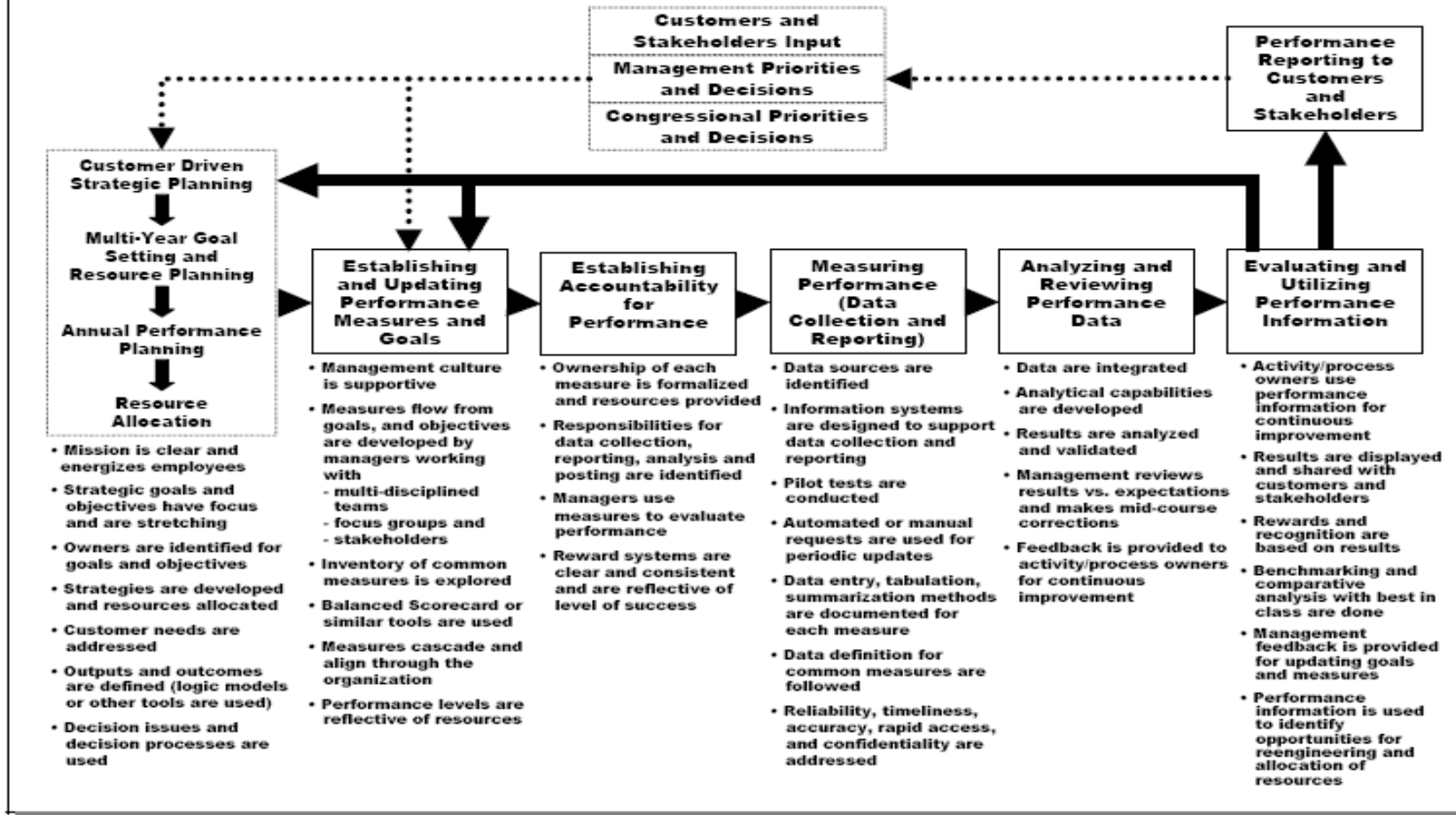


Figure 3. NPR Performance Measurement Process Model (1997)

Importance of Performance Based Acquisition

Performance-based practices are expected to help the Department of Defense (DoD) improve performance, encourage innovation, and increase competition in services, often at a reduced cost to the government (Gansler, 2000). The Air Force purchases a broad range of services to support its installations, military and civilian employees, and primary war fighting capabilities. Initial performance-based services acquisition implementation efforts focused on installation support services purchased through operational contracting activities (RAND, 2003).

The original PBA performance goals were reviewed and a new goal was set by the Office of Management and Budget to encourage the acquisition workforce, including program and project managers, to employ PBA methods on service acquisitions. The memorandum was signed by Paul A. Denett, Administrator of Office of Management and Budget from the Executive Office of the President. In fiscal year FY2006, agencies were required to apply PBA methods on 40 percent or more of their eligible service actions over \$25,000, to include contracts, task orders, modifications, and options, as measured in dollars. According to the Federal Procurement Data System (FPDS), most agencies met or exceeded the goal, awarding over 45 percent of their eligible service contract actions as PBAs (Denett, 2007).

Recently a RAND (Project Air Force) study conducted interviews with numerous groups within the Air Force that are using PBSA contracts. They found three key areas related to success. First, teamwork is a critical factor for success. Teamwork encourages buy in, and with any new initiative, the acquisition team must have the support of all

players in the game. Second, market research is important to simply finding out what resources, companies, and so on are available to meet requirements. If properly conducted, market research assists in applying commercial standards to requirements documents (for example, statements of work). Third, using past performance information in evaluating offerors greatly enhances the chances of reaching a true best-value decision. In addition, once contractors realize past performance is being evaluated, they are more apt to perform better to get more business in the future (RAND, 2001).

The Project Air Force study indicates that those who were interviewed were very happy with the performance of the vendors they had obtained using PBSA practices. Determining the effects on the cost was very difficult because of difficulty of determining internal costs and accuracy of government cost estimates. This study also indicates that the customers, contracting officers, and vendors were generally satisfied and happy with PBSA approaches to contracting.

Another RAND study, *Acquisition Reform Cost Savings Estimates*, indicates that requirements reform (performance-based specifications) and cost as an independent variable (CAIV) are crucial for cost savings. Although there were wide variations from one system or program to another, the RAND report found that some programs (such as JDAM and various avionics efforts) could claim large savings from acquisition reform. Although the primary focus on the multiyear contract cost savings, rather than performance-based acquisitions, the findings are nevertheless relevant from the performance-based acquisition perspective. The study points out some advantages of multi-year contracting. Some benefits of multi-year contracting related to PBA are: the avoidance of nonrecurring costs associated with negotiating and implementing a new

contract each year, long-term hiring and personnel planning can be made more efficient, and the contractor can plan the purchase of long lead items and materials longer production runs (RAND study, 2001). Estimates for multiyear contracting savings for a selected list of programs are illustrated in Table 3.

Table 3. An Overview of Acquisition Reform Cost Savings Estimates

Program ^b	Production Savings (%)	Estimate Quality
F-16 (FY82–85)	10	Forecast
F-16 (FY86–89)	10	Forecast
F-16 (FY90–93)	5.5	Forecast
F-16 (FY99–02)	5.4	Forecast
CDE for C-17	8.2	Forecast
C-17 (airframe)	5.5	Forecast
Javelin ATGM	14.3	Analysis
MTVR	7.4	Analysis
CH-60 (U.S. Navy and U.S. Army)	5.5	Forecast
DDG-51 (FY98–01)	9	Forecast
F-22 (1996 CAIG/JET)	3.9–4.7	Analysis
F/A-18E/F (target)	7.4	Analysis

^aSavings percentages include government investments for cost reduction initiatives for C-17 airframe and F/A-18E/F.

^bCDE = Commercial Derivative Engine; ATGM = anti-tank guided missile; MTVR = Medium Tactical Vehicle Replacement; CAIG = Cost Analysis Improvement Group; JET = Joint Estimate Team.

(Source: RAND study, 2001)

Since the end of the Cold War, base closure and realignment (BRAC) actions have reduced the number of military depots in the United States from 38 to 19 and manpower by two-thirds (Mahon, 2007). In parallel with the DoD's shrinking logistics support base, the fleets have continued to age, weapon system and parts availability have continued to decline, obsolescence has increased, and vendors have disappeared, leading to increased DoD sustainment costs. With these facts, the desire to better manage the

total life-cycle support costs of weapons systems and improve logistics support to the war fighter, resulted in the selection of Performance Based Logistics (PBL) as a key logistics transformation initiative (Mahon, 2007).

Since the performance-based environment surrounding DoD weapons systems is so complex (e.g. C-17), availability, reliability, and cycle time are typically measured. Frequently, there are no metrics to measure cost-savings or reduced logistics footprint. In some cases (C-17), there may not be convincing evidence that PBL is saving the air force anything on these objectives (Mahon, 2007).

An acquisition can be separated into two major milestones: system acquisition and system sustainment. The government's primary concern has been on system acquisition. However, the sustainment costs for a system is often much higher than the acquisition of the system itself. It has been estimated that about 30 percent of all dollars spent are used to acquire the system, while the remaining 70 percent of all dollars are used for support (Berkowitz, et.al., 2005). In their study, Berkowitz and his colleagues interviewed managers from 30 different initial DoD acquisition programs. The study indicates that in order to meet the PBL objectives, both government and industry must agree on business practices that provide the greatest value for all parties (Berkowitz, et al., 2005).

Two case studies, a contract to Lockheed Martin in support of the S-3 aircraft, and a repair contract to Pratt and Whitney in support of the J52 engine, clearly explain the advantages of PBL contracts. Some of these advantages include the elimination of dual infrastructures, reductions in materiel costs, increased government accountability, enhanced commercial partnerships, increased parts availability, increased focus by the

PBL vendor, and benefits to small businesses. These advantages have enhanced support to the J52, S-3 and other PBLs where DLA has partnered with private companies (Starks, 2005).

In 2005, Defense Acquisition University (DAU) published *Performance-Based Logistics: A Program Manager's Product Support Guide*. This guide is comprised of success stories about the implementation of PBL. F-117, JSTARS, and TOW ITAS are Reduction in Total Cost (RTOC) pilot programs that benefited from the PBL efforts. Those programs have been highly successful, reaping significant cost savings/avoidance and identifying lessons learned which are now being institutionalized by DoD (DAU, 2005).

Cultural Effects on Acquisition Environment

In April 2000, the Under Secretary of Defense Dr. Gansler established a goal for the U.S. Department of Defense to have the minimum 50% of acquisitions procured by the performance-based acquisition method by 2005. By 2007, DoD had more than 100 acquisition programs supported by the PBA, the Joint Strike Fighter (F-35) being one of six originally selected pilot programs. Current expectations are that the F-35's life-cycle cost will be about 20% lower when compared to that of legacy systems such as F/A-16 and F/A-18 (Sols, Nowick, Verma, 2007).

Although the PBA is a new method in the acquisitions area, many countries and private sectors have implemented this procedure and started to use it in their logistics systems. The United Kingdom's (U.K.) Defense Logistics Organization is transitioning

to performance-based contracting support for availability and capability for the sake of seeking achievement of established effectiveness levels. The U.K.'s Royal Air Force is expecting to reduce the costs by 12% in the outsourced maintenance of E-3D Sentry Airborne Warning and Control System (AWACS) aircraft (Sols, Nowick, Verma, 2007). European Aeronautic Defense and Space Company Construcciones Aeronauticas S.A. (EADS CASA) has a defense acquisition relationship with many South American countries including Chile, Ecuador, Paraguay, and Brazil. Those countries entered into the performance-based acquisition area with the purchase of the C-212 and CN-235 aircraft systems.

The U.S. Department of Defense, many South American countries, and some European countries have been applying PBA in their acquisition systems. Many other countries are acquiring the same weapon systems through joint venture acquisitions. Those countries have been using performance-based acquisition methods, at least indirectly. It is important to learn whether cultural differences play a big role in this the success or failure of performance-based acquisition methods.

According to a study conducted by Simcha Ronen and Oded Shenkar, there are eight culture clusters in the world. Countries and cultures are “clustered” according to similarities on certain cultural dimensions such as work goals, values, needs, and job attitudes (Ronen, S. Shenkar, O., 1983). As the acquisition environment becomes more complex, multinational companies increase their direct investment overseas, especially in less developed and consequently less studied areas, they will require more information concerning their local employees in order to implement effective types of interactions between the organization and the host country (Ronen, S. Shenkar, O., 1983). The study

produced helpful knowledge to understand better the work values and attitudes of employees throughout the world. The authors claim that American theories work very well for Western nations and they keep the study open for future research by asking, “are those theories applicable for non-Western countries?” A synthesis of country clusters is shown in Figure 4. The countries, United States, United Kingdom, Canada, Australia, and Ireland were characterized as former British colonies and are included in Anglo cluster. The Near Eastern cluster contains Greece, Iran, and Turkey. This cluster is characterized by high power distance, high uncertainty avoidance, low individualism, and medium masculinity.

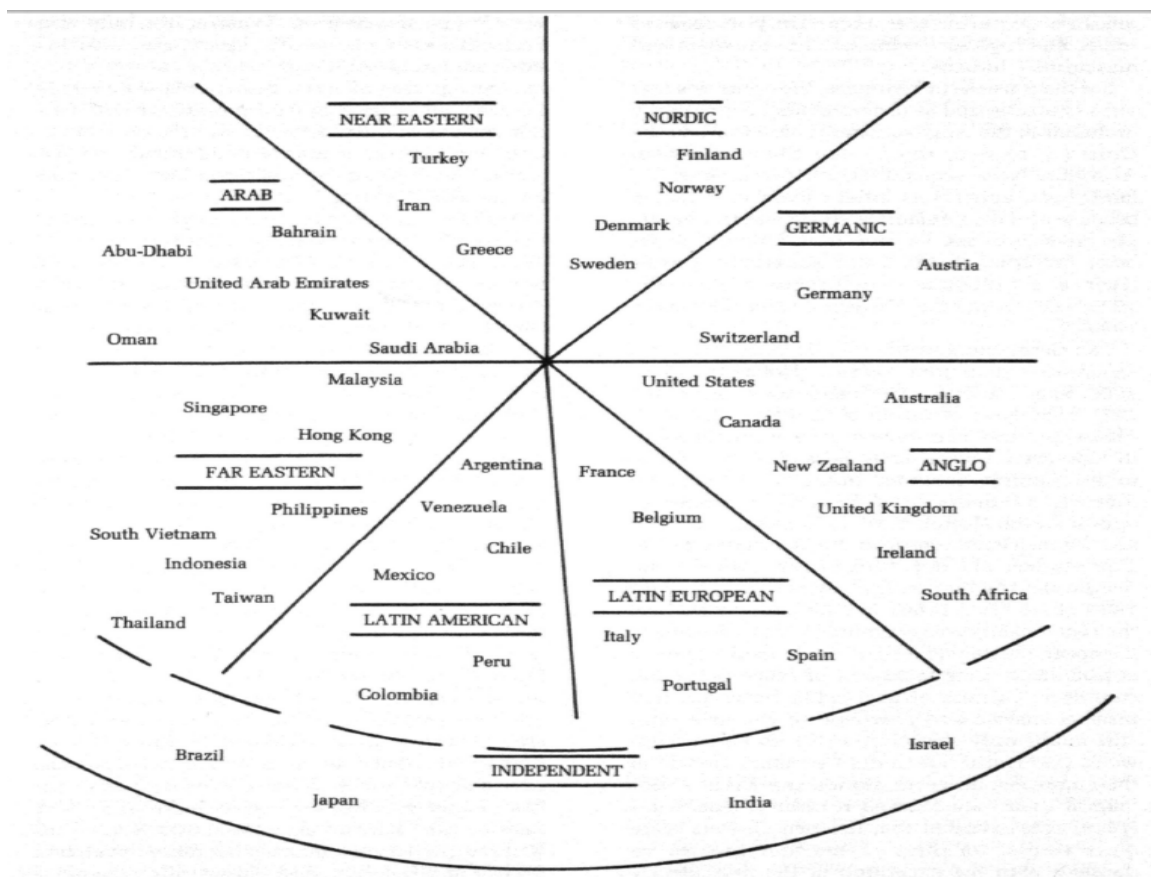


Figure 4. A synthesis of Country Clusters (Ronen and Shenkar, 1985).

In another study, Chang (2004) emphasized the regulation of foreign investment from a historical perspective. More advanced European economies such as UK, France, and Germany have used formal or informal performance requirements for key Foreign Direct Investment (FDI) projects to ensure that their national interests are not hurt in sensitive sectors such as defense and cultural industries. East Asian countries such as Japan, Korea, and Taiwan have also applied very liberal policies in certain sectors while being very restrictive in others (Chang, 2004). Because performance-based acquisition is a new concept and includes more interactions between government and contractor firms, there is likely to be resistance to change. This resistance can be overcome through effective training of acquisition managers and filling the gaps with regulations that will benefit both government and vendors.

Human Resource Management (HRM) policies can be significant control mechanisms for companies and governments engaged in cross-cultural acquisitions (Faulkner, et al., 2002). Faulkner and his colleagues conducted a study that examines whether there are such things as best HRM practices consistent across nationalities or whether companies of different nationalities generally adopt HRM strategies. Table 4 shows the comparison of national differences in HRM. The study shows substantial convergence in certain practices (performance-related pay, increased training, and team-based product development), but there remained considerable national differences in HRM practices.

Table 4. Comparison of National HRM practices (Faulkner, et.al, 2002)

	<i>US</i>	<i>Japan</i>	<i>Germany</i>	<i>France</i>	<i>UK</i>
Pay	Performance-related	PRP growing	PRP growing	PRP growing	PRP growing
Recruitment	Short term	Lifetime	Long term	French long; local less so	Less short term than US
Training	High; courses	On-the-job	Technical bias	To a ceiling	Increased; courses
Career planning	Little	Steady and slow	<i>Ad hoc</i>	Highly structured	Very variable
Product development	Strong move towards team-based	Fairly strong team-based	Strong move to team-based	Some use of teams	Not very team-based
Culture	Top-down	Bottom-up; consensual	Top-down	Top-down	Top-down
Appraisal	Regular and formal	Subtle; not transparent	Growing	Growing	Regular annual
Promotion	Fast and performance-based	Slow and seniority-based	Based on technical expertise	Emphasis on formal qualification; fast	Variable
Communications	Formal; need-to-know	Open when asked	Open and Informal	Open and formal	Need-to-know approach

(Note: PRP stands for Performance-Related Pay).

Summary

This chapter described the literature relevant to the creation, definition, examples, and evaluation of the performance-based acquisition. The chapter differentiated the essential elements defined by Straight, the FAR, and Garrett and explained the primary essential elements to the success of performance-based acquisitions. This chapter also addressed why organizations may benefit from building a performance-based environment for acquisitions. Results of some success stories in the performance-based logistics environment were shown to emphasize the importance of PBA. Finally, this chapter addressed cultural differences in literature related to the acquisition environment. The following chapter will discuss the methods used to conduct the research.

III. Methodology

Chapter Overview

The purpose of this chapter is to describe the chosen methodology for organizing the research design and collecting relevant data. In order to organize the study, the researcher reviewed Yin (2003), Locke (2001), Glaser et al (1967) and Maxwell (2005), and selected a qualitative approach with grounded theory as the specific tradition of inquiry. Using guidance from qualitative research literature, a semi-structured questionnaire was prepared which served as the data collection tool for the target question of the study. This set of questions was designed to obtain information from experienced acquisition professionals regarding performance-based acquisition methods. The researcher transcribed, categorized, and coded data from the interviews into a Microsoft Excel spreadsheet in accordance with qualitative methodological precepts.

Research Design

Research can serve many purposes. Earl Babbie mentions the most common three purposes of research in his “The Basics of Social Research” book. Those purposes are exploration, description, and explanation. Much of social research is conducted to explore a topic and this approach typically occurs when a researcher examines a new interest or when the subject itself is relatively new (Babbie, 2005). As the topic of this study is relatively new (i.e. performance-based acquisition in an international context),

the researcher chose an exploratory research approach. Exploratory studies are typically done for three purposes: (1) to satisfy the researcher's curiosity and desire for better understanding, (2) to test the feasibility of undertaking a more extensive study, and (3) to develop the methods to be employed in any subsequent study (Babbie, 2005). Exploratory studies can also be a source for grounded theory (Babbie, 2005), providing new models for future explanatory research.

Qualitative Research

According to Creswell, there are three distinct approaches to research design: quantitative, qualitative, and mixed method (Creswell, 2003:17). Creswell defines *quantitative research* as:

...One in which the investigator primarily uses post positivist claims for developing knowledge (i.e. cause and effect thinking, reduction to specific variables and hypotheses and questions, use of measurement and observation, and the test of theories), employs strategies of inquiry such as experiments and surveys, and collects data on predetermined instruments that yield statistical data (Creswell, 2003:18).

In contrast to quantitative research, he defines *qualitative research* as:

...One in which the inquirer often makes knowledge claims based primarily on constructivist perspectives or advocacy/participatory perspectives or both. It also uses strategies of inquiry such as narratives, phenomenologies, ethnographies, grounded theory studies, or case studies. The researcher collects open ended, emerging data with the primary intent of developing themes from the data (Creswell, 2003:18).

To select an appropriate research approach for a given study, the researcher should be able to define the relationship between the problem and a particular research approach. As an example, a researcher seeking to identify or explain the relationship

between measured variables (e.g. numerical quantities) would likely be best suited to select a quantitative approach (Leedy and Ormrod, 2001). In contrast, if the researcher's aim were to explore and characterize existing phenomena, or to develop a theory regarding such phenomena, a qualitative method would likely be the better choice (Leedy and Ormrod, 2001). In summary, Table 5 identifies the three types of approaches available to researchers.

Table 5. Research Method Procedures (Creswell, 2003:17)

Quantitative	Qualitative	Mixed Methods
<ul style="list-style-type: none"> - Predetermined - Instrument based questions - Performance data, attitude data, observational data, and census data - Statistical analysis 	<ul style="list-style-type: none"> - Emerging methods - Open-ended questions - Interview data, observation data, document data, and audiovisual data - Text and image analysis 	<ul style="list-style-type: none"> - Both predetermined and emerging methods - Both open- and closed-ended questions - Multiple forms of data drawing on all possibilities - Statistical and text analysis

In choosing the appropriate research method for a particular study, perhaps the most important factor is the nature of the data itself. Data and methodology are always interdependent. The methodology to be used for a particular research problem must always take into account the nature of the data (Leedy and Ormrod, 2001).

The researcher chose a qualitative research method that was appropriate for data collection in this study. After deciding to follow a qualitative methodology, the specific tradition of inquiry to guide the research needed to be determined. Although there are

many other accepted traditions, Creswell identified five popularly accepted traditions frequently used (Creswell, 1998:5). The five traditions are biography, phenomenological study, grounded theory study, ethnography, and case study.

The approach used for qualitative data collection method for this study was a semi-structured interview with subject matter experts. The interview questions attempted to capture the experiences of acquisition professionals within actual programs that interviewees' had been working on. The nature of the semi-structured interview questions was similar to a multiple case study. Thus, the study will be a hybrid study, using both grounded theory and case study methods, and the following sections address these two topics, respectively.

Grounded Theory Approach

Grounded Theory emerged from the collaboration of two sociologists: Barney Glaser and Anselm Strauss. They built this theory from combining two main traditions of research: positivism and interactionism. Grounded Theory can be described as an approach that attempts to combine a naturalist approach with a positivist concern for a “systematic set of procedures” in doing qualitative research (Babbie, 2005). Creswell defines grounded theory as a study to generate or to discover a theory, an abstract analytical schema of a phenomenon that relates to a particular situation. This situation is one in which individuals interact, take action, or engage in a process in response to a phenomenon (Creswell, 1998).

According to Glaser and Strauss, a theory is a strategy for handling data in research, providing modes of conceptualization for describing and explaining. “The form in which a theory is presented does not make it a theory; it is a theory because it explains or predicts something” (Glaser & Strauss, 1967). Grounded theory can be presented either as a well codified set of propositions or in a running theoretical discussion, using conceptual categories and their properties. While Glaser and Strauss recognize that qualitative and quantitative data are both useful for verification and generation of theory, their grounded theory approach focuses on qualitative data. They explain that qualitative methods work best in discovering the crucial elements of sociological theory, that is, these crucial elements are best derived from data on structural conditions, consequences, deviances, norms, processes, patterns, and systems. The grounded theory approach is most advantageous in difficult empirical situations, such as new or unusual environments (Glaser & Strauss, 1967).

The Discovery of Grounded Theory explains that researchers assign meaning to their observations in terms of the *constant comparative method*. This set of practices offers logic for composing conceptual elements that hinge on their articulation through close reading, comparison and attendant conceptualization of data (Locke, 2003). Locke (2003) conceptualizes the constant comparative method in terms of four stages, which span the entire study, moving from assigning meaning to incidents of recorded data to refining and writing up the completed theoretical framework.

Stage 1: comparing incidents applicable to each category

When researchers engage their data during the forms of the constant comparative method, they participate in two activities, *naming* data incidents and *comparing* data

incidents and names. These two activities are complemented by a third, supportive activity, memoing. In naming, researchers conceptualize and develop the abstract meaning of incidents by articulating what they perceive is being expressed in those incidents. Comparing occurs in tandem with naming and is critical to help researchers to develop a category for multiple observations and it helps to clarify what the researcher perceives from the data. As the researcher begins to identify the properties of a category and to be caught in various ideas that the comparative process engenders, recording a memo on the emerging ideas captures these fresh theoretical musings and gives the researcher analytic space to reflect and work out these ideas (Locke, 2003).

Stage 2: integrating categories and their properties

In this stage, researcher aims to develop an organization for the conceptual categories derived in stage 1. In order to arrange those categories, the researcher is concerned with how the various conceptual elements can be arranged in relation to each other. At this stage of analytic activity, writing memos can help the researcher to articulate the significance of the categories and the relationships between the analytic elements in the framework.

Stage 3: delimiting the theory

This stage sets boundaries around the theory. Here the aim is to settle on the theoretical components and to clarify the story they have to tell about the phenomenon or social situation. Once the researchers have integrated their theoretical categories and make a commitment to tell a particular story from the data, this process of boundary-setting will help the researchers to focus on the more relevant and robust categories.

Stage 4: writing the theory

In this final stage, the researcher is able to produce a research or story by virtue of possessing coded data, a series of memos, and a theory. Locke's four stages of the theory development process are shown in Figure 5.

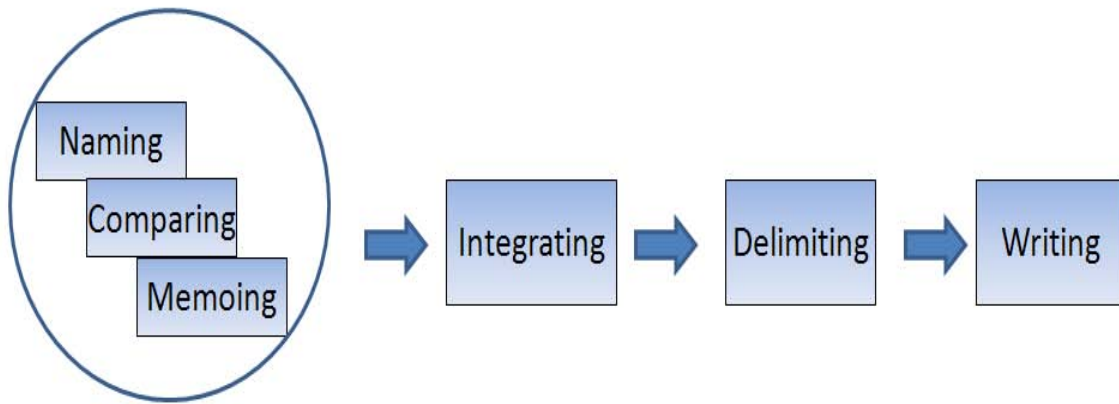


Figure 5. Four stages of theory development process (Locke, 2003).

Case Study Methodology

Since interviewees responded to questions from their experiences in different acquisition contexts (different programs, different countries, etc.), this study amounts to a multiple case study. In determining the appropriate case study strategy there are three conditions that apply:

- 1) the types of research questions,
- 2) the extent of control an investigator has over actual behavioral events, and,
- 3) the degree of focus on contemporary, as opposed to historical, events (Yin, 2003).

The types of research questions is the familiar series of “who,” “what,” “where,” “how,” and “why.” If the research questions focus on “what” questions, this type of question is a justifiable rationale for conducting an exploratory study. When the study focuses on the “who” and “where” type of questions, the study is likely to favor the analysis of archival records, as in economic research. In contrast, “how” and “why” questions are more explanatory and likely to lead to case studies, histories, and experiments. Defining the research questions is probably the most important step in research. The research questions should have both *substance* (What is the study about?) and *form* (“who,” “what,” “where” questions) (Yin, 2003). Since the nature of the study is to explore the success of the PBA in different cultural environments, the semi-structured questionnaire includes more “what” and “why” questions.

The researcher had little to no control over actual behavioral events. Additionally, the researcher focused on contemporary or recent past events. Therefore, the study was non-experimental, and non-historical. Instead, the researcher used the case study method. “Although case studies and histories look similar, the case study’s unique strength is the ability to deal with a full variety of evidence-documents, artifacts, interviews, and observations” (Yin, 2003, p.8). The case study relies on many of the same techniques as history, but it adds direct observation of events and interviews of the persons involved in the events.

Data Collection

The most commonly used data sources in doing qualitative research are documentation, archival records, interviews, direct observations, participant observations, and physical artifacts (Yin, 2003). According to Creswell, the four basic forms of qualitative data are: 1) observations, 2) interviews, 3) documents and 4) audio-visual materials. Importantly, he notes that each form of data has both advantages and limitations that the researcher should consider when planning the research design (Creswell, 2003).

Since performance-based acquisition is a relatively new method in the acquisition area, selecting the data collection process was an important consideration for the researcher. Since many program managers were available within AFIT and a variety of different countries' liaison officers working with FMS were located in the Wright-Patterson Air Force Base, conducting interviews was the best way to obtain convenient qualitative data. Yin indicates that one of the most important sources of case study information is the interview. The data were collected using open-ended interviews with a total of thirteen liaison officers, program managers, contracting officers, and contracting negotiators. In order to prepare a well-defined semi-structured questionnaire, the researcher considered these two elements: (1) to follow the subject of the study's line of inquiry, and (2) to ask conversational questions in an unbiased manner. The semi-structured interview questions are shown in Table 6.

Table 6. Semi-Structured Interview Questions

No:	Question:
1	Have you ever been involved in a contract using performance based acquisition methods? If so, can you describe the methods that were used? What “worked”? What did not “work”? In your estimation, did performance based methods result in cost, schedule, or performance benefits compared to other methods?
2	Have you been involved with non-U.S. contracts? If so, did they use performance based acquisition methods? If so, could you describe how those methods were implemented? Would you say that the methods were implemented substantially the same as they would be for a U.S. contract? Substantially different?
3	In the future, do you plan to implement performance based acquisition methods (in a U.S. environment or in a non-U.S. environment)? Do you anticipate any advantages? Disadvantages?
4	In acquisition programs in which you have been involved, what has been the most critical issue or obstacle to success (e.g. cost, sustainability, meeting the user’s requirements, schedule, etc.)?
5	Can you share an acquisition “horror story” with me, when something went wrong?
6	Can you share an acquisition “hero story” with me, when something went right?
7	When can you describe an acquisition as successful? What are the most important metrics for determining success?

Summary

This chapter described the research design and specific methodology selected to conduct the thesis study. Due to the nature of the research design and data, the researcher selected a qualitative research method. In order to obtain convenient data, a semi-structured interview questionnaire was prepared including seven investigative questions. These questions were asked to liaison officers, program managers, contracting officers, and contracting negotiators. Interviews were recorded with the interviewee’s consent and then every sentence was transcribed into an Excel worksheet. Each sentence was then categorized using the coding and memoing process. Finally, the data were sorted into categories to see if patterns emerged related to specific research questions that could

ultimately lead to new theory in the area of performance-based acquisition in an international context. The following chapter will discuss the analysis of data of the research.

IV. Data Analysis

Overview

The purpose of this chapter is to document and analyze the qualitative data gathered during the semi-structured interview portion of this research. As previously discussed, the questionnaire included seven open-ended questions. The thirteen interviewees included program managers, contracting officers, liaison officers, and project managers. Interviews were analyzed and transcribed into an Excel worksheet using coding theory (Locke, 2003). Each sentence* was given a code to retrieve and organize the themes of the interviews. The organizing part of the coding entails systematic categorization of the various themes, so the research can quickly find, pull out, and cluster the segments relating to the primary investigative question (Miles & Huberman, 1994). Clustering is used to draw conclusions from the themes that emerge from the interviews. In order to provide a more in-depth view into the interview responses, a complete transcription of all interviews is included as Appendix B.

Demographics

The qualitative data were gathered from a total of thirteen program managers, contracting negotiators, liaison officers, and project managers. The researcher chose

* The term “sentence” may refer to multiple sentences in this study. The researcher assigned to single or multiple sentences a common meaning represented by a single code that is captured or composed in a conceptual category.

interviewees from a variety of acquisition areas in order to reduce possible biased results. Performance-based acquisition is a relatively new method, and interviewees' experiences differ according to the programs in which they have been involved and their own government acquisition officer training policies. The demographics of interviewees are illustrated in Figure 6.

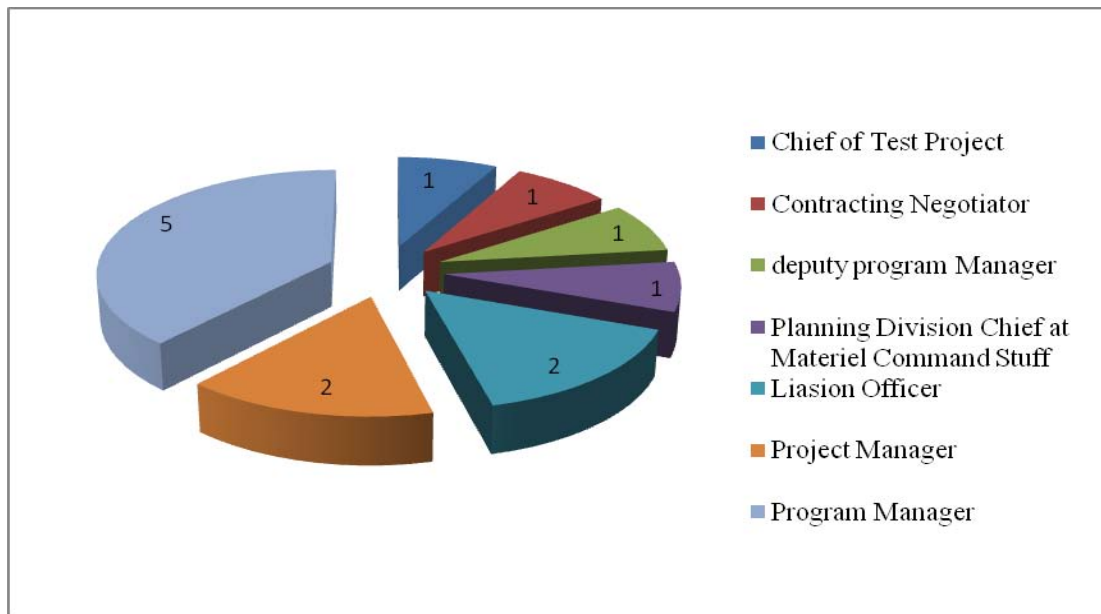


Figure 6. Demographics of Interviewees

The experience levels of the interviewees were collected. Interviewees, who had less than ten years of experience, were typically young officers or were new to the PBA environment. On the other hand, interviewees who had more than ten years of experience had worked in multiple acquisition programs or they were involved in big, complex acquisition programs. Most of the interviewees were program managers and have an

average of four years of experience in the acquisition area. Table 7 shows the job title and the experience of interviewees.

Table 7. Interviewees' Job title and Experience

Job Title	Experience
Chief of Test Project	5 years
Contracting Negotiator	7 years
Deputy Program Manager	22 years
Liaison Officer	8 years
Liaison Officer	2 years
Planning Division Chief at Materiel Command Staff	3 years
Program Manager	3 years
Program Manager	6 years
Program Manager	3 years
Program Manager	4 years
Program Manager	3 years
Project Manager	3 years
Project Manager	10 years

Interview Analysis

Using the grounded theory method, every sentence from every interview was “coded” to gain insight and allow meaningful patterns to emerge. The researcher coded sentences into categories and subcategories. In order to reduce researcher bias, the researcher coded sentences according to the core meanings of sentences and intentions of the interviewees. An example of the open coding approach is shown in Tables 8 and 9. In the following examples, interviewee’s sentences were transcribed into an Excel worksheet and then the researcher looked for the meaningful pattern leading to the core

meaning of the sentences. In the first example, illustrated in Table 8, the interviewee talks about how unstable user needs create a challenge for the acquisition program.

Table 8. A Coding Example for Challenges

<u>Q#</u>	<u>SENTENCE</u>	<u>SUBCATEGORY</u>	<u>CATEGORY</u>
5	It was a development of an emulator; it was a piece of test equipment, that would take care of some older technology and we were trying to develop this emulator. The development of emulator was in progress and we had requirements. Unfortunately, one of the engineers unknown to the program management was working with the contractor and adjusting the requirements. You had a changing requirements base and that resulted in the contractor having to do additional work.	Unstable user needs	Challenges

In the second example, shown in Table 9, the interviewee refers to the factors that are needed for Program Success. The interviewee describes the importance of having good communication with the contractor.

Table 9. A Coding Example for Program Success

<u>Q#</u>	<u>SENTENCE</u>	<u>SUBCATEGORY</u>	<u>CATEGORY</u>
4	Communication with the contractor is vital. You have to have a good relationship with them. You won't produce anything if you are lying to one another. If the contractor feels comfortable coming to the government and telling them the truth, we just have the major problem we're going to have schedule slips and then you can work through, negotiate your chance is I think of successfully working around that problem much greater than if they hide it comes out later on at the program you can't do anything about it so that's absolutely a major concern. You have to be able to have open communication.	Communication	Program Success

One way to determine the importance of particular categories is to count the number of occurrences (Miles & Huberman, 1994). Table 10 provides this count data, and gives a sense of the relative “significance” of particular categories and subcategories.

Table 10. A Count of the Number of Subcategories in Each Category

<u>SUBCATEGORIES</u>	<u>CATEGORIES</u>	<u>COUNT</u>	<u>CLUSTERS</u>
Funding	Challenges	10	CHALLENGES
Schedule	Challenges	5	
Cost	Challenges	4	
Work ethics	Culture	5	
Cultural similarity	Culture	1	
Language	Culture	1	
Non-US contractor	Funding	1	
Public desire	Funding	1	
Dependent to contractor	Traditional Acquisitions	1	
Expensive logistics network	Traditional Acquisitions	1	
Limited availability	Traditional Acquisitions	1	
Statement of work	Contract Development	3	GOAL
Defining performance metrics	Contract Development	2	
Flexibility	Contract Development	2	
Performance-based acquisition	Environment of the Contract	3	
Sub-contracting	Environment of the Contract	3	
Different procurement type	Environment of the Contract	2	
Communication	Program Success	15	
Product quality	Program Success	14	
Customer satisfaction	Program Success	13	
Performance-based acquisition	Type of Contract	2	
Alternative service delivery	Type of Contract	1	
Cost plus type based on performance	Type of Contract	1	
Award fee	PBA metrics	6	SUCCESS BOOSTERS
Cooperation	PBA metrics	2	
Earned value management system	PBA metrics	2	

Table 10 presents the counted subcategories in each category. To refine a new theoretical perspective, the researcher clustered the subcategories according to their role in the success of a performance-based acquisition program. This delimiting process led to three new theoretical clusters: challenges, goal definition, and success boosters. To provide consistency, each subcategory was cross-checked with categories accordingly. For example, there were 10 sentences in the subcategory called *funding* within the category called *challenges*. Accordingly, the researcher included the *funding* subcategory in the *challenges* cluster.

Figure 7 presents the relative significance of the subcategories based on this counting process. When making generalizations or saying something is important, significant, or recurrent we have to come to an estimate by making counts (Miles & Huberman, 1994). The numbers indicate the number of times interviewees repeated themes in each subcategory. For example, *flexibility* appeared six times in the *Program success* category and twice in the *Contract development* category for a total of eight. A detailed list of the subcategories is included as Appendix C.

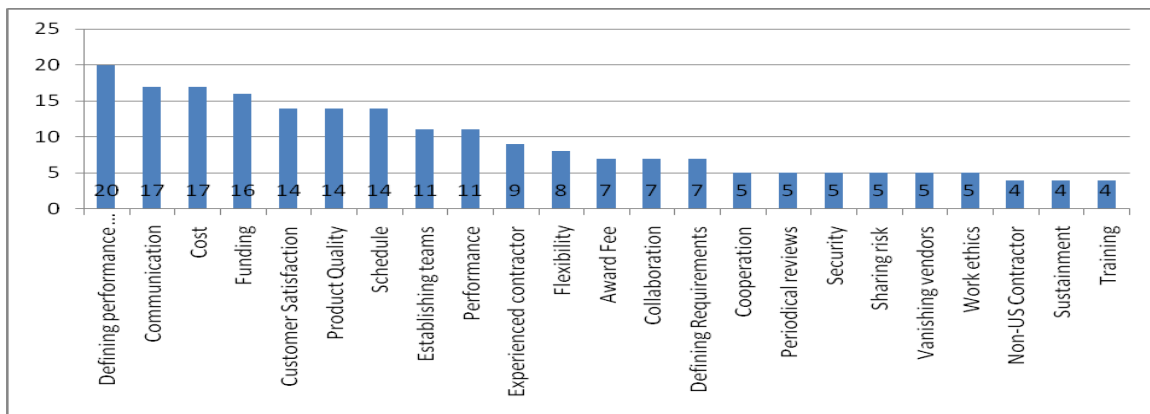


Figure 7. Numbers of Subcategories of the Interview

Based on the count data, it is apparent that defining performance metrics was particularly important or significant to the interviewees. Interviewees acknowledged that while it is difficult to define the best, most fair, and most reasonable performance metrics for both the government and the contractor, defining those standards is the key to acquisition success. One of the interviewee indicates this as; “The difficulty lies in appropriately defining the performance standards to ensure that the customer gets what he needs (within cost guidelines), and the contractor is able to achieve those standards (within the resource restrictions applied) while still making a fair profit.”



Figure 8. The Schema of Clustered Subcategories

By clustering subcategories of the interviews as illustrated in Figure 8, three factors emerged leading to the success of the performance-based acquisition. Those are clear definition of the goal, challenges, and success boosters. The goal should be to acquire the desired product or service which the user needs met within the reasonable amount of time and within the reasonable amount of cost that will be beneficial for both parties. Interviewees see that the most important metric for the success of the acquisition programs as *customer satisfaction*. One of the interviewees indicates that as “When you meet the requirements of the contract, when you meet the original intent of your design of your product and it's been successfully used without major failures, I think that is a success.”

The second factor that emerged is the ability to recognize and respond to challenges in PBA. Challenges may be related to the nature of the contract such as whether it is a software development program or a research program, etc. Socio-cultural issues such as different work ethics, languages, or politics also emerged as challenges for acquisition programs. The most important challenges that emerged from the clustered subcategories were *funding, security, vanishing vendors, work ethics in different countries, language, and unstable user needs*. The interviewees’ most repeated challenge to program success was *funding*. One interviewee talks about *funding* as “The hard part at least with the American acquisitions is that in my opinion we have under budgeted every program.”

Finally, the third factor that emerged is success boosters. In complex acquisition programs, there is always potential for ambiguities. For example, the business relationship between the government organizations and the contractor may not be clear.

Or, the documentation prepared by the government organization may not be understood by the contractor. In order to reduce ambiguity and increase performance in a performance-based acquisition environment, this study demonstrates some factors that assist the success of the program. These *success boosters* emerged as *defining performance metrics, communication, establishing integrated PBA teams, working with experienced contractor, training, flexibility, and periodical reviews of the program*. One critical success booster for the acquisition program is *communication*. An interviewee talks about the importance of communication as “But again, it really comes down to your team, the customer, government, and the contractor. As long as everybody works together and has good communication and trust, I think you are going to have success whether you are using PBA or not.”

The subcategory data were also “rolled up” into categories. These categories helped to draw conclusions from the patterns of the coded data. The purpose of the grounded theory method is to build a theory or write a story from the categories or subcategories that are applicable to and indicated by the data under the study (Glaser & Strauss, 1967). Using the constant comparative method (Locke, 2003), the researcher developed categories in order to create a theory from the interview data. The categories that emerged were program success, challenges, PBA metrics, contract environment, contract development process, contract type, culture, and traditional acquisitions. Those categories were created according to the primary meanings of sentences. Interviewees spoke mostly about program success. Specifically, interviewees discussed the factors that can facilitate the performance of the program, the obstacles to success of the

program, and the metrics for determining the success of the program. The percentage of interview categories is illustrated in Figure 9.

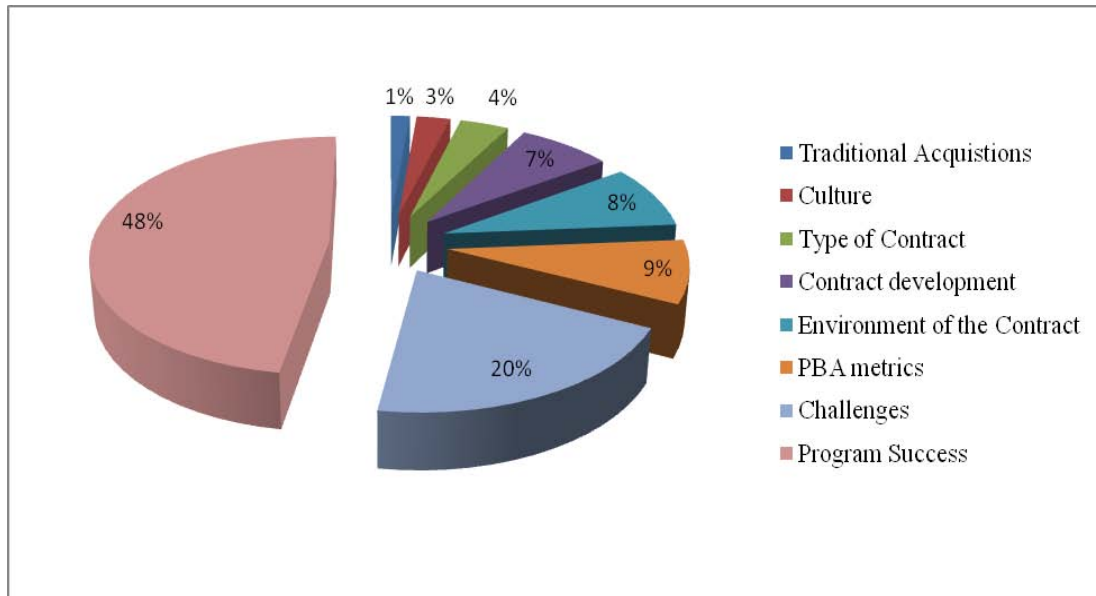


Figure 9. Categories of the Interviews

The most important metric for program success is the product quality or customer satisfaction. Only one out of thirteen interviewees chose the number of deliveries as the most important metric. Twelve of the interviewees said that the most important metric for determining the success is satisfying user needs. Although customer satisfaction is the most important performance metric for success, other factors such as product delivery date and the number of deliveries clearly affect customer satisfaction, at least indirectly. If the users are not satisfied within the operational need time with the correct amount of material then we cannot speak about the success of the acquisition.

It is difficult to draw conclusions about the effects of cultural differences in performance-based acquisition, as the researcher could only conduct three interviews with individuals outside the US. Nevertheless, the findings related to cultural differences seem to be mostly about security issues, rather than the ability to execute the method properly. Clearly, nations want to protect their technological advantage from other countries whether those countries are western or not. Another cultural issue that appeared to be significant was potential for different work ethics to interfere with performance. In a performance-based acquisition environment, with appropriate regulations, well-defined performance metrics, and with communication and collaboration this issue might be mitigated.

Nearly all of the interviewees (85 percent, including all three non-U.S. interviewees) agreed that performance-based acquisition might be successful in a non-western environment. Some interviewees expressed their belief that implementation of PBA would be easier in a more similar culture because work ethics and language tend to be similar. On the other hand, as another interviewee points out, language barriers might occur even in the same cultural environment. Language barriers and different work ethics might be mitigated through frequent communication, constant cooperation, and clear regulation. The percentage of the interviewees who think PBA can be successful in a non-Western environment is shown in Table 11.

Table 11. Expected Success Percentage of PBA in non-Western environment

Can PBA be Successful in a Non-Western Country?	
YES	11 (85 %)
NO	-
NOT SURE	2 (15 %)

Summary

The aim of this chapter was to perform the analysis and present results of the research. The chapter covered the analysis of the qualitative data gathered from the semi-structured interview questions. Although the study was limited to thirteen interviewees and only three of them were from different nationalities, the results offered insights into the success, benefits, and challenges of implementing performance-based acquisition in different cultural environments. The sentences were coded and counted to see the significant patterns leading to answers to the research questions. Three factors of PBA success emerged from the categories of the interview data. These three factors were clear goal definition, challenges, and success boosters. Taking into consideration these factors, successful implementation of PBA in non-western countries seems to be plausible. Managing cultural diversity and defining the performance standards upfront would be important considerations prior to attempting performance-based acquisition outside the United States. The final chapter will draw the conclusions, present limitations of the study, and make recommendations for future research.

V. Conclusions

Introduction

The primary objective for this research was to explore the opportunities and challenges of implementing performance-based acquisition in different acquisition environments. The developments in information technology, transportation, and supply chain environments make the world more flat than ever. Business and government relationships are becoming more integrated. “It seems reasonable to expect that many of the existing service industries will continue as productive as any in the world, while new industries will quickly learn to operate to world-class standards of efficiency” (McRae, 1994, p.212). It seems likely that more communication and collaboration driven business relationships will lead to new acquisition approaches. Performance-based solutions are one of the more popular newer approaches. Although most of the performance-based acquisition programs are in western countries, such as the United States, non-Western countries are likely to follow this trend as well. Using qualitative research techniques, this study investigated the factors that would make PBA successful in a different culture. The research seeks to answer the question: “can PBA be successful in a non-western acquisition environment?”

This chapter will present the conclusions of this study, identify the limitations to the study, and offer recommendations for future study.

Conclusions

Performance-based acquisition creates a new acquisition environment for both industry and government by promoting flexibility and innovation and by creating win-win solutions through effective communication. It is no longer optional; it is a business necessity in both public and the business sectors (Garrett, 2005). Performance-based acquisition is mostly implemented in western countries. The results of selected PBA programs show that this performance-based approach is becoming more popular because the perception of acquisition professionals is that it creates better performing systems, more cost efficient programs, and rapid solutions to problems (DAU, 2005). The purpose of this study was to investigate whether performance-based acquisition would be successful or not if implemented in a non-western environment. According to the results presented in Chapter IV, the answer is a qualified “yes.” Most of the thirteen interviewees did not have direct experience implementing PBA in a non-Western environment. However, while acknowledging that there may be cultural and socioeconomic challenges to overcome, most of them agreed (11 of 13) that PBA would be successful if implemented in a non-western environment.

Certain cultural differences may affect the success of a performance-based acquisition. For instance, interviewees’ comments centered on cultural issues such as language barriers, work ethic differences, etc. For example, regarding language barriers one interviewee stated, “I mean there is a language barrier but within the contract you'll define what language you're going to convey them. All the contracts will be in English not Turkish because we can't read Turkish. And all the technical publications will be

English.” Another challenge to implementation of PBA in a non-Western context is the effect that different work ethics might have on a project. The local knowledge of cultural differences can be managed advantageously in PBA acquisitions because the “how” is left up to the contractor. An interviewee indicates that as “Having a non-US contractor they have experienced of what is needed in that location and what type of methods they need to use for construction and things like that. The advantage is definitely to the non-US contractor in that situation.” On the other hand, one of the interviewees mentioned how cultural *similarity* makes it easier to implement PBA in a different environment. “The closer the country is to your culture, the easier it is. You know when you are in, let’s say in an Anglo-Saxon environment where the work ethic tends to be the same, the language is similar; the way you communicate is similar. I think it is probably easier.”

One of the primary objectives of the study was to investigate whether to implement performance-based acquisition in non-western countries. Understanding the similarities and differences between countries would help acquisition professionals to implement PBA in non-western countries. This study confirmed that cultural factors could play at least a minor role in the success of performance-based acquisitions. Communication, cooperation, and more integrated business relationships could mitigate the risk of cultural challenges affecting the success of PBA. This research also reveals that both industry and government can successfully implement performance-based acquisition approach for the incoming acquisition programs regardless of the cultural differences.

Another objective of the study was to uncover the critical factors affecting the success of PBA programs. Understanding these critical factors would help acquisition

professionals implement PBA successfully in general, whether in the U.S. or outside the U.S. This study produced three critical factors for the success of performance-based acquisition. Both government and industry would benefit of implementing PBA by defining the *goal* clearly, managing *challenges* effectively, and operating the *success boosters* accurately.

Investigating the research question and analyzing the gathered interview data explains the success of the performance-based acquisition in non-western countries. In this century, the world is getting flat and accessing the information is easier than before. Implementing a successful approach in a different environment only requires applying the same rules or similar rules to adapt to the cultural diversity. Finally, this study gives some insight about the success of the PBA in a non-western country. Organizations in the public or private sector should pick an acquisition approach that would promote flexibility and innovation and create win-win solutions for both buyer (s) and seller (s) through effective communication and organizational goal alignment. In order to achieve internal or external organizational targets, using PBA seems to be the future approach in acquisition environment.

Limitations

Limitations restrict the findings of this study. For instance, many programs that use performance-based methods belong to the defense industry, and often information from these programs is either classified or highly proprietary in nature. It was difficult to obtain quantitative information such as schedule and cost performance. However,

interview data partially mitigated this limitation by providing qualitative information that could act as a proxy for quantitative information. Another limitation was the inability to make direct comparisons of alternative acquisition methods. Organizations choose only one acquisition method for a program so the information needed to compare the success of the PBA with alternative methods in the same context was not available.

Additionally, the study was limited to 10 U.S. (and 3 non-U.S.) acquisition officers serving at Wright Patterson Air Force Base, as time constraints precluded the possibility of gathering data from as broad a sample of acquisition professionals as would have been preferred. Only three out of the thirteen interviewees were not from the United States. Thus, the research questions related to the international context are difficult to address with rigor. Moreover, none of the interviewees was from a non-military environment, and none was a contractor.

Like all qualitative studies, the methods used to identify related responses and to determine the themes within the responses were subjective and relied on the researcher's knowledge and opinion. These methods may inject researcher bias into the results of the study. One procedure to reduce researcher bias in these cases is to have more than one researcher independently code the interviews, and compare the results for inter-rater reliability. There was not time to accomplish this procedure for this study. Finally, the approach used for this study may limit the ability of future researchers to repeat the results of this study.

Future Research

Future research that conducts interviews from a wide variety of different nationalities is recommended. Conducting interviews with acquisition professionals from a wide variety of different countries and different sectors (industry and government) would enhance the rigor of the findings. In addition, increasing the number of interviewees from different nationalities may improve the ability to answer research questions related to the international context. Talking with contractors to get perspectives from both sides of the contract would increase understanding of the research question.

This study chose a qualitative approach to investigate the research question due to difficulty attaining quantitative data. Future research might use both qualitative and quantitative methods to improve the research design. The use of mixed methods might enhance the findings related to cultural differences in particular. Future studies may replicate the findings of this study, increasing the validity of this research.

Summary

The purpose of this research was to investigate how the cultural differences might affect the success of performance-based acquisition in non-western countries and to determine common factors that lead to success and failure. The coding of categories and subcategories from the interviews illustrated common themes. These themes allowed the researcher to develop new theory related to performance-based acquisition. The primary objective question was answered by the story that emerged from the patterns of the coded

sentences. Ultimately, the research supports the view that the performance-based acquisition approach is applicable to acquisitions in different cultural environments. Common concerns such as inadequate security, difficult language barriers, or incompatible work ethics or culture may be mitigated through: 1) appropriate training, 2) setting international regulations and standards, 3) better communication, 4) properly sharing risk, and 5) effective collaboration.

Appendix A. Semi-structured Interview Questions

Demographic Information: Name, rank, nationality, current job title, current job description.

Relevant Experience:

How much (and what kind of) work experience do you have in acquisition?

Do you have a basic understanding of performance based acquisition methods?

Semi-structured Interview Questions:

1. Have you ever been involved in a contract using performance based acquisition methods? If so, can you describe the methods that were used? What “worked”? What did not “work”? In your estimation, did performance based methods result in cost, schedule, or performance benefits compared to other methods?
2. Have you been involved with non-U.S. contracts? If so, did they use performance based acquisition methods? If so, could you describe how those methods were implemented? Would you say that the methods were implemented substantially the same as they would be for a U.S. contract? Substantially different?
3. In the future, do you plan to implement performance based acquisition methods (in a U.S. environment or in a non-U.S. environment)? Do you anticipate any advantages? Disadvantages?
4. In acquisition programs in which you have been involved, what has been the most critical issue or obstacle to success (e.g. cost, sustainability, meeting the user’s requirements, schedule, etc.)?
5. Can you share an acquisition “horror story” with me, when something went wrong?
6. Can you share an acquisition “hero story” with me, when something went right?
7. When can you describe an acquisition as successful? What are the most important metrics for determining success?

Appendix B. Coding of Responses

Q#	<u>SENTENCE</u>	<u>SUBCATEGORY</u>	<u>CATEGORY</u>
1	I would say last contract I did used PBA methods. I don't think it was explicitly sets but we did. The performance was the most important part what we were doing because it was a research program.	Research program	Type of Program
1	We used, first of all, earned value management system. I think that's one of the methods with the talk about where you figure out how you progress is based on the amount of work you are supposed to accomplish versus how much you actually accomplish and so on.	Earned value management system	PBA metrics
1	We had weekly program management reviews where we would be told with the status was, any sort of the problems that they run in to see how well they've been performing on the contract.	Periodical reviews	PBA metrics
1	If there were issues than we would go ahead and try to figure out how much cost to remedies those issues and gain the performance that we want out of the contract.	Periodical reviews	PBA metrics
1	Generally we, having the weekly meetings were good, we had very open relationship with the consortium that was developing the program.	Communication	PBA metrics
1	So, really the best thing we were having; you have articles that are delivered, those were the things that you can assess how well they're performing.	Documentation	Program Success
1	So, generally because we had such as open relationship, it was very like flowing kind of thing.	Open relationship	Program Success
1	The earned value system worked pretty well.	Earned value management system	PBA metrics
1	They were very good giving us reports we knew when there was going to be a cost issue and we were able to work.	Periodical reports	Program Success
1	I think generally the best thing about, it was the team was very cohesive, and we communicated well and it was not an adversarial kind of relationship.	Establishing teams	PBA metrics

<u>Q#</u>	<u>SENTENCE</u>	<u>SUBCATEGORY</u>	<u>CATEGORY</u>
1	What did not work? It is difficult. I mean it depended on. Scheduling was always difficult, because it takes the contractors a long time to generate a schedule.	Schedule	Challenges
1	So, to use the program schedule as a tool could be difficult.	Schedule	Challenges
1	I mean we had to go through. You know if it took a major rewrite if there was some major problems so that could have gone better as certainly when you would have a schedule slip of a major cost group that would require you to redo certain things or look at the task and figure out what needed to be ultimate.	Periodical reviews	Program Success
1	Everyone had a good idea what needed to be done. But making the schedule reflect that could be difficult, sometimes that would take some major work after various decision points.	Schedule	Challenges
1	Okay now they have to go crank the machine again, get us a new schedule. Those things could have been better I would think.	Schedule	Challenges
1	Otherwise as far as the way that we were, I mean the performance was very good we were getting what we wanted out of the contract certainly all the way through the time I left.	Product Quality	Program Success
1	We had a cost plus kind of a contract where you pay based on the performance and so, certainly that allowed us to, you know this was a research program there were a little different from acquisitions. It is condensed and we were looking for some specific things	Cost plus type based on performance	Type of Contract
1	So, because the way contract was written it allowed us a lot of flexibility. If we decided for whatever reason that we did not if we could remove items from the contract very easily, or we could say we don't have enough money to do this.	Contract flexibility	Program Success
1	So, we would get either bring some of the work in house, in our own labs so, we could save money. So, we were able to manipulate the contract much cheap much more easily.	Flexible work environment	Program Success

Q#	<u>SENTENCE</u>	<u>SUBCATEGORY</u>	<u>CATEGORY</u>
1	We were on top of them all the time to make sure that they were using what is called management reserve to put out. Management reserve is that amount of contract that is left after the cost that we ordinarily go to incentive.	Authority	Program Success
1	So, you specify this is your reserve and you have that to put out fires as we say to solve problems. And the fewer problems you have the more you keep at the end. So, the program was very good and identifying that management reserve and having the contractors to use that to prevent cost groups so in that case absolutely.	Management Reserve	Program Success
1	We were able to keep cost down a lot more and because we were very knowledgeable what needed to be done if we saw opportunities to reduce cost by using different methods than we could easily remove scat lines from the contract that didn't have another organization do those.	Flexible contracting	Program Success
1	Yeah It does save some money.	Cost	Program Success
1	I mean we still have cost growth because you save money here and there but because the way we estimate the work you know you use historical data and on the research program that is difficult because it's brand new project so you don't always know exactly what your unexpected cost will be. Instead of let's say traditional acquisition programs where they have still cost growth a lot of times but it's maybe sometimes it's not as difficult to project what you are doing.	Enough historical data	Challenges
1	So, we did saved money, the program expensed the growth but we also added fly, we added performance because of that. So it was very reasonable of the way that it worked out.	Cost	Program Success
1	We definitely had very good performance in the wind tunnels, everything with the engines, and all that kind of stuff.	Product Quality	Program Success
1	As far as schedule certainly we were able to maintain schedule very well.	Schedule	Program Success

Q#	<u>SENTENCE</u>	<u>SUBCATEGORY</u>	<u>CATEGORY</u>
1	But they had caused some slips just because like facilities don't always work out. Things like that. So, unexpected things caused schedule, but overall the schedule was very well at here too.	Facilities	Problems
1	It was a unique approach the contract was a lot different. It's called other transactions agreement (OTA).	Other Transactions agreement	Type of Contract
1	So, we had a more integrated contractor instead of having a traditional prime-sub relationship.	Integration	Program Success
1	The contractors were put together in a consortium which means that both of them were equal foot-in. One would be the administrative manager but otherwise the government and this case two main contractors were equal foot in to negotiate.	Consortium	Program Success
1	We saved a lot because nobody could blame the other for slowing the program down and so on. It was so much more collaborative environment.	Collaboration	Program Success
1	I think in that case we certainly did save a lot of schedule.	Schedule	Program Success
1	Performance was very high level. Because they were working together in this case and the way that they execute the program was very good.	Collaboration	Program Success
1	But until the vehicle flies we won't know how well we achieved because it's brand new item. So, again it's difficult there is no historical comparison for this kind of project.	Enough historical data	Challenges
2	We didn't have non-US contractor, although suppliers for various parts might be non-US so they would be subcontract. We did have one or two of those.	Sub-contracting	Environment of the Contract
2	Where we were working with the company there was originally US and then they were bought foreign firm. For example like Allison engines were bought by Rolls Royce engines sometime ago.	Sub-contracting	Environment of the Contract
2	There are issues as far as security which have you know especially when you are working with munitions or technical systems.	Security	Challenges

Q#	<u>SENTENCE</u>	<u>SUBCATEGORY</u>	<u>CATEGORY</u>
2	So my experience would be more in that line as far as you know the way that you do work in performance. I am not sure there would probably be some effects. I mean the work ethics in different countries, different work hours, different laws, labor and other things. So that cause certain things but otherwise I don't know too much about that.	Work ethics	Environment of the Contract
2	Security is big one. Especially when you are dealing with engine technology because it is a technology that the nations like to protect.	Security	Challenges
2	So, when you deal with a company that is part of a country that is looking to do some similar work in the research that you are doing it's more difficult to exchange information because sometimes like a lot of times for example when Rolls Royce bought Allison they had to design their building such a way that all the employees of Allison who were all US citizens could work on their programs and not have issues with security because they were all cleared US personnel.	Exchanging Information	Challenges
2	So, it was a subsidiary of Rolls Royce. And the Rolls Royce management could not gain some of that information because they were British firm. So, some of that was they were not party to.	Sub-contracting	Environment of the Contract
2	And the same issue of other companies that way. So, for example if you a company that's a part of a known competitor a lot of times you can't exchange certain information the government might consider secret so on so.	Exchanging Information	Challenges
2	That adds complication so that adds cost because the more security is very expensive.	Security	Cost
2	The way that we protect things requires a lot of energy and it is expensive. So that's one issue very common.	Security	Cost

Q#	<u>SENTENCE</u>	<u>SUBCATEGORY</u>	<u>CATEGORY</u>
3	Yeah I think that makes sense. GSA (General Services Administration) certainly likes to use Performance Based. They recommend that. It is sort of slow progression one when they talk about Performance based contract and PBA. Those things are definitely useful and again since really what you want out of a contract just not the spend money you want quality product so performance is probably everything. So, I would say yes.	Product Quality	Program Success
3	I guess it would depend on the contract. I mean if the country that you are working with uses the same methods of labor and everything else you can do that. If you work with a country that has let's say restrictions on the numbers of hours they can work in a day something like that. It might be a little more difficult. It would really have to depend on the relationship with the country and how the federal government has agreements set up.	Different procurement type	Environment of the Contract
3	I think the closer the countries to your culture are easier it is to. You know when you are in, let's say in an Anglo-Saxon environment where the work ethic tends to be same, the language is similar; the way you communicate is similar. I think it is probably easier.	Closer better	Culture
3	If you are working with the Japanese company, a company that is very focused on performance very focused on customer satisfaction then that would be easier.	Performance Oriented	Culture
3	You know, other countries might have a little bit more relaxed work ethics if that's the case then you would need to use some kind of different method. I think performance is always a good way to go but sometimes it might be difficult to measure based on cultural differences.	Work ethics	Culture
3	Again without knowing a lot about it, it'd be difficult to say more but that's what I would think. As far as working with a foreign country having shorter work days and maybe different attitude might be a little bit different.	Work ethics	Culture

Q#	<u>SENTENCE</u>	<u>SUBCATEGORY</u>	<u>CATEGORY</u>
3	I think it is for anybody that you'd work with is advantage by means of PBA. As long as you can trust the performance is being reported is accurate then yes.	Performance Oriented	Environment of the Contract
4	I would say generally it has more to do with I mean if you are working with technological systems certainly things that come up technology issues that you know you are working with a new things that are not well tested so those things would certainly I think be major issues.	Technological systems	Challenges
4	Otherwise I'd say funding. Funding is the major concern. Because the way that we receive funding in the government is every year congress votes. President submits the budget congress votes on it and then they manipulate the budget so you may not always get the budget that you would prefer to have to do your program.	Funding	Challenges
4	That is the major thing that getting the correct amount of funding and getting it when you need it. Because sometimes they'll give you money but they'll ask you to spend it but certain times programs which don't work for the performance of the program. This is I think particularly important you know usually in a program the majority of the work is done when you're doing when you're building and you know you do major part of the research very front part of the program And then sometime they'll give you money towards the end of the program. It is not as useful. That's the major obstacle. When you get your money and then how well you are executing and how well you are performing because the way they ask performance is on your execution how much you spent. It is not how much how much work has been done necessarily	Funding Discontinuity	Challenges

Q#	<u>SENTENCE</u>	<u>SUBCATEGORY</u>	<u>CATEGORY</u>
4	I think that's the major thing. That's discontinuity between how you're funded and how you're expected to work to actually accomplish something. That Sometimes they'll cut the money because, oh you didn't spend enough, you didn't produce enough, you didn't spend enough. So in that case performance methods would be much better if congress look at those, but they don't tend to look at those, it's more financial they look at.	Funding Discontinuity	Challenges
4	Communication with the contractor is vital. You have to have a good relationship with them. You won't produce anything if you are laying one another. If the contractor feels comfortable coming to the government and telling them the truth we just have the major problem we're going to have schedule slips and then you can work through, negotiate your chance is I think of successfully working around that problem much greater than if they hide it comes out later on at the program you can't do anything about it so that's absolutely major concern. You have to able to have open communication.	Communication	Program Success
4	Working the schedule. You know making sure you have accurate schedule keeping you track of that, keeping track of hours, and keeping track of your own values is very important as well.	Schedule	Program Success
4	User requirements. The best is when they're stable. If the user requirements change then you'll have much harder time accomplishing your objectives. And they do tend to change. .	Customer satisfaction	Program Success
4	And the longer the program goes the more likely it is. They'll want to change something because they'll develop some new need and they want to insert it in the program I think the quicker you do the program the better your result will be.	Longevity	Program Success

Q#	<u>SENTENCE</u>	<u>SUBCATEGORY</u>	<u>CATEGORY</u>
4	The more stable your user needs are the better. And the if you satisfy those needs and then your user will be happy. Then they will help your funding and everything else. So it's very important to satisfy customer. Otherwise there's no reason to do a program if you are not satisfying the person you are doing it for. It's a waste of money.	Stable user needs	Program Success
4	Funding and the congress looks at the way we're performing. You know you can get all the money you need but you need to get it at the correct intervals and the correct amounts.	Funding time	Program Success
4	And you have to be trusted by the congress that you are spending it correctly. If you're not then they'll take it away and you won't succeed. So, I would say the funding the way you get is very important.	Funding	Program Success
4	But it is very difficult to say the most, they're all so important. The way we assess our performance and the way we receive funding are probably the biggest thing I would think.	Funding	Program Success
4	I think performing well and having a good track record will help you get more money. That's also very important.	Good performance history	Funding
5	I am trying to think something. There are plenty that come up I mean you can look at on the public record. For example GPS program. You know it started up very well and they did some tremendous work because they're much focused team, they're very good at getting advocacy for the program maintaining funding working together with the contractors and picking good solutions.	Establishing teams	Program Success
5	Then is the program group, you know they made initial accomplishments, they launched all these satellites and then you know now it's the next contract and everything is running into the some of typical acquisition problems. There is a lot of scrutiny; they're spending money than they should be. They're running into problems like we call vanishing vendors.	Vanishing vendors	Challenges

Q#	<u>SENTENCE</u>	<u>SUBCATEGORY</u>	<u>CATEGORY</u>
5	That's a major problem for acquisition contracts. Because let's say you have a company that makes particular items that's vital to your program. If that company goes away then you have to develop that capability some other way. In this case it's the producer of the atomic clock.	Vanishing vendors	Challenges
5	Another example is you need certain batteries for a vehicle, like an unmanned vehicle and the company that's making those batteries goes out of business. Now what? What are we doing? You know you have to redesign everything, go to a different type of battery and all these kind of things. Those are certainly major issue.	Vanishing vendors	Challenges
5	You know we go to war and we got a nice funding line before the war starts. And now sudden need for the war so we lose all our money for the program because they're going to war, for the active conflict. Those kinds of things happen you know, fairly often in programs.	Unexpected circumstances	Challenges
6	We'll see what happens with the X-51 but it's been very well run program. You always your share of things. But we'll find out in a couple of years, I mean a few months whether or not successful. It was a very good effort, the team was very good and that's a very good example whether or not it performs. Because its research might not work properly but everything leading up this point has been very good.	Establishing teams	Program Success
6	We had a lot of good advocacy all over government, we had people in the administration who had been in the previous administrations had strong supporters of the program.	Advocacy	Program Success

<u>Q#</u>	<u>SENTENCE</u>	<u>SUBCATEGORY</u>	<u>CATEGORY</u>
6	The major thing that made this acquisition successful is communication. The way we set up the contract, the way we gage the performance, the way we were able to manipulate the money so that we could, you know you have to change the way you execute the contract in order to best use the money so we were very good at meeting expenditure goals. Because the way we have to do business. Again we are looking at performance, its expenditures that congress cares about so we had to make sure that we were satisfying those goals.	Communication	Program Success
6	And we were very good at keeping government involved in everything that was happening because as long as refreshing their minds they think favorably upon the program.	Collaboration	Program Success
6	You have reviews you go through, and you have to please all kinds of different people to make sure that they don't think your program is not valuable. So we were very good at advocating the value of the program at speaking the entire chief scientist of the Air force for example was a great advocate.	Advocacy	Program Success
6	You know breathing congress, breathing various staffers, these kinds of things. Playing the politics is very important in making sure it works.	Politics	Program Success
6	You know because of all that this great relationship with the contractors, and having knowledgeable people on staff, working with great other and government organizations, getting everyone involved. The more people getting involved like an advisory capacity not necessarily in an execution but to look at it better is because all their organizations think fluently upon it. You have to know who need to engage what the requirements are. You need to talk to environmental people; you need to talk to different offices. If you keep them early and you know everybody is happy to gain the information they need things go smoother than if you forget to talk to somebody and later they're like "Oh, you didn't talk to us." You know we are going to stop you and you come into bureaucracy.	Collaboration	Program Success

Q#	<u>SENTENCE</u>	<u>SUBCATEGORY</u>	<u>CATEGORY</u>
6	Proactivity. That was the major thing that made that program, the execution work.	Proactivity	Program Success
7	I'd say number one that you get the vehicle or the item that you wanted to get. That it works the way it is supposed to. Those are big ones.	Product Quality	Program Success
7	You need to satisfy the customer. Otherwise there is no point to doing it. If you just get a cool item nobody wants then you fail.	Customer satisfaction	Program Success
7	If you stayed in your cost, I mean as long as the others true and then keeping the cost is important.	Cost	Program Success
7	And if you get it right time, you don't want you know to develop a great item twenty years after be useful then what? What did you do it for?	Schedule	Program Success
7	And then also another way to look at it. It's in the future of that item is easier to support and maintain then the overall cost, life-cycle cost will be lower. So I think you need really look at to sustainment and how well we maintain, how easiest to maintain parts and knowledge about the system.	Sustainment	Program Success
7	I mean look at the B-52. It's been in the inventory more than fifty years. It is very successful program and still does the job it was designed to do. So, there are a number of programs like that they have been very successful based on the capability they offered for the price and schedule.	Sustainment	Program Success
1	Not that I'm aware of.		
2	No, I haven't.		
3	Not sure.		
4	All the program I've worked with had no funding issues. The main issue was to meet schedule for the sustainment mod program.	Schedule	Challenges
5	Can't think of one. I guess I've been lucky in a way as I've been put on programs that were already in place and making deliveries. Of course, that takes away a lot of the potential learning I could have obtained by being on "bad" programs.	Successful program	Program Success

Q#	<u>SENTENCE</u>	<u>SUBCATEGORY</u>	<u>CATEGORY</u>
6	I was not the program manager, however, for years, the E-3 crewmembers requested new mission crew seats for the planes in order to reduce crew fatigue. The “old” seats in place for 25 years did not recline at all which is tiring for crewmembers on 8+ hour long missions. A fellow program manager was able to find funding within the Air Force to replace the mission crew seats.	Funding	Program Success
6	These seats are being or have been installed aboard the AWACS fleet, reducing crew fatigue and improving crew morale.	Customer satisfaction	Program Success
7	If my leadership and the users are satisfied with the program and the program stays within legal bounds.	Customer satisfaction	Program Success
1	We did a rolling plan. Every six months we do a plan for the rest of the term we had. This considers the amount of money that we are going to spent on manpower and materiel.	Monthly reviews	Contract development
1	Lockheed Martin would have a higher price for us, we couldn't do that and we shared the risk.	Sharing risk	Contract development
2	We had a very good experience with Martin Baker company from France. We had something similar to outsourcing. They were supplying ejection seats for the aircraft.	Different Company	Environment of the Contract
3	All the supply chain is very complicated and integrated so it's very difficult to apply PBA. It doesn't apply so easily. We have several type of services for engines, aircrafts overhauling, textile, ...	Complex contract environment	Challenges
4	Failures in the integrated logistics support. The problem was tier 1, tier 2 suppliers. Sometimes some of them were disappeared. Not only for the electronics, but also for the engines.	Vanishing vendors	Challenges
5	Sometimes you are not fast enough to review the contract. The number of aircraft that we need for accomplishing flying plan reduced dramatically. We were not fast enough to reduce the requirement of engines that we have done to the company.	Flexibility	Program Success

Q#	<u>SENTENCE</u>	<u>SUBCATEGORY</u>	<u>CATEGORY</u>
6	Instead of paying for the materials that we are using and instead of paying for manpower hours that the company used, we will pay just and only for the milestones. We have to pay more but all responsibility and risk is on the side of the company. This work much better.	Sharing risk	Program Success
6	The more complete is a system the easier to go to PBL or to have a one single measure, something that gives you an overall idea of the performance of the supplier. A complete aircraft is easy to translate the risk to the company. When you are contracting maintenance of different stuff, different components for different aircraft this is much difficult to do.	Variety of Service	Challenges
7	When you got what you expected to have.	Customer satisfaction	Program Success
7	First the number of deliveries, then the schedule of deliveries, now we are working on quality of deliveries. When you satisfy the number of deliveries then you focus on the schedule of deliveries. After these you focus on the quality and the reliability of what you had.	Number of delivery	Program Success
7	It depends on a lot of factors. But first is quantity, then is time and after that is quality.	Quantity	Program Success
7	We have a lot of stuff that is near obsolescence. Sometimes you need a spare and the spare is not available on the shelf. The company has to rebuild the assembly line again.	Vanishing vendors	Challenges
7	In some case PBA is wonderful. For example for the UN mission in the Cyprus. Instead of having we could do PBA for at least 2 helicopters. That having to take care of everything for just two helicopters in Cyprus. I go to change to PBL with no doubts in that case.	Variety of Service	Program Success
1	For our performance based acquisitions we had quality assurance team that was located on each side where our products were. We had quality assurance team that evaluated the contractor for each specific location and then the program as a whole.	Establishing teams	Program Success

Q#	<u>SENTENCE</u>	<u>SUBCATEGORY</u>	<u>CATEGORY</u>
1	And they reported back to us what had been achieved to that point what was acceptable work what was unacceptable work, to pay or not to pay for based on the contractor request for payment.	Periodic reports	Contract development
1	What worked? The best was having the people on location. Because they, subject matter experts, could see the daily activities by the contractor. You could see what the contractor was doing constantly.	Collaboration	Program Success
1	When you are dealing with software and some other things that go with it, it's not a definite finish date. So there always going to be upgrades always little quirks that need to be worked out. And sometimes it could take longer than expected because something fails in the quote that they're writing.	Type of job	Challenges
1	So, that's why PBA works in this case because you're getting your finished product for the price of the product not an hourly rate for the people working on it.	PBA metrics	Program Success
1	On the program I worked on yes there were cost benefits. Just because of the complex nature of what they were working on if we had paid them in hours of what they did as opposed to completing the project we would have spent a lot more money.	PBA metrics	Program Success
1	Schedule. Sometimes they had incentive to finish faster. Because they were getting paid just based on the products so they've finished faster.	Schedule	Program Success
2	I don't know the methods that they typically use. I think you have to learn about one the culture of the country that they are coming from, And what their typical business practices are to determine if they accept performance based strategy.	Work ethics	Culture
2	It is important to get very educated on the other countries that you are dealing with and the contractors.	Education	Culture
3	It is a long term contract; they've been doing it that way a long time so it is easy to continue that. Because the contractor is very familiar with it, they are accepting the way you do business.	Experienced contractor	Program Success

Q#	<u>SENTENCE</u>	<u>SUBCATEGORY</u>	<u>CATEGORY</u>
3	I think sometimes you have to look at what the product is you are trying to get out of it. If it's something that you can evaluate performance and evaluates completion levels than I think PBA is best way to go.	PBA metrics	Program Success
3	Having a non-US contractor they have experienced of what is needed in that location and what type of methods they need to use for construction and things like that. The advantage is definitely to the non-US contractor in that situation.	Experienced contractor	Program Success
3	It is advantage that if you are looking for something local. So if you are trying to do work in Turkey you probably want a Turkish contractor. Because they have local knowledge they know what the culture is.	Experienced contractor	Program Success
4	I think requirements. I think having very good understanding of what the government wants to get out of the program and what the contractor is going to provide	Defining Requirements	Program Success
4	And making sure that regardless of whom the contractor is and what they're doing for you that they have the same interpretation of what you want as you do.	Communication	Program Success
4	And that the requirements are set and not constantly changing. If the requirements change, they fluctuate then the likelihood you'll get what you want in the end goes down dramatically.	Defining Requirements	Program Success
4	The language, no matter what language it is, is very subjective. You can look at the same words as I look at and get a totally different interpretation of what that means. So, language creates a big obstacle.	Language	Challenges
4	The written word is based on their knowledge and their experience. So, everyone has different experiences, the contractor is coming from the contractor side trying to figure out what it is you want and you are coming from the government side trying to put into words what you have pictured in your head. So it doesn't matter to speak the same language naturally or not there can be a lot of conflicts interpreting the language.	Interpretation of contract	Challenges

Q#	<u>SENTENCE</u>	<u>SUBCATEGORY</u>	<u>CATEGORY</u>
5	I found contractors like to paint a pretty rosy picture. If they give you bad news they feel they'll be evaluated horribly and the contract could end.	PBA metrics	Contract development
6	Having a contractor that was really willing to do what we needed and mould the requirements and change a few things the last minute allowed us to speed up the production line.	Flexibility	Program Success
7	When you meet the requirements of the contract, when you meet the original intent of your design of your product and it's been successfully used without major failures I think that is a success.	Customer satisfaction	Program Success
7	The program as a whole can be a success even if it has little failures along the way. So, you may not get everything done right on the schedule, or you may have major cost overrun that you have to make up in the overrun but if you get your product where it needs to be used, who it needs to be by when they need it then it is a success.	Product Quality	Program Success
1	As mentioned, I was involved with a cost-plus award fee type contract. The award-fee process required a quarterly review of all award-fee comments.	Award Fee	PBA metrics
1	Valid comments could be either positive or negative and ultimately determined whether the contractor made the award-fee bonus.	Award Fee	PBA metrics
1	Comments were received from various government units involved with the contractor's work.	Various comments	PBA metrics
1	In my mind there wasn't enough rigor in the award fee process. Often the contractor would receive praise for what seemed to me to be part of their normal responsibilities.	Vague awarding	Challenges
1	For those collecting the award-fee comments, it was always easier to find and report the good things over the bad.	Award Fee	PBA metrics
1	In the end, I don't think the contractor ever really went above and beyond what they were originally paid to do.	Payment	Program Success

Q#	<u>SENTENCE</u>	<u>SUBCATEGORY</u>	<u>CATEGORY</u>
1	Basically, it didn't result in CSP benefits because they already had their money. Which is fine, except they probably received financial award based on the assumption that they did go above and beyond.	Payment	Program Success
2	I have never been involved with non-U.S. contracts, so unfortunately, I am unable to comment.	Not involved	Environment of the Contract
3	This type of Acquisition method should be used in situations where the government can see tangible benefits from the contractor's outstanding performance.	Tangible benefit	Environment of the Contract
3	In my case, it didn't seem to be the most effective method in the operations and sustainment phase.	Sustainment	Program Success
3	So to answer your question, I would be most likely to use it in an early acquisition phase, where schedule and cost are most vulnerable.	Cost and Schedule	Challenges
4	I think the biggest obstacle to success is the instability of the user requirements and schedule expertise, both of which lead to cost overruns that you can never recapture.	Instable user requirements	Challenges
4	One of the reasons for requirements instability is that Program Managers do not have the right amount of authority to direct their programs.	Authority	Challenges
5	A request for proposal was sent out in order to purchase around 700 high quality surveillance cameras for a perimeter detection system. Proposals were received and the contract was awarded to a small business that essentially won because they gave the lowest bid.	Lowest bid	Type of Contract
5	After they won the bid, they tried to buy the cameras on credit from the manufacturer, but were unsuccessful for several months because they only had around 10K of capital assets.	Funding	Challenges
5	After the first batch of cameras was delivered, it was noted that they were not equipped with essential cabling required to deliver the video and data streams from the cameras to the monitoring stations.	Product Quality	Program Success

Q#	<u>SENTENCE</u>	<u>SUBCATEGORY</u>	<u>CATEGORY</u>
5	This cabling was clearly described in the RFP, but, as it turned out, the small business did not understand the requirement and thusly did not include it in their original proposal. That is how they were able to outbid the competition.	Communication	Program Success
5	At this point the Contracting Officer would only allow the repurchase of the cabling through the same small business and only with the same source of money that had paid for the original contract.	Communication	Program Success
5	This turned out to be a disaster because the original money had come from several Air Force, Army, and Marines operational units who paid for their portions of the systems largely with one-time money.	Funding	Challenges
5	The Project Manager ended up having to go around to all these units and ask for the additional money to pay for the cabling that the units already thought they had paid for. What a disaster!	Funding	Challenges
6	Honestly, hero stories are harder to come up with. It seems like every acquisition program encounters problems somewhere along the line.	No perfect program	Program Success
7	Acquisition success metrics are extremely difficult to measure.	Difficult to measure	PBA metrics
7	It basically comes down to cost, schedule, and performance.	Cost, schedule and performance	Program Success
7	I think performance should ultimately be the determining factor.	Performance	Program Success
7	If the system can perform the way it was originally intended to, then that is success.	Performance	Program Success
7	Often times these days, cost is metric of success because of the amount of attention paid to the big acquisition programs and their noteworthy cost overruns.	Cost	Program Success
1	Well, we met as a team, and developed service summaries, what the remedies or if the contractor doesn't follow through in doing something how we're going to handle that.	Planning contract	Contract development
1	We did quality assurance; training so that the folks who were overseeing the quality of the contract would understand what it is we're looking for in that contract.	Planning contract	Contract development

Q#	<u>SENTENCE</u>	<u>SUBCATEGORY</u>	<u>CATEGORY</u>
1	Everything worked fine. If we had something that we need to revise then we revisited.	Contract success	Contract development
1	We had challenges of trying to develop so the summaries and how to come up with remedies for what happened and what we should revise from the contractor if that didn't work.	Revision of the contract	Challenges
1	If some part of that didn't work, something in the performance was deficient how we were addressed that. So, those were the challenges of how to identify remedies.	Performance deficiency	Challenges
1	I see a lot of overhead and performance based acquisition and not that's bad but it takes a lot of time. I can't answer that whether PBA save us money.	Cost	Challenges
2	Well, it's the same as what I've told you, because what I've been talking to you about is an FMS contract, so foreign military sales contract. Is just that DOD Air Force who put the contract between us and the contractor, who is also American firm that is for a foreign government and for support of a foreign government? So saying, our saying, rules apply whether it's in the States versus whether it is outside.	US or non-US contract	Environment of the Contract
2	You know that's when you say F-15, F-16 and those I don't know how, our guess is the maintenance contract but I have support service contract. It's not for a system; it's for services, to people.	Service contract	Type of Contract
2	I am not done a PBA other than foreign military sales.	FMS contract	Environment of the Contract
3	It means that they were paid for foreign military money, non-US money, but the contract is between the US government and US contractor.	Non-US money	Funding
3	No not that I know. Not in my near future I know we don't plan to implement any contract with the non-US contractors.	Non-US Contractor	Environment of the Contract
3	Because as US we typically are going to follow the same guidelines that we have for with US contractors.	Non-US Contractor	Challenges

Q#	<u>SENTENCE</u>	<u>SUBCATEGORY</u>	<u>CATEGORY</u>
3	I mean there would be a few things that maybe wouldn't be applicable but generally US entering into a contract we have certain guidelines that we follow so they would unless the FAR says it doesn't apply to than it would apply.	Contracting guidelines	Environment of the Contract
4	Funding.	Funding	Challenges
4	The most difficult part is to find someone qualified to be willing to manage the contract, the performance.	Finding Contractor	Challenges
4	To oversee the performance and to do periodic reviews to ensure that the contractors performing in accordance with contract.		
4	So, I'd say the most challenging part is to find someone to do that. Especially since our contractor is working out of country.	Non-US Contractor	Challenges
5	No horror story.		
6	No hero stories. Everything went well.		
6	It's the one according to the way we expected. This is, this contract is being an existence for a year. So, you know and the same contractor pretty much knows what they're doing.	Qualified contractor	Program Success
6	So, we don't have the issues some contracts had.	Routine contract	Program Success
7	Well, of course time, and the service that we're receiving quality service, when we couldn't recognize that we were receiving timely and up to quality that we expect it's a successful contract, our customer's satisfied.	Time, Customer Satisfaction	Program Success
7	I think satisfaction has to come in first.	Customer Satisfaction	Program Success
7	Because if our customer is satisfied then we won't have needed to do, we may not get the opportunity to do that contract again.	Customer Satisfaction	Program Success
7	We have to satisfy our customer first and then you can say cost.	Customer Satisfaction	Program Success
1	Basically in structuring the contract they wanted us to create top level kind of short summary what we were trying to accomplish with the contract and you start to break it down into what were the performance measures that would help us achieve success.	Performance measures	Contract development

Q#	<u>SENTENCE</u>	<u>SUBCATEGORY</u>	<u>CATEGORY</u>
1	Define the task and create a level of measure effectiveness or level of performance that we wanted the contractor achieve. The challenging part was to create some measure of effectiveness for an engineering task that made sense that was clearly definable and could be used effectively.	Defining Requirements	Contract development
1	The challenge was trying to get the engineers in our office and program managers and everybody sit down and figure out what is a reasonable measure to determine that they've done effectively and we're getting the product we want.	Defining performance metrics	Contract development
1	You have to sit down and define upfront and get both parties to agree here is what our measures of quality on the final product are. Especially when you are doing something very intellectual based work. That can be difficult to create a much defined case easy measurable list of items.	Defining performance metrics	Challenges
1	I think one of the things that weren't done well when we transitioned was the level of training and education wasn't necessarily where it could have been.	Training	PBA metrics
2	As far as the idea of being able to use performance based measures on a non-US contractor I don't see any reason why that wouldn't work it all. Both parties would still have to agree on the measures of the performance and the effectiveness but the principle of performance based acquisition I don't see why that would change it all based on the nationality of the contractor or the government.	No difference	Environment of the Contract
3	If I had the opportunity to create a contract with a non-US contractor I would expect that still work.	No difference	Environment of the Contract
3	For us working with a US contractor just for security concerns and some of our regulatory issues it is easier. As far as if we work with a contractor outside the US there are concerns about the security and proprietary data and stuff like that need to be handled a little bit differently.	Security	Environment of the Contract

Q#	<u>SENTENCE</u>	<u>SUBCATEGORY</u>	<u>CATEGORY</u>
3	Dealing with a new contractor, a foreign contractor I would probably be more comfortable using performance based acquisition because now between government and the contractor we agreed upon levels of performance so that everybody knows upfront what is expected of each party. That would give me a level of comfort.	No difference	Environment of the Contract
4	Getting the requirements and the scope of the project defined upfront correctly. We had a lot of issues later on the program where we have thought through everything upfront so we'd find that realized later on way we've got additional work or we need to change this.	Defining Requirements	Challenges
4	Because not only do you have to think about what tasks need to be accomplished but which are critical tasks you need to have done and what's a measure of effectiveness that you needed done to. In order to create to performance based contract there is actually more work more thinking that has to be done upfront to releasing the contract.	Defining performance metrics	Contract development
4	If you got a contractor that historically you had issues in a particular area spending the time upfront to come to an agreement of what is expected and document those expectations and what is going to be done to hold them accountable is probably going to pay off and saving you for problem down the road.	Experienced contractor	Program Success
5	This individual got the idea of the concept and went to Air force chief of staff at the time and told him about it. Chief of staff told him it is brilliant idea here is the budget, go make it happen. The guy didn't talk to A-10 program office, didn't talk to pilots. When it came to program office the pilots said, I don't want them in my cockpit.	Establishing teams	Program Success
5	In the end it never went on the aircraft. The test community tried flying with the configuration with it and determines that. It was a safety issue because when they move the stick it would hit this item, it'll block the stick from full movement.	Defining Requirements	Program Success

Q#	<u>SENTENCE</u>	<u>SUBCATEGORY</u>	<u>CATEGORY</u>
5	Because it was driven from high level nobody was going to give up even when the data was already there saying it is not practical solution. Used up a lot of resources, money, and man power trying to do that in the aircraft.	High level pressure	Challenges
6	I came on to the program and started to do looking at it and basically came into determination there was no way it was going to cost them, they thought it was going to cost much more, and they made a lot of assumptions on how quickly things could be done, and they also missed a lot of activities that needed to be done.	Communication	Program Success
7	It needs to meet the user's needs and expectations. Performance of the system and the environment where the user uses it.	Customer satisfaction	Program Success
7	Also meeting the cost and schedule targets are set to the baseline of the program being able to stay within that.	Cost, schedule	Program Success
7	Being able to turn around and educate, prepare the workforce for future programs by executing something successfully. Prep for the future, prep for the workforce being able to continue doing that work.	Training	Program Success
1	Have you ever been involved in a contract using performance based acquisition methods? Yes		
1	If so, can you describe the methods that were used? Award Fees for contractors, working in teams to establish a schedule, Integrated Working Groups	Establishing teams	PBA methods
1	What "worked"? Award Fees - Contractors worked hard to reach the maximum incentives	Award Fee	Program Success
1	What did not "work"? Working in teams to establish schedule - there was never any agreement between parties resulting in endless meetings re-base lining the schedule. The IPT was simply a gripe session.	Schedule	Program Success
1	In your estimation, did performance based methods result in cost, schedule, or performance benefits compared to other methods? No	Overall PBA is negative	Program Success

Q#	<u>SENTENCE</u>	<u>SUBCATEGORY</u>	<u>CATEGORY</u>
2	Have you been involved with non-U.S. contracts? NO		
3	In the future, do you plan to implement performance based acquisition methods (in a U.S. environment or in a non-U.S. environment)? Not sure - I am going to a new unit and I will have to see what measures they have in place.	Overall PBA is negative	Program Success
4	In acquisition programs in which you have been involved, what has been the most critical issue or obstacle to success (e.g. cost, sustainability, meeting the user's requirements, schedule, etc.)? Cost and Schedule	Cost and Schedule	Program Success
5	Can you share an acquisition "horror story" with me, when something went wrong? Yes There I was. I just became the Deficiency Reporting and Investigation System (DRIS) program manager. The system was on its way to shut down due because a new system was coming. However, no one wanted to actually pull the plug because they knew it would be their job. Therefore, every time I tried to get anything done, it was met with opposition. Also, my division was under one chain of command and the users of the system (the customer) were under another. I tried to write an agreement between everyone specifying the funding and shut down schedule. It got road blocked so many times that it never got signed off. This was an important document too. It needed to be signed and everyone knew it. I wound up moving to AFIT without it done. After a year, I saw the current program manager. They are still operating under the old agreement because no one ever spent the time to finish getting the new one signed. I'm not sure if PBA would have done any good. The story does show insight into the mentality of some acquisition workers. Change is difficult to attain.	Resistance to Change	Challenges

Q#	<u>SENTENCE</u>	<u>SUBCATEGORY</u>	<u>CATEGORY</u>
6	Can you share an acquisition “hero story” with me, when something went right? I was the Executive Officer for the 554th when a new Commander arrived. He took many of the programs and started holding people accountable. Also, if people didn't live up to his expectations, they were removed from leadership. He set the goals which were challenging yet attainable. He set the consequences and the rewards and people responded. As a result, 2 programs were saved and the entire group returned to schedule.	Setting Rules	Program Success
7	When can you describe an acquisition as successful? When something is actually fielded and works as specified	Product Quality	Program Success
7	What are the most important metrics for determining success? usability, cost, schedule	Usability, Cost, Schedule	Program Success
1	Successful performance based contracting is contingent upon a relationship with a capable and competent partner that is willing to share risk.	Sharing risk	Program Success
1	It also depends on the cost and payment structure of the contract (i.e. firm fixed price vs cost reimbursable) plus the incentive schedule meeting and/or exceeding the performance standards in the contract.	Cost	Program Success
1	The difficulty lies in appropriately defining the performance standards to ensure that the customer gets what he needs (within costed guidelines), and the contractors able to achieve those standards (within the resource restrictions applied) while still making fair profit.	Defining performance metrics	Challenges
2	Not sure what is being asked. Our contracting methods are essentially the same.	No difference	Environment of the Contract
3	The decision will not be mine, but this seems to be the way of the future.	Future contracting method	Environment of the Contract
3	But it is easier said than done, since institutionally we lack the experience and expertise of the private sector.	Lack of experience	Challenges

Q#	<u>SENTENCE</u>	<u>SUBCATEGORY</u>	<u>CATEGORY</u>
4	Performance based contracting is a relatively new concept (especially for the military - since we are used to "doing" as opposed to "managing") and is difficult to implement without appropriate training (particularly with respect to a quality management system on the part of those tasked with ensuring that the standards in the contract are being met, as well as for those performing financial audit and certification).	Training	Program Success
4	As well, there needs to be a common understanding (with the contractor) of how things will work. It all comes to "expectation management".	Communication	Program Success
5	Not really. Most problems were overcome with appropriate authorities making timely and appropriate decisions.	Timely decisions	Program Success
5	You need to identify those authorities, and delegate decision-making to the lowest possible level.	Communication	Program Success
6	-	No hero story.	Program Success
7	It really depends on the type of procurement.	Different procurement type	Program Success
7	In the case of logistics support to deployed operations, it would be no loss in operational effectiveness due to alternative service delivery (ASD). In Canada's case, it was enhancing our ability to deploy forces by allowing functions that could be given to the private sector to be out sourced.	Alternative service delivery	Type of Contract
1	Yes. In fact the one we use currently for the contract we have to modify your aircraft that Turkish fleet aircraft is a format performance based acquisitions. It's a sole source contract so wasn't competitive since Lockheed Martin is the sole provider for the F-16 aircraft.	Sole Source	Type of Contract
1	But contracting we do use the basic tenets of performance based acquisitions. We submit a sue contractor comes back with a SOA, with a systems requirements document recommendation and that's how we contract.	Statement of Work	Contract development

Q#	<u>SENTENCE</u>	<u>SUBCATEGORY</u>	<u>CATEGORY</u>
1	Well, it's the, we first submitted to Lockheed and our proposal was statement of objectives. We don't stay the specific requirements, you know, down to the very level of detail.	Statement of Objectives	Contract development
1	We state an overall goal basically objectives such as upgrade the avionics similar to a certain level.	Stating goal	Contract development
1	And then through meetings with the contractor they make sure they understand what our requirements, what we're trying to do, what mission we are trying to meet.	Meetings	Contract development
1	So, that gives the contractor flexibility then to go in or we don't dictate every single thing that they're to do we give them latitude, and this to work you have to have a contractor that's pretty competent has a lot of experience in doing these things.	Flexibility	Contract development
1	But they in turn will break that statement of objectives more into solid statement we call it statement of work. And, it will define the specific task that the contractor will do.	Statement of Work	Contract development
1	Also to guide that we have systems requirements document. And that document again it doesn't go to a fine degree of how to do the task. It's more what we need accomplish by the end of the task.	Systems requirement document	Contract development
1	There are mil-standards and certain guidelines that are in that systems requirements documents and that has a lot of lower level requirements like to meet some electrical qualification requirements.	Systems requirement document	Contract development
1	Also we'll develop Interface Control Documents (ICDs. It defines the interface between various systems within the overall system.	Interface control documents	Contract development
1	So, by using those documents you define more technical aspects of the acquisition.	Technical Aspects	Contract development

Q#	<u>SENTENCE</u>	<u>SUBCATEGORY</u>	<u>CATEGORY</u>
1	And then that's how we, we have various design reviews and we see. The contractor is basically stage. You know here is how we are going to accomplish this and they generate the mini plans or performance measurements that are used and we evaluate those success. How do we know we achieve success by using those goals or the documents of they said.	Design reviews	Contract development
1	So in plus during all the many test and design reviews and evaluations that's how you, you know you have to have some way to know when you achieved your goal.	Testing	Program Success
1	I think overall, the general process works. You have some circumstances possibly; I can't say this point in this particular effort that anything hasn't worked. You face problems with individual development or systems that are in development and you may face some technical difficulties. A video card may fail because the design is not proper. So you don't get the right display. Maybe has noise or something so you have to go back and have to redesign that. Of course that causes problems downstream from the schedule and the cost impact. But the process itself you know we were able to discover the issue or whatever that's been successful.	Technical Difficulties	Challenges
1	I can't say that there hasn't been anything that hasn't work that I would say fault of performance based acquisition. There have been failures to meet technical goals or requirements. Maybe there is an interface problem between systems. But that's more a technical issue it's not really performance based acquisition issue.	Interface Problems	Challenges
1	I guess there are other contracts that we use that use performance based acquisitions and in those in some circumstances I would say if you don't, I am talking in general here ok, properly define your measurements. Sometimes they can be done just to fill a square. I mean to say 'hey we are doing performance based acquisitions' and you make up some criteria as you go through that really don't give any benefit to the acquisitions.	Defining performance metrics	Challenges

Q#	<u>SENTENCE</u>	<u>SUBCATEGORY</u>	<u>CATEGORY</u>
1	It's more along the lines of 'ok we have to do performance based acquisitions. So we are going to establish these measurements. And they may not be appropriate for the acquisition. And that's the key to get measurements that you know what you are doing is correct.	Defining performance metrics	Program Success
1	If you are going a contract for someone to do a level of effort testing for you said part of what you want it to do test our measure the success of that buy not so much that it met the test but it did it within certain budget. It's a level of effort you are not sure what that cost is but you set a range. If you don't really if the test results in the reaching success is more important than a certain level of cost you may succeed in your testing but because of your cost level is too high you really say "oh we haven't met our paragoals or we exceeded our goals in cost "	Budget Constraint	Challenges
1	So you need to make sure what you are doing really measures what it is you are trying to achieve and you don't artificially create some kind of goal or some kind of measurements for your in results that really doesn't give you any benefit. You know it's not relevant to what your final real objective is. Because the goal is you have a mission and you want to reach that mission and you need to make sure that what you're contracting for is in line with what your mission goal is.	Defining performance metrics	Program Success
1	So if it's ultimately delivered a fighter aircraft and you want it by this date and it need to be and obviously cost is an issue you need to structure the program so that you can measure those things. But does it mean you failed say it you have to make tradeoffs as you go through.	Cost - Quality trade off	Program Success
1	But you want to make sure that those measurements help guide you to reach those goals. If it's not relevant I mean if whatever your other measurements might be if they are not relevant to that in result you have kind of wasted both the contractor time to track whatever it is and your time to trying observing.	Defining performance metrics	Program Success

Q#	<u>SENTENCE</u>	<u>SUBCATEGORY</u>	<u>CATEGORY</u>
1	I don't see that, that has been really influence so much by the performance based acquisition in not achieving those standards. I guess I say yeah it has helped. It helps like I said if you structured it right it helps you to focus on the most important aspects of the program. Because that's what you're really judging your success fine.	Judging Success	Program Success
1	I think that's a hard question to answer because there are so many unplanned events that happened. An example would be this current program. There is a we have in place a plan a detailed plan for how we will do the design work, the integration, and engineering work, testing , and then the final fielding of the effort.	Unplanned events	Challenges
1	When something's outside of your control say Turkey has a certain home indigenous or home developed system they want to integrate into the aircraft and it's key. That's its own development program, separate but it feeds in and can impact the modification program if it's behind schedule. So, if that happens your schedule is impacted. Is that a fault to the PBA? No. It's really an outside environment influence.	Stable user needs	Program Success
1	It depends on your contractor base. If you have a very experienced contractor and a large contractor base that you can go to and draw from the chance of PBA working is much greater than if you have a very fledgling, early technological base or a base that's in its infancy or its new, maybe not very deep, not very experienced.	Experienced contractor	Program Success
1	I think the environment both on the government side and on the industry side has to be ready so support that. And I think if early cooperation between the government and the contractor words, a joint share effort and that regard.	Cooperation	Program Success

Q#	<u>SENTENCE</u>	<u>SUBCATEGORY</u>	<u>CATEGORY</u>
1	Would another form of contracting or method of contracting work? Yes I think it could. It just takes a lot more effort and I think the government takes risk in doing that as long as government is willing to do that. And again if they don't judge the industrial bases ready or capable of really providing positive benefit back to doing PBA maybe that's not the right choice.	Different procurement type	Environment of the Contract
2	No not really. It's all been US contracts. I mean from a standpoint of doing FMS for fourteen years I have been interfaced with foreign companies and we are doing that currently in our program. But it is more from a technical standpoint than a contracting standpoint. So, I guess I have to say no.	No difference	Environment of the Contract
3	I think it depends on the environment. If I were to go to pick a country northern Africa somewhere where they really had no technological base.	Industrial base	Environment of the Contract
3	And depending on what you are going to do. In terms of let's go build a fighter aircraft. You know depending on where you are at, there are only some countries having the industrial base to go do that.	Industrial base	Environment of the Contract
3	Or some other highly complex effort. If you're just going to contract for trash pickup garbage pickup or some service like that and of course you could do that I think anywhere. It depends on what the task is. If it is very non-complex task road repair some service like that. Those are things that people do all over the world in anywhere and probably there's enough industry no matter how where the culture is what the culture is whether it's a third world country or first world country that you can go and do performance based acquisition. There would be no challenge to do that. I am not sure how much benefit there is. For example road repair.	Type of job	Type of Contract

Q#	<u>SENTENCE</u>	<u>SUBCATEGORY</u>	<u>CATEGORY</u>
3	The more complex the task that you want to do based on the industry. If you are going to go international if you're going to do PBA and you bidding environment is allowed to be international then obviously you can do that. But if you want to stay national I think it would depend on the level of the development of the country you're in.	Industrial base	Type of Contract
4	Really it is reaching agreement on a good statement of work. Once you do your SOW making sure that's clear, what's in statement of work and whatever technical documents support that. So that you have a good base. Once you've done that you have something really tells you how you want to measure your success.	Statement of Work	Contract development
4	I think making that transition from getting a good statement of work to having good measurements at the end of the program what are your test objectives and have you met them so that you know you really done what you started to do. I think that's probably the most critical.	Achieving goal	Program Success
4	If you started from the beginning and you don't correctly state what it is, you know your objectives are.	Stating goal	Program Success
4	If you aren't able to craft a good, a contractor doesn't present a good statement of work and you don't reach a clear understanding of what the tasks are and needed to be done. You are go opening yourself up to later on, you're going to have to go back in contractually and correct something. It's going to cost you more money and you are going to find you didn't do something.	Establishing teams	Program Success
4	And also matching what's the correct contract type of vehicle. Should it be a firm-fixed price contract, fixed-price incentive fee, time materiel cost plus.	Procurement type	Program Success
4	You need to know what your requirement is what you can scope and define and how that, what best works for both the government does and the contractor so there is a win-win situation.	Cooperation	Program Success

Q#	<u>SENTENCE</u>	<u>SUBCATEGORY</u>	<u>CATEGORY</u>
4	For example say you are going to do very intensive development program and a lot of testing. It's going to be scope what that testing is, how long it will take, how much we have to do, how much retest is going to accomplish. So you can't scope the test you don't want to do firm-fix price contract. Because is going to say I have no idea of what is this going to take and here's my risk and they're going to bid a lot of dollars to do that. So in that case you'd be smart to go cost-plus or time materiel. The risk wasn't all on the contractor and you'd pay reasonable price, you pay for the work done.	Sharing risk	Program Success
4	It's more of a general thing, and that's your working relationship with the in customer and the contractor. I think that's very important.	Cooperation	Program Success
4	But again, being able to know what is trying to achieve and how good define objectives to me so that you can measure.	Defining performance metrics	Program Success
5	It was a development of an emulator; it was a piece of test equipment. That would take care of some older technology and we were trying to develop this emulator. The development of emulator was in progress and we had requirements unfortunately one of the engineers unknown to the program management was working with the contractor and adjusting the requirements. You had a changing requirements base and that resulted in contractor having to do additional work.	Unstable user needs	Challenges
5	And since it wasn't done through the contracts it ended up being where they fault the claim against the government and won. It had to be paid. That's not really performance based acquisition issue.	Unstable user needs	Challenges
6	It's really a team effort.	Establishing teams	Program Success
6	I think a lot of it has to do with your relationships and your communication and level of trust which is not really a performance based acquisition thing.	Communication	Program Success

Q#	<u>SENTENCE</u>	<u>SUBCATEGORY</u>	<u>CATEGORY</u>
6	A PBA gives you a structure an environment that can help you succeed but really when it comes right down to it, its people that makes it work. If you don't have competent people and you don't have people that have integrity and trust and then you won't succeed.	Quality of the Acquisition team	Program Success
6	I think PBA is a good tool to use, it brings a lot, it allows a lot of ideas to come out and compete against one another but ultimately even if you are depending on the people you have, even if you give them the worst contracting tool or acquisition process they still achieve success, they still going to go out and make do their best to achieve success.	Quality of the Acquisition team	Program Success
6	I think PBA can help achieve success and get you the most for your money which I think is what we are supposed to do, try to do. But again it really comes down to your team, the customer, the government, and the contractor. As long as everybody works together and has good communication and trust I think you are going to have success whether you are using PBA or not.	Communication	Program Success
7	It is the customer happy. The customer feels like he got value for and did it meet his objectives. To me I think that's the most important goal.	Customer satisfaction	Program Success
7	It is again did I get what I want it and did I get value was it a good value, and did I get it on time. You know if you are in the military you have operational need date. Did I meet my operational need date?	Product Quality	Program Success
7	In my position I feel sort of you know, you got to keep it healthy industrial base, you got to keep customer happy.	Keeping healthy relationship	Program Success
1	We had a list of different qualities that we wanted that the contractor can perform to as far as the quality of their work.	Product Quality	Program Success

Q#	<u>SENTENCE</u>	<u>SUBCATEGORY</u>	<u>CATEGORY</u>
1	It ranged from things like how well doing their system engineering, how well they were defining their requirements and breaking those down, how well they were doing their testing. If they had laid out all their test objectives upfront how accurately they had tested those objectives, how accurately they had got back and updated what they needed to update, how many deficiencies that they've found in their design.	Defining performance metrics	PBA metrics
1	So, if they did a regular set of testing and found no deficiencies that was obviously much better than if they did a poor job of testing and found no deficiencies so that kind of played into it.	Testing	PBA metrics
1	We had a several different administrative categories as far as them submitting their documentation on time, them billing us on time, their accuracy of their billing. Then we went into things as far as retention of the employees on the company.	Managing Administrative process	PBA metrics
1	It was a software program so we didn't want to have a bunch of turn over with the software programmers who want to them the contractor maintain the core set of people who are going to carry through.	Using software program	PBA metrics
1	Timeliness, I think that pretty much covers it as far as how we incentivize them. We had basically across the board. Everything you'd want to good contractor to do.	Experienced contractor	PBA metrics
1	System engineering, testing, reporting, things on time, managing their people. Those were all different items that we evaluated every six months. And based on the award fee on how we evaluated them.	Award Fee	PBA metrics
1	It ranged from anywhere 80 percent of the pool all the way up to the nineties depending on how they were performed in that time period.	Performance	PBA metrics

Q#	<u>SENTENCE</u>	<u>SUBCATEGORY</u>	<u>CATEGORY</u>
1	Well just the fact that we had award fee made them listen to our comments. So that was much more effective than not having an award fee. To be able to say hey we've got seven percent of profit every six months that you could earn all of seven percent, we are going to deviate a chunk of that to you based on your performance. That helped just overall as opposed to not having that they're being a fixed profit.	Award Fee	PBA metrics
1	What worked really well were the objective things that we could make them change. If we could say hey your staff is not on time and not accurate, we could them zero for the specific area that fed into the award fee. Those areas had a lot more weight. Because they knew when they're late, they knew something wasn't right.	Flexibility	Program Success
1	The things didn't work so well were the really ambiguous kind of fuzzy measures. You're doing systems engineering ok we'd like you do it better, and we didn't have a concrete reason of what was better. You know was better doing it faster, was better doing accurately we just kind of said. We don't think it is as good as we'd like it to be. Those kinds of things we gave them feedback they said we don't know what to do with that. We don't understand how you want us do it better.	Fuzzy measures	Program Success
1	So, the more objective based our criteria was the easier for us to say hey you are not getting the stuff on time, you are not programming well because we can't see the amount of deficiencies that you have or you have lost five programs that's not what we want. Those were very easy to score them on and communicate that back to them and say you are not doing on these areas.	Scoring contractor	PBA metrics
1	The areas that were very subjective we're going to just had to make call if they were doing well or not well.	Subjective Measures	Challenges
1	I would say slightly. It certainly made the core group of leadership at the contractor performs better.	Experienced contractor	Program Success

Q#	<u>SENTENCE</u>	<u>SUBCATEGORY</u>	<u>CATEGORY</u>
1	I think it performed better than a fixed price contract of the same sort of magnitude. Cost probably not because in the end we actually paid them more profit probably than we could squeeze that of them with a fixed price contract.	Cost	Challenges
1	I think we certainly got more performance out of them first of all we are cost based anyway we are paying their cost additional and fee at the end. So performance wise I am positive that we got a better product from them because we did performance based. I certainly think that the performance based ad it better quality product in the end.	Product Quality	Program Success
2	In one of my units we had a contract called eagle vision and I believe prime contractor was French on that program. The issues at least I heard from those folks with that contractor was they were a little bit laid back on when stuff was going to get done. American contractors tend to laid out schedule and then we the government kind of beat on them and tell they deliver to that schedule or close to it. The French contractor seemed much more laid back as far as the time went.	Work ethics	Culture
2	I certainly believe that having performance elements in all cases incentivizes the contractor to meet the requirements based on they're going to make more money if that's how they're incentivized.	Way of giving Incentive	Program Success
3	Yeah, if I have the choice on a contract I certainly would. If I had to do it differently I would tie my performance based criteria to specific milestones. As far as you complete your critical design review then we evaluate your performance and give you sort of award.	Defining performance metrics	Type of Contract
3	You've completed your first phase of testing, instead of just doing a calendar based where is every six months we just hand them a check based on how we did, I would explicitly tie that to the performance of a certain event.	Defining performance metrics	Program Success

Q#	<u>SENTENCE</u>	<u>SUBCATEGORY</u>	<u>CATEGORY</u>
3	PBA in a non-US environment. I would say yes. If it was up to me I think that there is probably one of the better methods to incentivize a delivery that meets your cost schedule and performance.	Performance	Environment of the Contract
4	The hardest part was the subjective measures of whether things like: program management, system engineering was good or bad, or how good or bad was it.	Subjective Measures	Challenges
4	We had laid out an award fee, the criteria that makes it good or makes it bad. And it is very difficult to actually pick. If say there is five criteria to pick like your performance contractor fits in number four bin instead of the number five. What ended happening for us we picked certain things that went wrong and certain things that went right and we count those weight against each other but the rest of the stuff was just kind of was ok.	Defining performance metrics	Program Success
4	So, when you are ready to do your award fee and make your evaluation all the errors that you may have found or good stuff for that matter is very refreshing your mind two months ago, but something happened six months ago you may have overlooked it, or you may forgot about it. We tried to do was continuously updated the database with specific comments we actually created an access database that all the members of the program office if they noted something bad or good or something needed changing, encourage them go online and type that in there so that we had a record of whole six months.	Scoring contractor timely	PBA metrics
4	The hardest part was the administration of the whole thing and then ensuring the consistency across the comments and then being fair to the contractor. The difficult part was really the subjective nature of evaluating good performance versus bad performance. If I had to do it again I'd made very objective criteria of meeting certain design review successfully, completing a certain task successfully. i think that would eliminate a lot of the other issues with subjective evaluations.	Ensuring Consistency of comments	Challenges

<u>Q#</u>	<u>SENTENCE</u>	<u>SUBCATEGORY</u>	<u>CATEGORY</u>
5	In that program that I was just referring to, we did fail operational testing. But it really wasn't contractor's fault; it was the test agency's fault. They didn't have an updated software on their computers. What ended up happening was they basically claimed the contractor did a bad job their software system didn't work. Turns out the test agency an Air Force government agency had old software. If they would have the most recent update it would have been a little different result on the back side of the testing.	Technical Difficulties	Challenges
5	I guess the other horror story specifically related to the performance based was is; we had contracting officer who was very black and white with those criteria. So, if they had one issue that was poor or they were late on one document his idea was we'll give them zero for that area. Which made the award fee go from mid nineties down to eighty one which put the contractor up on arms. So there was a lot of damage control that we had to do with that.	Unfair scoring	Challenges
6	I think we were that program was pretty good in the fact that everybody at least on the government side was a pretty good team. So, no one had to do extraordinary effort to get anything done.	Establishing teams	Program Success
7	I think the primary successful criteria are that you deliver your product; it performs as intended within a reasonable amount of time.	Product Quality	Program Success
7	The hard part with at least with the American acquisitions is that in my opinion we have under budgeted every program.	Funding	Challenges
7	I think you got to deliver something that works in the end.	Product Quality	Program Success
7	And if you do that with reasonable slips in schedule and cost I think that is a successful acquisition.	Schedule	Program Success

Q#	<u>SENTENCE</u>	<u>SUBCATEGORY</u>	<u>CATEGORY</u>
1	The methods we used from the program office; we worked with the contractor, we give them, they had the authority and ability to choose the best methods but as a government we had a better idea what users actually want it so we worked with them to help find the best solution. The success we have individual people interactions between us and the contractor as opposed to any contractual methods that we used.	Communication	Contract development
1	The biggest thing that seemed to work was we on the government side needed to understand what things needed to be done and we let the contractor determine how they're going to them. We were confident in their methods as well.	Flexibility	Contract development
1	The program was a very long one. In the beginning phases of it the government wasn't as involved in what the contractor was doing to set up the program. So we had a problem in the development of the software and that they weren't using the correct metrics to determine if the software was good enough to use.	PBA metrics	Program Success
1	The government needs to understand what the contractor is doing so they can recognize if something is not working or not going to work. From a performance based of judging or grading if the contractor on how well they perform you definitely need to have some insight along the way.	Communication	Program Success
1	I have seen some shorter programs where that did. On the larger programs there are so many variables that cause the schedule and stuff to slip and the cost go up.	Program Length	Type of Contract
2	I think the biggest thing with non-US contracts is the rules and regulations. I guess there would be no difference non-US contractor and US contractor. There may be legal things a little bit different but from a performance based acquisition I don't think there would be any difference.	Regulations	Environment of the Contract

Q#	<u>SENTENCE</u>	<u>SUBCATEGORY</u>	<u>CATEGORY</u>
3	If I have the opportunity, yeah. If you look at non-government contracts just in a free market almost is everything is performance based. If you perform and do a good job or build a good product you are rewarded by profit or future contract. That idea should work very well.	Performance	Environment of the Contract
3	Where the contractor is shouldn't make a difference. If you set up your contract of, you know, we will pay you for the work you do, based on your performance I don't see difference. I see that is kind of international benefit for all companies.	Performance	Environment of the Contract
4	I don't think the government understood what exactly the contractor was doing. We didn't keep enough communication or involvement with them along the process to ensure them what was coming out of their performance was what we're expecting.	Communication	Program Success
5	It was a year and a half project of trying to get the right thing for the people who were going to use it and come to find out this is what they want it at all. There is a lot of good work that went into getting them but it just wasn't what they wanted.	Communication	Program Success
6	When we finally started talking to the users and figuring out what it was that they wanted we went to go talk to contractor and say: look let you talk to the users so they can tell you exactly what they want it. We were able to change some of the stuff so the users did get what they wanted.	Defining User needs	Program Success
6	The best metric would be a combination of getting the right thing that you need in a short amount of time.	Time	Program Success
7	The system you are building what the actual user wants or whatever it is you are getting for the users what they want.	Customer satisfaction	Program Success

Q#	<u>SENTENCE</u>	<u>SUBCATEGORY</u>	<u>CATEGORY</u>
1	Because PBA was a new innovative way of buying aircraft for the Royal Air Force, traditionally we would have bought a number of aircrafts. And manufacturer of the aircraft tells us in the military, you have bought one hundred aircrafts, you want to fly those aircrafts maybe 2000 hours per year, and this is the way you want to fly them. Based on our reliability calculations you'll consume this package of spare parts. That's what you need to buy.	Dependent to contractor	Traditional Acquisitions
1	In the seventies we have bought an aircraft called Tornado and we bought a very large package of spares. We changed the way aircraft flew within the life of the aircraft so we began consuming different types of spares. As a consequence we ended up nearly billion pounds worth of spare parts in the warehouse not adding any availability to the aircraft's performance.	Too many Spares	Traditional Acquisitions
1	When we bought Typhoon we decided we weren't going to buy any spares at all. We would just buy the aircraft. We modeled the consumption of the aircraft based on the reliability figures the manufacturer provided. Through to the manufacturer the spares provisioning was a lot lower than we had ever seen in history.	Collaboration	PBA metrics
1	We integrated the contractor, the manufacturer into the supply network within the military which is the first time that was ever done.	Cooperation	PBA metrics
1	So we derisked the military responsibility for providing spares support to the aircraft initially.	Sharing risk	PBA metrics
1	So the manufacturer not only was he responsible for making the aircraft and delivering it into service but he was responsible supporting it and justifying the reliability figures that he had predicted would be associated with the aircraft.	Cooperation	PBA metrics

Q#	<u>SENTENCE</u>	<u>SUBCATEGORY</u>	<u>CATEGORY</u>
1	We decided that as a performance based measure we could not afford to have everything that we wanted to have. Because we had not got the funding. If we could we would give everything to the contractor and they would provide one hundred percent functionality and availability for the aircraft.	Funding	Challenges
1	We had performance based metrics that would pay the contractor a monthly fee to provide that level of availability and we would measure the repair cycle, the delivery cycle, downtime in the servicing hangar, we would measure the robes of aircraft.	Award Fee	PBA metrics
1	That acquisition process (Typhoon) was a multinational acquisition process. We had very expensive logistics network moving parts around all of Europe (UK, Spain, Germany) to build an aircraft.	Expensive logistics network	Traditional Acquisitions
1	And limited availability when it came to spare parts. Between the three nations we decided to put spare engines in different centers in those different countries. That was too expensive.	Limited availability	Traditional Acquisitions
1	Then we decided to put spare engines in only one country, Munich in Germany. That sounds good in theory. They just couldn't afford it. The manufacturing over cost, overrun. The aircrafts started of being thirty million dollars each and with overruns, delays, and modifications each aircraft then became fifty million dollars each.	Over cost	Traditional Acquisitions
1	And really everybody was watching everybody else to make sure that we all had a fair share of a central pool of spares. The thing became very complicated and to measure anything within in that environment performance metrics became almost impossible. It was too complicated to track and you couldn't measure anything. Because nobody could decide on what the actual performance metrics would be.	Defining performance metrics	Challenges
1	In the end we decided that the best performance metrics we could have would be let the manufacturers supply the engine and we would pay that service.	Performance Based Acquisition	Type of Contract

Q#	<u>SENTENCE</u>	<u>SUBCATEGORY</u>	<u>CATEGORY</u>
1	If all of those criteria are fulfilled and you get a good product and along the way you can measure, you can gage, you can watch every stage of the process, high the performance of the project actually working against the baseline then that's great. That's to me performance based acquisition. It's identifiable, measurable, and successful.	Measurable performance	Program Success
1	There can be increased cost with performance based logistics with regards to it can be more manpower intensive to monitor and check.	More Manpower	Challenges
1	The product will be the same price but the management of the process and monitoring the process and watching and putting a team to make sure you're getting what you want, when you wanted. The administration of the project maybe more costly. But it is a small trade off to get the correct product within the correct time at the correct price. That is the way we look at performance based metrics.	Cost	Challenges
1	It is hard work to do but it is essential to do it to get what you need when you wanted.	Schedule	PBA metrics
2	No. The reason being is we have licensed contract officers. I am a logistician. No I don't expect any differences because we apply the international standards.	International Standards	Environment of the Contract
3	If I was on an acquisition team, those performance based metrics would definitely be the part of the contract.	Performance Based Acquisition	Type of Contract
3	No. The only criteria, advantages or disadvantages when we look at any major system if we don't want to make it ourselves because they associated with cost or Turkey or US have developed the system that is so good. We decide we want to buy it. As long as they meet the international or European standards of support and manufacturing then No.	International Standards	Environment of the Contract
3	I mean there is a language barrier but within the contract you'll define what language you're going to convey them. All the contracts will be in English not Turkish because we can't read Turkish. And all the technical publications will be English.	Language	Culture

Q#	<u>SENTENCE</u>	<u>SUBCATEGORY</u>	<u>CATEGORY</u>
3	So there are no advantages or disadvantage as long as everybody employs the same standards that we work to.	No difference	Environment of the Contract
4	Money. Overspent. Always a problem. We never get enough money from the government for the full acquisition process.	Funding	Challenges
4	As a military we are not skilled enough at identifying all the associated costs. We know how much the aircraft cost. Aircrew, training, synthetic trainer, the simulator, initial provisioning for the spares, we can map as much as we know but there is always overruns, delays, increased costs in manufacturing.	Establishing teams	Challenges
4	The government won't give us any more money. Because they want to use it on health, education, roads which are what the public want. The public don't want defense.	Public Desire	Funding
4	Funding is always a major issue.	Funding	Challenges
4	Quality of the team involved in that acquisition is always a major success factor.	Establishing teams	Program Success
4	Plus identifying the correct performance metrics. You have to be very clever in getting the right metrics in that project and having a very knowledgeable skilled team. Those are the sort of critical success factors that you have enough leverage within your performance metrics enough leverage over the manufacturer to make him want to deliver the right thing at the right time.	Defining performance metrics	Program Success
4	If there is no cost penalty, no time penalty to the manufacturer he doesn't care. He's still going to get his money. But if there is a clever performance metric that the manufacturer will deliver the right item at the right time.	Penalty as Incentive	Program Success
5	Only that one I explained to you about the engines. We spent two hundred million dollars on one hundred engines that didn't work to begin with, they were eighteen months late in delivery to the air force.	Delivery Time	Program Success

<u>Q#</u>	<u>SENTENCE</u>	<u>SUBCATEGORY</u>	<u>CATEGORY</u>
5	When they were delivered they said the aircraft don't fire because they were so hot, because they hadn't been engineered properly and we only used them for one year and we sold them to another country.	Product Quality	Program Success
6	To be honest No. I don't. Not that there aren't it is only because I am not aware of they are. Because I haven't been involved in projects for five years.	No	Success Story
7	I think for the really public, for the taxpayer is that you've got exactly what you set to buy in the right quantity, to the right standard, it's a quality product, and it was within the time that you ask for it, and it was within the cost. If you take those factors into consideration time, cost, and quality as long as they are met and reliability is also a big factor.	Reliability	Program Success
7	And It is supportable as well through the life of the equipment; you know we have the manufacturing base in industry. The company hasn't gone broke, it is still there. So, if we want to buy more, or modify it, or develop it, or support it with extra spares that company is strong enough to be there for thirty years of life that was predicted against that equipment.	Supportability	Program Success

Appendix C. Subcategory Count in Each Category

<u>SUBCATEGORIES</u>	<u>CATEGORIES</u>	<u>COUNT</u>
Communication	Program Success	15
Product Quality	Program Success	14
Customer satisfaction	Program Success	13
Cost, schedule and performance	Program Success	11
Funding	Challenges	10
Establishing teams	Program Success	8
Schedule	Program Success	8
Defining performance metrics	Program Success	7
Award Fee	PBA metrics	6
Collaboration	Program Success	6
Experienced contractor	Program Success	6
Flexibility	Program Success	6
Schedule	Challenges	5
Work ethics	Culture	5
Cost	Challenges	4
Defining performance metrics	Challenges	4
Security	Challenges	4
Defining Requirements	Program Success	4
Funding	Program Success	4
PBA metrics	Program Success	4
Statement of Work	Contract development	3
Performance Based Acquisition	Environment of the Contract	3
Sub-contracting	Environment of the Contract	3
Cooperation	Program Success	3
Sharing risk	Program Success	3
Sustainment	Program Success	3
Time	Program Success	3
Training	Program Success	3
Defining Requirements	Challenges	2
Enough historical data	Challenges	2
Exchanging Information	Challenges	2
Subjective Measures	Challenges	2
Technical Difficulties	Challenges	2
Unstable user needs	Challenges	2

<u>SUBCATEGORIES</u>	<u>CATEGORIES</u>	<u>COUNT</u>
Defining performance metrics	Contract development	2
Flexibility	Contract development	2
Monthly reviews	Contract development	2
Planning contract	Contract development	2
Systems requirement document	Contract development	2
Different procurement type	Environment of the Contract	2
Industrial base	Environment of the Contract	2
International Standards	Environment of the Contract	2
Regulations	Environment of the Contract	2
Cooperation	PBA metrics	2
Earned value management system	PBA metrics	2
Establishing teams	PBA metrics	2
Performance	PBA metrics	2
Periodical reviews	PBA metrics	2
Scoring contractor timely	PBA metrics	2
Advocacy	Program Success	2
Periodical reports	Program Success	2
Program Length	Program Success	2
Quality of the Acquisition team	Program Success	2
Stable user needs	Program Success	2
Performance Based Acquisition	Type of Contract	2
Authority	Challenges	1
Complex contract environment	Challenges	1
Ensuring Consistency of comments	Challenges	1
Establishing teams	Challenges	1
Experienced contractor	Challenges	1
Facilities	Challenges	1
Finding Contractor	Challenges	1
Funding Discontinuity	Challenges	1
Fuzzy measures	Challenges	1
High level pressure	Challenges	1
Interface Problems	Challenges	1
Interpretation of contract	Challenges	1
Language	Challenges	1
Manpower Quantity	Challenges	1
Non-US Contractor	Challenges	1
Performance deficiency	Challenges	1

<u>SUBCATEGORIES</u>	<u>CATEGORIES</u>	<u>COUNT</u>
Resistance to Change	Challenges	1
Technological systems	Challenges	1
Type of job	Challenges	1
Unexpected circumstances	Challenges	1
Unfair scoring	Challenges	1
Unplanned events	Challenges	1
Vague awarding	Challenges	1
Variety of Service	Challenges	1
Communication	Contract development	1
Contract success	Contract development	1
Defining Requirements	Contract development	1
Design reviews	Contract development	1
Interface control documents	Contract development	1
PBA metrics	Contract development	1
Performance measures	Contract development	1
Periodical reports	Contract development	1
Sharing risk	Contract development	1
Statement of Objectives	Contract development	1
Stating goal	Contract development	1
Technical Aspects	Contract development	1
Cultural Similarity	Culture	1
Language	Culture	1
Performance Oriented	Culture	1
Training	Culture	1
Contracting guidelines	Environment of the Contract	1
Different Company	Environment of the Contract	1
FMS contract	Environment of the Contract	1
Future contracting method	Environment of the Contract	1
Non-US Contractor	Environment of the Contract	1
Performance Oriented	Environment of the Contract	1
Security	Environment of the Contract	1
Tangible benefit	Environment of the Contract	1
Non-US contractor	Funding	1
Public Desire	Funding	1
Collaboration	PBA metrics	1
Communication	PBA metrics	1
Defining performance metrics	PBA metrics	1

<u>SUBCATEGORIES</u>	<u>CATEGORIES</u>	<u>COUNT</u>
Difficult to measure	PBA metrics	1
Experienced contractor	PBA metrics	1
Managing Administrative process	PBA metrics	1
Schedule	PBA metrics	1
Sharing risk	PBA metrics	1
Testing	PBA metrics	1
Using software program	PBA metrics	1
Various comments	PBA metrics	1
Authority	Program Success	1
Award Fee	Program Success	1
Different procurement type	Program Success	1
Documentation	Program Success	1
Good performance history	Program Success	1
Integration	Program Success	1
Judging Success	Program Success	1
Keeping healthy relationship	Program Success	1
Management Reserve	Program Success	1
Measurable performance	Program Success	1
Number of delivery	Program Success	1
Penalty as Incentive	Program Success	1
Politics	Program Success	1
Proactivity	Program Success	1
Procurement type	Program Success	1
Qualified contractor	Program Success	1
Quantity	Program Success	1
Regulations	Program Success	1
Reliability	Program Success	1
Routine contract	Program Success	1
Stating goal	Program Success	1
Successful program	Program Success	1
Supportability	Program Success	1
Testing	Program Success	1
Usability, Cost, Schedule	Program Success	1
Variety of Service	Program Success	1
Way of giving Incentive	Program Success	1
Dependent to contractor	Traditional Acquisitions	1
Expensive logistics network	Traditional Acquisitions	1

<u>SUBCATEGORIES</u>	<u>CATEGORIES</u>	<u>COUNT</u>
Limited availability	Traditional Acquisitions	1
Over cost	Traditional Acquisitions	1
Too many Spares	Traditional Acquisitions	1
Alternative service delivery	Type of Contract	1
Cost plus type based on performance	Type of Contract	1
Defining performance metrics	Type of Contract	1
Industrial base	Type of Contract	1
Lowest bid	Type of Contract	1
Other Transactions agreement	Type of Contract	1
Research program	Type of Contract	1
Service contract	Type of Contract	1
Sole Source	Type of Contract	1
Type of job	Type of Contract	1

Appendix D. Blue Dart Submission

First Name: Fatih Last Name: Cebeci

Rank: 1st LT Designator # AFIT/GLM/ENV/09-M01

Students Involved in Research for Blue Dart: First Lieutenant Fatih Cebeci

Position/Title: AFIT Graduate Student

Phone Number: DSN:

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School/Organization: Air Force Institute of Technology

Status: ☒ Student ☐ Faculty ☐ Staff ☐ Other

General Category / Classification:

<input type="checkbox"/> core values	<input type="checkbox"/> command	<input type="checkbox"/> strategy
<input type="checkbox"/> war on terror	<input checked="" type="checkbox"/> culture & language	<input type="checkbox"/> leadership & ethics
<input type="checkbox"/> warfighting	<input type="checkbox"/> international security	<input type="checkbox"/> doctrine
<input checked="" type="checkbox"/> other: acquisition		

Suggested Headline: Implementation of Performance-Based Acquisition in Non-Western Countries

Keywords: Acquisition, Culture, Qualitative Analysis, Questionnaires

In recent years, governments and military organizations have been facing shrinking budgets, aging equipment, declining weapon system and parts availability, increasing obsolescence, vanishing vendors, increasing sustainment costs. Most military systems have been used for decades, so future planning of defense procurement is critically important. Performance-based acquisition is a strategic method to manage business by promoting flexibility and innovation and creating win/win solutions through effective communication, organizational goal alignment, and clear accountability among the buyer, seller(s), and subcontractors. Performance-based acquisition (PBA) is an

acquisition method structured around the results as opposed to the work to be performed. Performance-based acquisition is a results-oriented acquisition strategy used to achieve innovative solutions in agency programs.

Any major system's life cycle can be separated into two major milestones. These are system acquisition and system sustainment. It has been estimated that about 30 percent of all dollars spent are used to acquire the system, while the remaining 70 percent of all dollars are used for support. For continuous support and life cycle sustainment, implementing performance-based acquisition can help organizations to seize more benefits out of a system's acquisition.

In this century, many governments are transitioning their acquisition strategy from traditional methods to performance-based methods. In 2000, the U.S. Department of Defense set a goal that a minimum of 50% of the service acquisitions would use performance-based acquisition methods by 2005. F-35's life-cycle cost is expected to be about 20% lower when compared to that of legacy systems such as F/A-16 and F/A-18. Although PBA is a new method in the acquisitions area, many countries and private sectors have implemented this procedure and started to use it in their logistics systems. The United Kingdom's (U.K.) Defense Logistics Organization is transitioning to performance-based contracting support for availability and capability for the sake of seeking achievement of established effectiveness levels. The U.K.'s Royal Air Force is expecting to reduce the costs by 12% for the outsourced maintenance of E-3D Sentry AWACS aircraft. European Aeronautic Defense and Space Company EADS CASA has a performance-based acquisition relationship with many South American countries including Chile, Ecuador, Paraguay, and Brazil.

Applying PBA methods in those Western countries have shown successful results. Implementing performance-based acquisition methods in other non-Western countries might produce different results. The factors that mitigate the risk of implementing PBA in different countries are critical for acquisition professionals. In recent years there have been many studies about creating high performance environment in business practices. Since performance-based acquisition is relational and interactive compared to traditional acquisition methods, understanding cultural differences and the factors that affect the implementation of PBA may give acquisition professionals insight for developing and managing the PBA environment in different countries.

This study produced three critical factors: goal definition, challenges, and success boosters. Both government and industry would benefit from implementing PBA by defining the *goal* clearly, managing *challenges* effectively, and operating the *success boosters* accurately. Understanding the similarities and differences between countries would help acquisition professionals to implement PBA in non-western countries. This study confirmed that cultural factors could play at least a minor role in the success of performance-based acquisitions. Communication, cooperation, and more integrated business relationships could mitigate the risk of cultural challenges affecting the success of PBA. This study supports the view that the performance-based acquisition approach can be implemented in government and industry for the incoming acquisition programs regardless of the cultural differences. ***The views expressed in this article are those of the author and do not reflect the official policy or position of the United States Air Force, Department of Defense, or the US Government.***

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Vita

1st Lieutenant Fatih CEBECI graduated from Kuleli Military High School in Istanbul, Turkey. He entered undergraduate studies at the Turkish Air Force Academy in Istanbul where he graduated as a Lieutenant with a Bachelor of Science degree in Industrial Engineering in August 2002.

His first assignment was at Izmir as a pilot trainee in Pilot Training in 2002. In May 2004, he was assigned to Air Force Technical School, Izmir, where he was graduated as a logistics officer. In May 2005, he was assigned to Air Logistics Command, Ankara, where he served as a logistics officer. In August 2007, he entered the Graduate School of Engineering and Management, Air Force Institute of Technology. Upon graduation, he will be assigned to Air Logistics Command in Ankara.

REPORT DOCUMENTATION PAGE				Form Approved OMB No. 074-0188	
<p>The public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of the collection of information, including suggestions for reducing this burden to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.</p> <p>PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.</p>					
1. REPORT DATE (DD-MM-YYYY) 26-03-2009		2. REPORT TYPE Master's Thesis		3. DATES COVERED (From – To) Sep 2007 – Mar 2009	
4. TITLE AND SUBTITLE Implementation of Performance-Based Acquisition in Non-Western Countries				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S) Cebeci, Fatih, 1 st Lieutenant, TUAF				5d. PROJECT NUMBER N/A	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAMES(S) AND ADDRESS(S) Air Force Institute of Technology Graduate School of Engineering and Management (AFIT/EN) 2950 Hobson Way, Building 640 WPAFB OH 45433-7765				8. PERFORMING ORGANIZATION REPORT NUMBER AFIT/GLM/ENV/09-M01	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) Intentionally left blank.				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED.					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT <p>“Performance-based acquisition (PBA)” means an acquisition structured around the results to be achieved as opposed to the manner by which the work is to be performed. Performance Based Acquisition is a results-oriented acquisition strategy used to achieve innovative solutions in agency programs. Most military systems have been used for decades, so future planning of defense procurement is critically important. Performance Based Acquisition is a strategic method to manage business by promoting flexibility and innovation and creating win/win solutions through effective communication, organizational goal alignment, and clear accountability among the buyer, seller(s), and subcontractors.</p> <p>In this century, many governments are transitioning their acquisition strategy from traditional methods to performance based methods. In 2000, the U.S. Department of Defense set a goal that a minimum of 50% of the service acquisitions would use Performance-Based Acquisition methods by 2005. Do cultural differences have significant importance to the success of this new acquisition method? Applying PBA methods in those Western countries have shown successful results. What results can be obtained from applying this new strategy in non-Western countries? This study focuses on the success of Performance Based Acquisitions in non-Western countries.</p>					
15. SUBJECT TERMS ACQUISITION, CULTURE, QUALITATIVE ANALYSIS, QUESTIONNAIRES					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT UU	18. NUMBER OF PAGES 131	19a. NAME OF RESPONSIBLE PERSON Lt.Col.R. DAVID FASS, PhD, ENV
a. REPORT U	b. ABSTRACT U	c. THIS PAGE U			19b. TELEPHONE NUMBER (Include area code) (937) 255-3636, ext 4826 (Robert.fass@afit.edu)