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ACQUISITION RESEARCH SPONSORED REPORT SERIES

DoD Implementation of the Better Buying Power Initiatives

7 December 2012

by

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ABSTRACT

The United States economy is in a phase of fiscal stress; however, if the rate of spending continues as it has during the last three presidential terms; the United States will soon experience a state of fiscal crisis. The United States must take measures to affect the rate of spending. Since the 1940s, the Department of Defense (DoD) has made trade-offs on the goals and priorities of stakeholders within the system, also known as acquisition reform. This research makes an assessment on how DoD has implemented the last acquisition reform, the Better Buying Power initiatives (BBPi). Interviews were conducted at the Space Based Infrared Systems (SBIRS) program office and the Defense Acquisition University (DAU). The interviews focused on the execution of the BBPi within the SBIRS program and the training provided to the acquisition workforce on the BBPi by the DAU. The research found that training had been provided to the acquisition workforce, but those at the tactical level are not taking advantage of the initiatives because many view them as a "marching order" versus a suggestive starting point to create successful and innovative acquisition outcomes. The BBPi are an excellent first start to address past missteps; however, more guidance to the field is required for successful implementation.

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Disclaimer: The views represented in this report are those of the author and do not reflect the official policy position of the Navy, the Department of Defense, or the Federal Government.

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LIST OF ACRONYMS AND ABBREVIATIONS

ACM	Acquisition Career Management
AFIT	Air Force Institute of Technology
AFROC	Air Force Requirements Oversight Council
ALARM	Alert, Locate, and Report Missiles
APB	Acquisition Program Baseline
ASD(A)	Assistant Secretary of Defense for Acquisition
BBPi	Better Buying Power initiatives
B-SIG	Business Senior Integration Group
CAIV	Cost as an Independent Variable
CCW	Capable Contracting Workforce
CMI	Civil Military Integration
COCOM	Combatant Command
COTS	Commercial-Off-the-Shelf
CPAF	Cost-Plus Award Fee
CPFF	Cost-Plus Fixed Fee
CREP	Contract Repair Enhancement Program
C/SCS	Cost and Schedule Control System
CSIS	Center for Strategic and International Studies
C to Q	Certification to Qualification
DAPA	Defense Acquisition Program Assessment
DAS	Defense Acquisition System
DAU	Defense Acquisition University
DAPWG	Defense Acquisition Policy Working Group
DCAA	Defense Contract Audit Agency
DCMA	Defense Contract Management Agency
DCMC	Defense Contracting Management Command
DoD	Department of Defense
DoDI	Department of Defense Instruction
DSMC	Defense Systems Management College

DSP	Defense Support Program
EASE	Evolutionary Acquisition for Space Efficiency
EMD	Engineering and Manufacturing Development
ESP	Efficient Space Procurement
FEWS	Follow-on Early Warning System
FPIF	Fixed-Price Incentive Fee
FY	Fiscal Year
GAO	General Accounting Office (prior to July 7, 2004)
GAO	Government Accountability Office (after July 7, 2004)
GEO	Geosynchronous Earth Orbit
GPS	Global Positioning System
HEO	Highly Elliptical Orbit
HIC	Human-in-Control
IG	Inspector General
IOC	Initial Operational Capability
ITW/AA	Integrated Tactical Warning & Attack Assessment
JCIDS	Joint Capabilities Integration Development System
JROC	Joint Requirements and Oversight Council
KPP	Key Performance Parameters
KSAs	Knowledge, Skills, and Abilities
LCC	Life Cycle Cost
LCIC	Learning Capabilities and Integration Center
MAJCOM	Major Command
MDA	Milestone Decision Authority
MDAP	Major Defense Acquisition Program
MDD	Material Development Decision
MILDEP	Military Department
MSI	Mission Success Incentives
NASA	National Aeronautics and Space Administration
NDAA	National Defense Authorization Act

NDI	Non-Developmental Items
NDU	National Defense University
NPS	Naval Postgraduate School
NORAD	North American Aerospace Defense Command
OFPP	Office of Federal Procurement Policy
OJT	On-the-Job Training
OL	Operating Location
OSD	Office of the Secretary of Defense
PAT	Process Action Team
POP	Program Operating Plan
PM AQS	Program Management Acquisition Qualification Standards
PPBE	Planning, Programming, Budgeting, and Execution
RAA	Rapid Acquisition Authority
RDT	Rapid Deployment Training
R&D	Research and Development
SAE	Service Acquisition Executive
SAR	Selected Acquisition Report
SBIRS	Space Based Infrared Systems
SDD	System Development and Demonstration
SFP	SBIRS Follow-on Production
SMC	Space and Missile Systems Center
SMC/PK	Space and Missile Systems Center, Directorate of Contracting
SPI	Single Process Initiative
SV	Space Vehicle
TASC	Technical Applied Sciences Corporation
TINA	Truth in Negotiations Act
TSPR	Total System Performance Responsibility
USD(AT&L)	Under Secretary of Defense for Acquisition Technology and Logistics
WRALC	Warner Robins Air Logistics Center
WSARA	Weapons Systems Acquisition Reform Act

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I. INTRODUCTION

A. BACKGROUND

The United States economy is in a phase of fiscal stress; if the rate of spending continues as it has during the last three presidential terms, the United States will soon experience a state of fiscal crisis. Because the Department of Defense (DoD) budget is based in large part on discretionary funding, the military departments (MILDEPS) must identify creative ways to maximize every dollar received. The United States is in a position to obtain loans to finance current operations and restructure debt, but if measures are not taken to affect the rate of spending, it will be too late to prevent exponential increases (Jones, 2012, p. 1). Service chiefs, along with Secretary of Defense and congressional representatives, need to focus on the realities of what can be accomplished without cutting into the basic capability of the Services to organize, train, and equip personnel.

The quest to fix the acquisition process has been a novel idea since the late 1940s (Gates, 1989, p. 2). However, in each subsequent reform, the focus has been to retract the process that was previously acceptable and insert a new one. At the crux of all acquisition reform initiatives is the issue of trade-offs, or what goals/priorities are important to key stakeholders—the military departments, the defense industry, and Congress, just to name a few. The size of military budgets for operations is cyclical due to the priorities of the President and Congress at any given time (Cancian, 1995, p. 190). However, the goals/priorities of stakeholders for too long have overridden the government's ability, or even the necessity, to be fiscally conservative. Now, out of sheer necessity and statutory measures (Budget Control Act, 2011), Congress has been directed to face this problem and provide a workable solution or face the evils of sequestration. The DoD must continue to increase the operational capability of military departments, while finding ways to spend each dollar in the most efficient way possible. Far too often, the less-than-stellar outcomes of poor acquisitions stem from the inability to adequately plan, resulting in not obtaining quality goods and services in a timely manner and at a fair price. We can no longer afford such outcomes. Given the current fiscal demands and the fiscal

challenges we face in the 21st century, the federal government must improve its ability to acquire goods and services in a cost-effective manner (Government Accountability Office [GAO], 2005, p. i).

The ability to effectively manage an acquisition program relies heavily on the capability of a defense acquisition system (DAS), the Joint Capabilities Integration Development System (JCIDS), the Planning, Programming, Budgeting, and Execution (PPBE) process and the quality of the acquisition workforce. All are vitally important, as they play a significant role in bringing a requirement from an idea to fruition. The process of maintaining a proficient and highly skilled acquisition workforce is critically important to the process running as smoothly and efficiently as possible.

In the last several years, new acquisition reforms have been introduced through legislation and organic efforts by the DoD: the revision of Department of Defense Instruction (DoDI) 5000.02 (Office of the Under Secretary of Defense for Acquisition, Technology, & Logistics [OUSD(AT&L)], 2008) and the Weapons Systems Acquisition Reform Act (WSARA) of 2009. The revision of DoDI 5000.02 made wholesale changes by consolidating legislation since the last revision of the instruction in 2003. The majority of the changes to DoDI 5000.02 focused on the front end of the defense acquisition framework, from the Material Development Decision (MDD) through Milestone C. The WSARA (2009) combined with DoDI 5000.02 (OUSD[AT&L], 2008) gave increased oversight to front-end acquisition planning. Initial planning affords awareness of cost performance throughout a program's life cycle (GAO, 2012, p. 29). The linkage of acquisition reform that bundles many of the previous efforts together is the OUSD(AT&L)'s (2010a) *Better Buying Power* memorandum.

Ashton Carter, former Under Secretary of Defense for Acquisition Technology and Logistics [USD(AT&L)], along with the key input of Defense Acquisition University (DAU) President Katrina McFarland, created the Better Buying Power initiatives (BBPi) within his span of control. These initiatives were not so much reform based, but rather, based on best practices of successful programs (Gouldsberry, 2012, p. 1). The 23 initiatives were identified by responsibility; at the program manager level, this included shared responsibility between the program manager and contracting officer, and that of

the Office of the Secretary of Defense (OSD) and the Services (DAU, 2011). In an article interviewing DAU President Katrina McFarland, it was estimated that it will take two to four years for the BBPi to "trickle down" to the working level (Host, 2012). The article goes on to explain that senior/top-level management understand the need and urgency of the BBPi, but that is not who is on the floor day after day carrying out the policy implemented from the top. This research explores this issue from the perspective of knowledge flow theory and the impact of not drawing the critical connections between theory and practice. The purpose of the BBPi is to consolidate and implement best practices of previous DoD acquisition reforms. With the exception of the should-cost/will-cost analysis and cash flow, the initiatives presented by the USD(AT&L) are not novel.

B. PURPOSE OF THE RESEARCH

The purpose of this research is two-fold. First, the focus of this study is to provide a benchmark on the BBPi from a training perspective. I investigate the training resources provided by the DAU in support of the BBPi. After evaluating the data, I provide an assessment of the DAU's implementation of the BBPi principles in terms of immediate and future training opportunities, since improved training is the goal of this research. Second, I assess the implementation and application of the initiatives in the Air Force's Space Based Infrared Systems (SBIRS) program. The BBPi are the latest measures taken to decrease spending and life-cycle costs of current and future acquisition programs. This research project is current and timely because it provides an assessment of what the Air Force and DAU have done to meet this mandate since its issuance in September 2010.

C. RESEARCH QUESTIONS

The BBPi are not intended to be a checklist for the MILDEPs to follow to achieve automatic cost savings but are to be a guideline of actions to take, provided they are feasible for that particular program and the phase the program is at in the acquisition life cycle. The research questions I explored are as follows:

- Question #1: How has the DoD responded to implementing the BBPi execution within Major Defense Acquisition Programs (MDAP) from the

perspective of the SBIRS program, focusing particularly on the November 3, 2010, memorandum?

- Question #2: How has the DAU responded to the training needs of the acquisition workforce with respect to the BBPi?

Because there are currently 96 MDAPs between the start of development or the early stages of production, and because the BBPi are applied to each and every MDAP, the research answers this question by evaluating the SBIRS program against the BBPi. Although this program is currently in production and deployment, BBPi principles can be used to achieve the best outcome no matter where a system is in the life cycle (GAO, 2012, p. 1). The DAU provides initial training to the acquisition workforce, as well as refresher and rapid deployment training. Since the inception of the BBPi, both short-term and long-term improvements have responded to the training needs and goals of implementing the principles into contracting and the program management training curriculum for Defense Acquisition Workforce Improvement Act (DAWIA) certification. After analyzing the data obtained from the SBIRS and the DAU, I determine how these outcomes are relevant to DoD acquisition and its workforce and what should be done going forward.

Because this is a qualitative study, and there is not an established snapshot of the progress of the implementation of the BBPi, the BBPi implementation directive of November 3, 2010 (OUSD[AT&L], 2010b), is used as a barometer to assess the level of effort taken by the SBIRS program office and the DAU to meet the reform intent. The 23 BBPi are structured under five major thrust areas with specific actions to be completed. Within the November 3 memorandum the OUSD(AT&L) gives mandatory compliance measures for all MDAPs, as applicable, covering all areas of responsibility as identified in the initiatives themselves (OUSD[AT&L], 2010b).

D. BENEFITS OF THE RESEARCH

The benefit of an assessment of DoD implementation of the BBPi provides leadership with initial data to decide on a way forward in addressing the current issues concerning acquisition. This study provides a benchmark of accessing the BBPi against

the health of an MDAP. Future research can capitalize on the savings identified by the initiatives outlined in the BBPi.

E. LIMITATIONS OF THE RESEARCH

There are copious data on the SBIRS and the USD(AT&L)'s BBPi; however, the literature concerning DoD implementation of the BBPi since its inception does not exist. There is much theory about whether the initiatives are good ideas or what needs to be changed, but a study that looks at one MDAP with respect to the processes delineated by the USD(AT&L) does not exist.

The data speak for themselves; however, it is the human element, those managing the program on a daily basis that adds a third dimension to the analysis. The SBIRS has been the source of much research and scrutiny. Subject to changing priorities, managerial styles, and acquisition strategies, the SBIRS program has struggled to deliver a system on time and on budget. Lastly, the fact that the SBIRS was the only MDAP assessed as part of this research is a significant limitation in and of itself. The SBIRS is an extreme case of the acquisition process run amok. Although many alternative explanations exist for the SBIRS's various program performance issues, it is difficult to draw causal conclusions. In addition, because each MDAP has its own set of circumstances, it is difficult to generalize the findings of the case study to other MDAPs.

F. SCOPE AND RESEARCH METHOD

A case study research methodology is used for this research project. Using the case study method allows researchers to answer the *how* and the *why* of their research question, eliminates the need to control for behavioral events, and focuses on contemporary events (Yin, 2009, p. 8). The first case study is the Air Force's SBIRS program and the implementation of the BBPi. The second case study evaluates the training provided by the DAU to the acquisition workforce on the BBPi, specifically training on the initiatives and how the BBPi were incorporated into the DAWIA certification programs, particularly program management and contracting. Evaluating the execution and training focus areas completes the metaphorical loop of knowledge (M. E. Nissen, personal communication, June 7, 2012).

SBIRS program managers and contracting officers were interviewed using semi-structured questions. The questions focused on how the initiatives have been specifically implemented in the SBIRS program. Although the SBIRS is an older program, nearing its 16th anniversary, there is still more to be said about achieving efficiencies and cost-effective measures in a program where millions of dollars equate to a sunk cost. Until the first geosynchronous earth orbit satellite (GEO-1) completes its operational testing, the Air Force still uses the 1970s Defense Support Program (DSP) to provide the capabilities that the SBIRS has had problems delivering (Richelson, 2007; Werner, 2011). The purpose of the BBPi is to re-think the status quo concerning the business arrangements used on contracts and in the areas of program management. The idea is not to dictate the protocol, but rather to get the acquisition workforce to think critically when setting up business arrangements. The attitude of "we've always done it this way" stifles and effectively eliminates methods to conduct business more efficiently. Parts of the initiatives provided directives to implement several methods to achieve cost savings, but these are to be implemented only if they make sense for the program concerned. For that reason, the November 3 implementation directive (OUSD[AT&L], 2010b) served as a framework for focusing the interview questions in this research. The measures outlined in the directive are broad and do not affect each acquisition program; however, where they were applicable to SBIRS, I formulated interview questions for discussion.

The second half of the research focuses on the DAU. The format is the same as the SBIRS case study. Interviews of the center directors for Acquisition Management and Contracting focused on course changes with respect to the initiatives within the applicable DAWIA certification programs. Research also discussed the four-step course design process and the use of Bloom's taxonomy in developing DAWIA course curricula certifications (Layton, 2007).

G. ORGANIZATION OF THE RESEARCH REPORT

This thesis is divided into five chapters.

Chapter I, Introduction, provides a perspective on the current fiscal situation, how that is inextricably linked to the capability of the United States military, and how the

acquisition workforce enables the military's mission to be completed. I explain the last acquisition reform initiative and the BBPi, and I explore current DoD organizations (SBIRS and DAU) using a case study format.

Chapter II, Literature Review, provides a review of select acquisition reform initiatives, starting with the Packard Blue Ribbon Commission and ending with a short case study of the SBIRS program and the DAU.

Chapter III, Methodology, explains the process used to collect information for the study.

Chapter IV, Findings and Analysis, discusses the results of the interviews with personnel at the DAU and the Air Force's SBIRS. I draw general conclusions about the acquisition process and uses knowledge flow theory and the Snider and Rendon (2008) framework for assessing public procurement policy.

Chapter V, Summary, Conclusions, and Recommendations for Future Research, provides a summary of the findings, provides conclusions, and discusses potential areas for future research.

H. SUMMARY

At the completion of this project, the goal is to provide an initial baseline for assessing the implementation progress of the DoD's BBPi. Although this project does not assess each acquisition program office in each military department, it does provide rich discussion about how to effect change in DoD acquisition. Going forward, the ability to achieve value out of every dollar in realizing capabilities is palpable. As outlined in the priorities by Acting USD(AT&L) Mr. Frank Kendall, the DAU, as well as the Service components, are committed long term to achieving this objective (OUSD(AT&L), 2011). At the conclusion of this research, I provide an assessment on how the DoD—through the DAU and from a service perspective—has progressed in implementing the BBPi. I also provide suggestions for what the next steps should include, giving the BBPi enough traction to become the status quo instead of the shiny new policy that seeks to fix the acquisition process.

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II. LITERATURE REVIEW

A. INTRODUCTION

As much as the need for technology advancement is critical, so is the need to balance that requirement with the impending reality that resources are constrained. The United States has not fostered a culture of investing smartly for our future; we have spent money we did not have (Jones, 2012, p. 1). To correct destructive behaviors, the DoD has had a change of heart, or perhaps several for that matter, and has sought to reform the defense acquisition process many times over. Acquisition reform can be likened to Baskin-Robbins ice cream or to Burger King; you can have a different flavor every week, any way you'd like it. The analogy highlights the notion that acquisition reform in any sense is based on trade-offs—trade-offs of cost, schedule, and performance among each stakeholder (Cancian, 1995, pp. 191–192). As a steward of taxpayer dollars, it is important for the DoD to get value out of every dollar spent on defense, no matter the current landscape.

To understand the current situation and state of acquisition reform, the past must be analyzed, with a review of past reforms and initiatives. The approaches vary from stringent oversight, to minimal, to almost no oversight; from the most stringent military specifications to commercial off-the-shelf (COTS) products integrated into the most advanced weapons system; from cost being a sole driver of technology development to gold-plated requirements, no matter the costs. Past acquisition reforms (whether they were effective) shape the measures taken by today's senior acquisition leaders to shape the business outcomes of tomorrow.

Many initiatives, statutes, acts, and laws pass through Congress mandating a new way of doing business. Instead of starting from the very beginning, the start of this acquisition reform research begins with President Reagan's Blue Ribbon Commission on Defense, the Packard Commission of 1986, and works through the various reforms leading to today's BBPi. The reason for limiting the focus is that the BBPi are a culmination of the best practices since the Packard Commission. In this chapter, I outline

why some practices have been successful and why others have fizzled. Many initiatives are launched, but their impact on the acquisition landscape is not always effectively managed. The DoD implements new reform before realizing the effects of the last effort. The literature review is a chronology of acquisition reforms starting with the Packard Commission. It then walks through the reform that highlights the SBIRS program as a pilot for new acquisition reforms, Total System Performance Responsibility (TSPR) and Cost as an Independent Variable (CAIV).

The 1950s through 1980s was a boon for technology development in the DoD. With the threat of a Cold War, the United States was positioning itself for whatever adversary was to strike with the capability of meeting it head on. Discretionary spending was at an all-time high. During the 1980s, President Ronald Reagan placed an increased emphasis on military readiness and capability.

B. ACQUISITION REFORM INITIATIVES

1. Reagan's Blue Ribbon Commission on Management

Near the end of his term in office, President Reagan ordered the President's Blue Ribbon Commission on Management, also known as the Packard Commission (Gates, 1989, p. 7). The entire era is not made up of wasted taxpayer dollars scenarios; some programs were successful, bringing the most cutting-edge technology to the warfighter with affordable life-cycle costs. It is critical to step back and gain some perspective on the leadership at the time that was later instrumental in the Blue Ribbon Commission. In 1969, Secretary of Defense Melvin Laird and Deputy Secretary of Defense David Packard took office. They were keen on addressing the problems plaguing defense acquisition: excessive centralization, inefficiencies in the acquisition process, and a separation between authority of implementation and accountability for the outcome (Gates, 1989, p. 4). The sentiment of Laird and Packard was that previous administrations convoluted the process, making the process more difficult by requiring non-value-added data. To solve this problem, Laird and Packard acted to decentralize execution and tighten the acquisition process by giving program managers more autonomy. They also sought to improve the requirements generation process, increase operational testing, and

improve cost-estimating procedures (Gates, 1989, p. 4). With these goals in mind, the Packard initiatives were created, highlighting three focus areas: monitoring contractor and government work efforts, increasing program manager quality, and improving the quality of existing programs by focusing on the acquisition process itself. Outlined in memoranda to the acquisition workforce, the policy elements included the points detailed in Table 1.

In 1986, President Reagan appointed David Packard as chairman of the President's Blue Ribbon Commission on Defense, later known as the Packard Commission. The focus of the Packard Commission was to evaluate defense management in general and the acquisition process in particular (Gates, 1989, p. 7). Drawing on initiatives Packard established in the 1970s, the foundation of the recommendations to President Reagan for acquisition reform was based upon Packard's earlier work. In addition, the Commission recommended budgeting techniques, such as multi-year procurement and authorizations to improve program stability. With the exception of altering the appropriations process, all of the recommendations provided were signed into law in April 1986 and incorporated into the Goldwater–Nichols Department of Defense Reorganization Act of 1986 (Gates, 1989, p. 7).

2. National Defense Authorization Act of 1990

The National Defense Authorization Act (NDAA) of 1990 established a panel of experts to evaluate changes to DoD acquisition regulations. As a result of its analysis, the panel recommended changes for eliminating approximately 50% of the 600 statutes that affected DoD acquisition (Lorell & Graser, 2001, p. 13). These statutes included repeal and replacement of the Walsh–Healey Public Contracts Act's (1936) labor protections, deleting the requirement for labor surplus area studies, and deleting previous provisions for small business set-asides on foreign military sales (General Accounting Office [GAO], 1993, p. 46). In addition, the DAWIA (1990) was signed into law, establishing education and training standards, requirements, and courses for the civilian and military workforce. This was the impetus for the DAU (Layton, 2007, p. iii).

Table 1. Packard Initiatives (Gates, 1989).

Packard Initiatives
•Provide for systematic program reviews by OSD officials at important program milestones (resulting in the Defense Systems Acquisition Review Council [DSARC]).
•Provide the OSD with independent cost estimates and improve cost-estimate quality by establishing a cost analysis improvement group (CAIG) within the OSD.
•Establish cost as a program objective, equal to schedule and performance in importance, and consider operations and support costs during the development process (design to cost and life-cycle costing).
•Increase testing objectivity by establishing operational test and evaluation (OT&E) agencies that are independent of the Service commands responsible for the development effort.
•Establish military training courses and schools to improve the program managers' training.
•Give program managers a clear written charter to strengthen their authority.
•Provide better promotion opportunities to attract superior officers to program management.
•Reduce the turnover rate of program managers so that they have longer job tenure.
•Resolve technological uncertainties during development, not during production (e.g., increase prototyping, emphasize early and more complete hardware testing, and reduce concurrency)
•Encourage competitive hardware developments to reduce risk and stimulate contractor efforts

3. Federal Acquisition Streamlining Act (FASA) of 1994

Using the recommendations of the 1990s NDAA Section 800 Panel, Secretary of Defense William Perry (1994) issued a decree for acquisition transformation titled *Acquisition Reform: A Mandate for Change*. The 21-page document runs in concert to the principles of today's acquisition system, a flexible system with commercial-like processes, products, and technologies (Lorell & Graser, 2001, p. 14; Perry, 1994). Perry's February 1994 document emphasized civil military integration (CMI)—the integration of the civilian commercial and military industrial base—and changed the definitions of commercial and non-developmental items (NDI) while providing special provisions exempting contract actions, which included these items for DoD regulations and requirements (Lorell & Graser, 2001, p. 11). The mandate created a position for the Deputy Under Secretary for Acquisition Reform and a process action team (PAT) to review military specifications to reduce government oversight of regulations and contractors (Lorell & Graser, 2001, p. 14). Most of the recommendations in Perry's decree were incorporated into the Federal Acquisition Streamlining Act (FASA) of 1994.

The FASA opened the floodgates, focusing on the use of commercial procedures and technologies. 1994 was a big year for acquisition reform.

4. Total System Performance Responsibility (TSPR)

As part of Bill Clinton's presidential campaign, he promised to minimize the size of government. A large portion of the reduction came from government personnel and a large percentage of those government personnel were from the acquisition workforce. Expertise was replaced with various management approaches. TSPR was one of the management approaches used in place of tried and tested program management expertise. During the 20th century, the model moved from bureaucracies to networks, focusing on innovation in an outsourced environment. Instead of having the capability organically, the focus became how to contract for that expertise in the most efficient (not necessarily effective) manner.

It is said that much can be deduced from a name. A name has a denotation, a meaning, and a connotation, a reference that implies a general sentiment or feeling. For the DoD and acquisition in the mid-1990s, TSPR was a program management concept used to augment a smaller acquisition workforce while giving autonomy and responsibility to the contractor. Implemented by the Clinton administration to scale back the size of the acquisition workforce and as a policy to consolidate the United States' defense industrial base, the concept was ill-used on a widespread basis (Muradian, 2002, p. 4). More than one definition of TSPR can be found. Depending on who is queried and their specialty, the answer they give varies. However, Pandes (2001) defined TSPR as an acquisition strategy to "improve the quality of product or service, reduce costs and gain efficiencies" (p. 29). At the beginning, the strategy sounded great and was the answer to the Secretary of Defense's memorandum requiring the use of performance specifications in lieu of military specifications and also to the Pentagon acquisition chief Jacques Gansler's call for performance-based service acquisition (Pandes, 2001, p. 29). Proven management systems engineering practices were abandoned for un-validated engineering and acquisition practices. If TSPR was structured in a manner to achieve the goals of the Secretary of Defense and Gansler, it would be the panacea to costly acquisition programs;

however, it is not. For the many definitions of TSPR, there were just as many opinions on its status as an option for an acquisition strategy and its method of implementation for use. TSPR does not allow the government to control programs or manage the industrial base. Pete Aldridge, the current Pentagon acquisition chief, (as cited in Muradian, 2002, p. 4) comments in an article in *Defense Daily International* that TSPR focuses on the short-term goal of increasing contractor profit and not the long-term goal of maintaining national security and preserving the means to produce sophisticated tools of war.

Gill (2002), a procurement contracting officer at the Space and Missile Systems Center (SMC), criticized Pandes for stating that the Services, particularly the Air Force, championed this acquisition strategy in the face of huge cost overruns on the C-17, F-117, and SBIRS programs (p. 26). However, Pandes (2001) did not imply or state that as fact. Pandes' premise and intent was that, at that time, TSPR met the requirements of the Air Force to keep development underway when the SBIRS was and remained a top priority. To Gill's credit, as mentioned in his 2002 article, TSPR was not effective in development contract situations (p. 27). The major downfall of TSPR was that it gave away all oversight and responsibility for program success to industry. In a cost-plus-contract environment, which most of these system types are, the contractor in the end only risks losing a fee, whereas the government is left with an unusable product. In spite of the downsizing of the acquisition workforce and the requirements being fielded by the DoD and the military departments, organic contracting capability was shrinking fast, and TSPR seemed to be a reasonable solution to the problem. As Gill (2002) highlighted, "The government is ultimately responsible for the performance of systems provided to the warfighter. It is a responsibility that cannot—and should not—be transferred" (p. 27).

The downfall of TSPR came from inappropriate insight from government personnel over contractor teams. Additionally, the lack of DoD organizational capability to manage contracts with insight instead of oversight, and the lack of systems engineering and cost estimating expertise, which is essential in managing with insight, caused the downfall of TSPR (and is still causing the downfall of other performance-based acquisition approaches). Inherently there is nothing wrong with TSPR; however, the hands-off, cavalier approach of government program management personnel did not

require or define the relationship to provide the necessary insight/oversight in order to achieve the correct business outcome. The government's lack of organizational capability to manage acquisition programs using insight automatically negates any ability to provide proper insight and oversight within a government network (government and industry working together). Within a government network, the lines of accountability and control become blurred.

5. Coopers & Lybrand/Technical Applied Science Corporation (TASC) Study

Towards the end of 1994, the DoD championed an independent review of the regulatory contract cost premiums—the cost of doing business with the DoD—not applicable to the commercial sector. The private consulting firm Coopers & Lybrand elevated the conversation of cost savings that could be achieved through reduction in DoD regulation and oversight. The study identified over 120 regulatory and statutory "cost drivers" that increased the price the DoD pays for goods and services by 18% (GAO, 1996, p. 1). Part of the study highlighted the top three cost drivers accounting for more than 20% of the DoD's cost premiums: MIL-Q-9858A (military specification for quality control), the Truth in Negotiations Act (TINA, 1962), and the Cost and Schedule Control System (C/SCS) (Lorell & Graser, 2001, p. 16). Table 2 identifies 48.9% of cost premiums on top of the cost to perform the service or produce the capability necessary. Adopting performance standards instead of the technical specification, as recommended by Coopers & Lybrand, reduces costs in the long run, but, if not written properly, lends to ambiguity in requirements. TINA and the C/SCS (currently known as earned value management), although cost drivers, ensure that the government is getting timely cost and price information, free of defect.

Table 2. DoD Regulatory Compliance Cost Premium: Coopers & Lybrand Top 10 Cost Drivers (Lorell & Graser, 2001, p. 16)

Cost Driver	Percentage of Total Cost Premium
1. MIL-Q-9858A	10.0
2. TINA	7.5
3. C/SCS	5.1
4. Configuration management	4.9
5. Contract requirements/SOW	4.3
6. DCAA/DCMAO interface	3.9
7. CAS	3.8
8. MMAS	3.4
9. Engineering drawings	3.3
10. USG property administration	2.7

In response to the Coopers & Lybrand/TASC study (1994), Congress directed the DoD to assess these "cost drivers." The GAO responded with a report outlining the effort to reduce the cost to manage and oversee DoD contracts (GAO, 1996). The report focused on the "cost drivers" in Table 2. In response, the DoD coordinated a regulatory cost premium working group to coordinate DoD-wide efforts to address the cost-driver areas (GAO, 1996, p. 2). Using a cross-functional team approach with members from DoD functions, the MILDEPS, and government agencies to develop solutions minimizing the impact of the cost drivers, the teams were able to identify areas for change and to recommend options other than the current operating procedures, as well as implementation plans for the ideas generated.

Based on the recommendations of the cross-functional teams, in June 1994, the Secretary of Defense directed the use of performance-based specifications and standards to the maximum possible extent and the development of a streamlined procurement process to modify existing contracts, encouraging contractors to propose commercial practices (GAO, 1996, p. 4). In September 1994, the DoD established a laboratory for reducing oversight costs. Defense Contract Audit Agency (DCAA) and Defense Contracting Management Command (DCMC) (which is now Defense Contract Management Agency, DCMA), and industry contractors as well as DoD buying activities

came together to identify oversight cost drivers, assess if the oversight was appropriate, and identify and implement process improvements to reduce oversight costs (GAO, 1996, p. 4). In February 1995, MIL-Q-9858A, a military specification for quality requirements was deactivated. What the GAO (1996) does not discuss is that these cost premiums are regulatory requirements. The report is also silent on what the process is if a requirement's risk is low and on how oversight costs can be reduced.

Preliminary results concerning cost savings at the end of 1995 were dismal at best. Of the 10 contractors involved in the laboratory efforts, only three had actions to alleviate DoD requirements with a 1% savings, totaling $119 million (GAO, 1996, p. 4). There is a large discrepancy between Coopers & Lybrand/TASC's 18% cost premium and the projected 1% by the DoD's laboratory. One explanation is that Coopers & Lybrand did not assess the benefits afforded to the government because of these regulatory requirements. They only assessed the costs. Many of these costs are applied to these contract requirements because they protect the interests of the government and make good business sense. Also, in the absence of these regulatory cost premiums, many contractors would have self-imposed restrictions to ensure contract performance that could drive costs even higher. Non-performance of a system is mission failure; it is not just about saving dollars. The adage "you get what you pay for" is relevant, but neither the GAO report nor the groups interviewed in the Coopers & Lybrand/TASC study acknowledged this conclusion. As key stakeholders in the success of removing regulatory cost drivers and replacing them with industry practices, contractors must be vested in the effort. By March 1996, four of the 10 contractors involved initially were not actively pursuing the development of additional cost-savings ideas (GAO, 1996, p. 6).

The DoD maintained that the GAO's conclusion that the savings achieved from the laboratory might be less than estimated was "pure speculation" and work that made up the accounted for cost savings was in progress at the end of December 1995. In 1997, the GAO completed an additional assessment on the laboratory's progress and concluded that "the reinvention laboratory has made only limited progress in implementing changes to reduce contractors' costs of complying with government regulations and oversight

requirements. In particular, laboratory participants reported little success in addressing 9 of the top 10 cost drivers" (GAO, 1997, p. 4).

The report goes on to address the lack of success the laboratory had in finding and realizing the projected cost savings. The DoD had a lack of support from top-level management (GAO, 1997, p. 4). DoD and contractor personnel disagreed on the value of oversight (p. 4). The laboratory had difficulty in coordinating proposed changes when multiple customers were involved (p. 5). The GAO stated that DoD should use caution when using estimated cost reduction figures from oversight reform to create additional regulations (p. 5). Only a small portion of the projected savings had been realized in July 1996 when the laboratory was closed. Many of the cost savings identified were changes in contractors' quality assurance programs (p. 8).

6. Air Force Lightning Bolt Initiatives

Although most reforms are initiated at the DoD-wide level, during the mid to late 1990s, the Air Force was at the forefront of streamlining the acquisition process. From the beginning, Principal Deputy Assistant Secretary of Acquisition and Management Druyun made her mark on the acquisition reform process. After a discussion with her OSD counterpart concerning a Global Positioning System (GPS) proposal, Druyun reviewed the 1,200-page document and devised an 11-point implementation directive (outlined in Table 3) to guide the acquisition and contracting process, also known as the "Lightning Bolts" (Kittfield, 1997). Three years later, by all accounts the Lightning Bolt initiatives were successful and catapulted Druyun into fame, not only in Air Force acquisition, but also as a senior acquisition professional in the DoD.

Table 3. 1994 Air Force Lightning Bolt Initiatives (Kittfield, 1997)

Lightning Bolt Initiatives
•Establish a centralized request for proposal support team to scrub all RFPs, contract options, and contract modifications worth more than $10 million.
•Create a standing Acquisition Strategy Panel composed of senior-level acquisition personnel from the Office of the Assistant Secretary of the Air Force (Acquisition), Air Force Materiel Command, and the user.
•Develop a new System Program Office manpower model that uses tenets established in the management of classified and special-access programs.
•Cancel all Air Force Materiel Command center–level acquisition policies by December 1, 1995.
•Reinvent the Air Force System Acquisition Review Council process through Integrated Process Teams.
•Enhance the role of past performance in source selections.
•Replace acquisition documents with the Single Acquisition Management Plan
•Revise the Program Executive Officer's and Designated Acquisition Commander's Portfolio Review to add a section that deals specifically with acquisition reform
•Enhance the acquisition workforce with a comprehensive education and training program that integrates acquisition reform nitiatives.
•Reduce by 50% the amount of time taken to award contracts that meet customers' needs.
•Enhance the capabilities of laboratories by adopting improved business processes learned from weapon system reform efforts

7. Single Process Initiative

In December 1995, Secretary Perry made Single Process Initiative (SPI), originally a DoD and National Aeronautics and Space Administration (NASA) initiative, official DoD policy (Pope, 1997, p. 2). The SPI's intent was to reduce and/or eliminate the cost premiums identified in the Coopers & Lybrand study by eliminating duplicate, government-unique processes and replacing them with performance-based, commercial standards (Lorell & Graser, 2001, p. 20). The SPI sought to minimize military specifications and standards, to allow block contract changes to implement common processes, and to replace or eliminate military standards and specifications and business requirements when no value was added. The SPI promoted contractor flexibility to use the most efficient business and manufacturing processes (Pope, 1997). The woes of acquisition today were the same in 1997. The DoD's acquisition future was dim, and the SPI was hailed as the savior. Defense Contract Management Command (DMDC) was the agency leading the SPI effort. In a PowerPoint briefing, the expectation for the SPI and

for fixing acquisition was specified: “Acquisition Reform ... key to DoD’s future—Block Changes ... key to Acquisition Reform—Management Councils ... key to Block Changes” (Pope, 1997, p. 13). The SPI was the fix to cost overruns on large procurements.

Bergan (1997) cites several reasons that account for the lack of longevity concerning SPI. While SPI promoted contractor-original solutions to military specifications and regulations, the government evaluated proposals primarily on the basis of technical acceptability alone; cost considerations were not a significant factor (p. 120). While contractor ideas were implemented into requirements, considerations of cost were not explored and later in the life cycle, these solutions became cost prohibitive. Within Bergan’s survey, he found that contractors felt cost considerations should play less of a role in the technical acceptability of a proposal, while government personnel thought cost should play more of a role (p. 121).

8. Cost as an Independent Variable

In December 1996, the use of cost as an independent variable (CAIV) became official DoD policy, applying to all new major acquisition programs (Lorell & Graser, 2001, p. 34). Lorell and Graser (2001) claimed that the major premise behind CAIV is that it makes cost a priority over system performance and development schedule (p. 34). However, the intent of CAIV is that the stakeholders are able to get the most effective and efficient system within the budget allotted. As an example, for any manufacturer, if its customer wants its widgets cheap, it encourages the use of less expensive and potentially lower quality commercial parts and technology. CAIV raises the importance of strict cost-benefit analysis from the inception of a requirement all the way through development and production of new programs as an extremely important tool. The adage “you get what you pay for” looms over the concept of CAIV; however, the trade-off is when that of capability or performance becomes costly. By using CAIV, a conscious effort has to be made to prevent requirements creep, to ensure cost pricing targets are met, and to enable trade-off analysis between cost and performance (Lorell & Graser, 2001, p. 53). Although the intent of CAIV is to prevent the aforementioned issues, solely implementing CAIV as a program management mechanism by name does not make a

successful program. The end product is only as acceptable as the requirements selected to be part of the system are mature and precise.

Lorell and Graser (2001) also focused on U.S. Air Force Space Acquisition Reform lead programs. The SBIRS, also a focus of this research, was included in their review of acquisition reform. The SBIRS is intended to replace aging DSP satellites as a surveillance system for ballistic missile warning, defense, and intelligence (GAO, 2012). The SBIRS came to fruition in 1995 after the Follow-on Early Warning System (FEWS) was cancelled due to cost overruns and technical issues (Lorell & Graser, 2001, p. 84). As the replacement for DSP, with a short period for development along with funding limitations, the SBIRS had to be developed quickly. Because of these circumstances, the OSD and the Air Force designated it an acquisition reform leader program. To get started, contractors were provided with the operational requirements in a statement of objectives, requiring only two military standards (Lorell & Graser, 2001, p. 84). Using CAIV, as total funding requirements were not available, the program provided a must-cost total program objective. Contractors moved forward in the source selection by keeping research and development (R&D), procurement, and life-cycle costs low, competing among one another.

Two teams were awarded 15-month development contracts with the use of commercial practices and COTS products as a focus to reduce costs. Both were also afforded total control of the design and configuration. By 1996, the source selection had come to an end and Lockheed Martin was declared the winner. They were awarded a 10-year, $1.8 billion engineering and manufacturing development (EMD) contract. Only two years after the EMD contract was awarded, total program costs were estimated at $7.6 billion (DoD DOT&E, n.d). The Air Force encouraged Lockheed to continue its cost/performance trade studies and work to further reduce costs by providing substantial award fees, as explained in the following paragraph:

> As an incentive, the government approved an unusually large 20 percent award fee in the contract, half of which depended on successful cost management. To receive the highest rating for this area, the contractor had to further reduce the procurement price without sacrificing critical performance capabilities. Lockheed established a goal of a 10 percent

> reduction in the cost of the first three satellites compared to its Best and Final Offer proposal during the competition. As an incentive to maintain performance capabilities, reliability, low LCC, and schedule, Lockheed Martin committed to paying up to 8 percent of the contract value if it failed to meet critical mission and program milestones. (Lorell & Graser, 2001, p. 85)

9. Defense Acquisition Program Assessment

In June 2005, testifying before the Senate Armed Services Committee, Acting Deputy Secretary of Defense Gordon England expressed his thoughts about the current state of acquisition: "the entire acquisition structure within the [D]epartment of Defense needs to be reexamined and in great detail…. [T]here is growing and deep concern about the acquisition process within the Department of Defense and in the Committee" (OSD, 2005c, p. 3). Because of that concern, England authorized an integrated assessment including every aspect of acquisition from requirements to the legality of business arrangements (OSD, 2005b, p. 1). England ensured a simple recommendation for restructuring acquisition with identified responsibility and alignment of responsibility, authority, and accountability (OSD, 2005c, p. 4).

The Defense Acquisition Program Assessment (DAPA) panel, the group of experts leading the research effort, was a mix of industry and government. The panel chairman at the time was the partner and vice president of the Aerospace Market Group for Booz Allen Hamilton. The very mixed and varied panel came from the National Defense University (NDU), Lockheed Martin Corporation, the Air Force, the Army, and several consulting firms (OSD, 2005c, p. 5). Pulling on many different points of view, many retired officers, knowing the challenges of the military and private sector, set out on a massive project to assess every aspect of DoD acquisition and its management systems.

Up until 2012, many acquisition reforms were introduced and implemented, yet the results hoped for were not achieved. Since the Packard Commission, 128 studies of acquisition had been commissioned, yet none of the previous studies were able to explain and fix cost and schedule instability in DoD management and acquisition systems. Recognizing that the system is not without flaws, the DAS operates as it should with the

focus to deliver systems with the best performance to maintain strategic advantage and military power (OSD, 2005c, p. 6). As part of the DAPA panel's assessment, they sourced information from a variety of areas. Figure 1 identifies the bottom-up approach used by the panel to prepare the assessment. This multi-faceted approach integrates all of the available data.

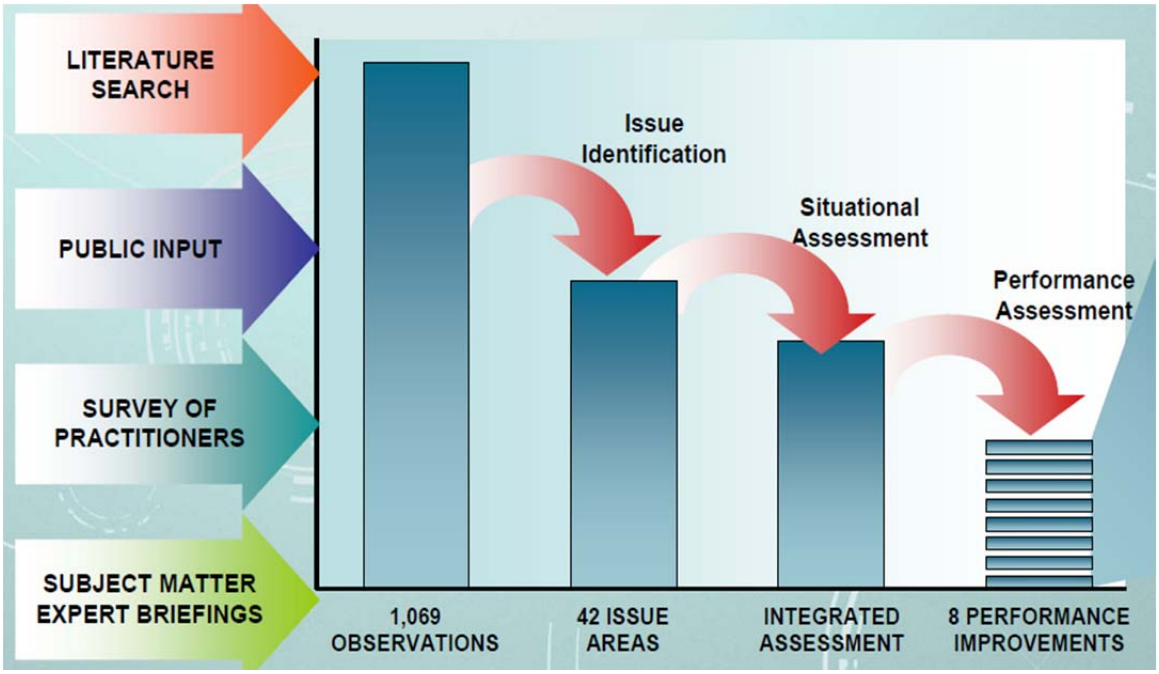

Figure 1 DAPA Performance Assessment Process (OSD, 2005c, p. 7)

The panel was successful in whittling more than 1,000 observations into 42 areas of interest. From there, 13 key issues were identified that drove cost and schedule variances. The key areas identified were Program Structure, Acquisition Strategy, Complex Acquisition System, Requirement Process, Joint Requirement Development, Need for Leadership, Process Discipline, Oversight, Rapid Acquisition Authority (RAA) Allocation, Program Manager Expertise, Acquisition Career Path, Industry Motivation and Behavior, and the PPBE process (OSD, 2005c, p. 3). Using these issues, an integrated performance assessment was completed, which defined eight performance improvements.

The panel also found that for the 13 key issues that recurred across acquisition, the increased amount of oversight was crippling the defense acquisition program. The oversight pendulum swings from ruling with an iron fist to no oversight at all, which is the cycle of acquisition reform. The panel concluded that oversight must be moderated and shift to an accountability management model focused on process instead of a trust-based oversight model focused on overall program actions (OSD, 2005c, p. 9). To improve performance, the panel recommended an integrated approach among the workforce, the user organization, and the industry in conjunction with the variables of budget requirements and acquisition (OSD, 2005c, p. 10). All of these variables have competing values and interests that cause instability, both cost and schedule, in defense acquisition programs. Figure 2 illustrates the acquisition system operating in a vacuum. Theoretically, an effective acquisition system is stable and cohesive. The acquisition workforce, the requiring organization, and industry must work together to ensure integration of stable contract requirements and adequate budgetary resources within the acquisition life cycle.

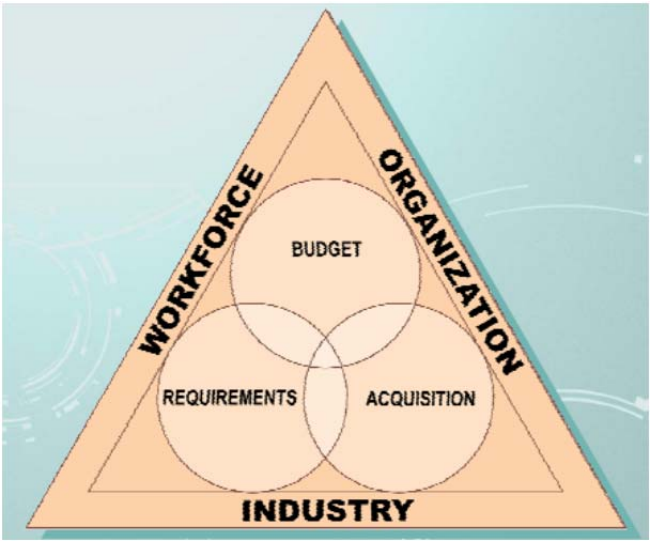

Figure 2 Theoretical Acquisition Environment—Stable and Cohesive (OSD, 2005c, p. 10)

Experience has shown that in practice, competing values and objectives create a disconnected and unstable environment for the operation of acquisition programs. Figure

3 shows a government-induced instability within the acquisition environment.

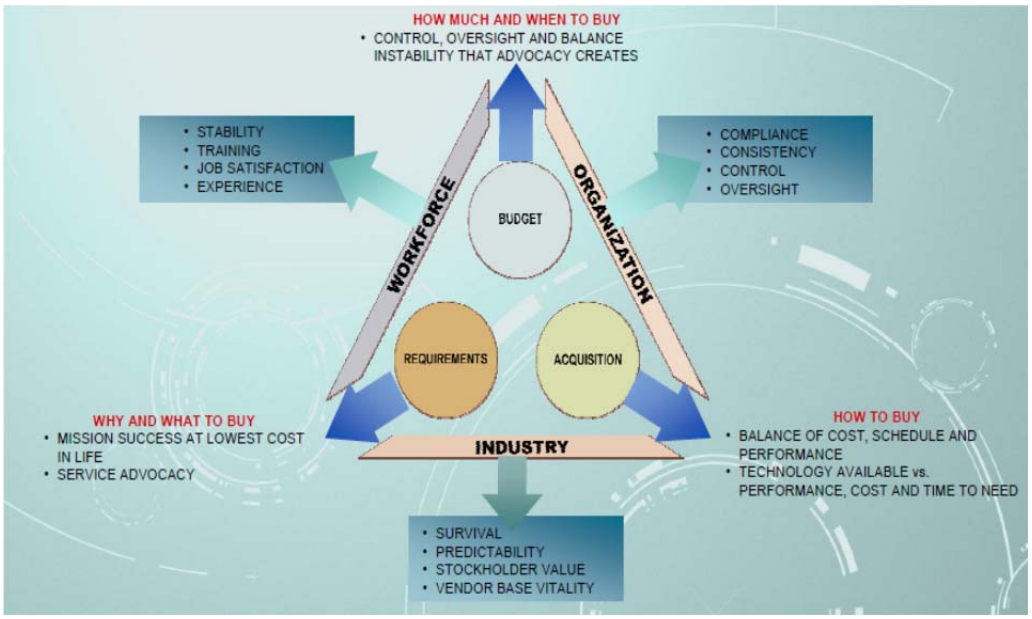

Figure 3 "In Practice" Acquisition Environment—Disconnected and Unstable (OSD, 2005c, p. 11)

Why and what to buy (requirements), how much and when to buy (budget), and the manner in which it is executed (the acquisition process) all have many stakeholders with unique yet competing goals. The DAPA's task as charged by the OSD was to outline an acquisition structure with clear alignment of responsibility, authority, and accountability (OSD, 2005c, p. 4). Table 4 summarizes the recommendations provided by the panel to minimize the conflict between the major elements of the acquisition system while meeting the goal with which they were charged.

Table 4. DAPA Performance Improvement Recommendations (OSD, 2005, p. 14)

Elements of Acquisition System	Performance Improvement Measure(s)
The User Organization	Realign authority, accountability, and responsibility at the appropriate level and streamline the acquisition oversight process
Acquisition Workforce	Rebuild and value the acquisition workforce and incentivize leadership
Budget	Transform the budgeting process and establish a distinct acquisition stabilization account to add oversight throughout the process
Requirement—Process	Replace JCIDS with combatant command (COCOM)-led requirements procedures in Services, and DoD agencies must compete to provide solutions
Requirement—Management & Operational Testing	Add an "operationally acceptable" test evaluation category. Give program managers explicit authority to deter requirements
Acquisition—Strategy	Shift to time-certain development procedures; adopt a risk-based source selection process
Industry	Overcome the consequences of reduced demand by sharing long-range plans and restructuring competitions for new programs with the goal of motivating industry investments in future technology on current programs

10. Revision of DoD Instruction 5000.02

Article I of the Constitution gives Congress the broad and wide-reaching authority for acquisition policy formation. Article I states the powers of Congress include the following: "To raise and support armies. … To provide and maintain a navy. … To make rules for the government and regulation of the land and naval forces. … [and] To exercise exclusive legislation in all cases whatsoever … for the erection of forts, magazines, arsenals, dock-yards, and other needful buildings" (U.S. Const. art I, § 8). The revision of DoDI 5000.02 is not directly acquisition reform but was triggered by an active Congress

from 2004–2008 as a response to troubled programs and negative trends that were becoming prominent throughout programs in the life cycle. The document consolidated all of the new policies originating at the OSD, six NDAAs, legislation, statutes, and laws drafted and approved during fiscal years (FY) 2004–2009.

From the initial 1971 acquisition framework of three decision points, three phases, and one milestone document, to December 2008's framework of six decision points, five phases, and over 30 milestone documents, the amount of oversight by Congress and the Government Accountability Office (GAO) grew from minimal oversight to significantly more oversight (SM&A Associates, 2009, p. 4). Although previous attempts tried to build in flexibility and autonomy, many more layers of oversight were added to combat the original problem. The revision of DoD 5000.02 (OUSD[AT&L], 2008) marked major changes that affected all large-dollar DoD contracts. Figure 4 illustrates that the focus of the changes is on the front end of development, Milestones A through C, and that this focus mandated a threshold prior to proceeding to technology development, the MDD review.

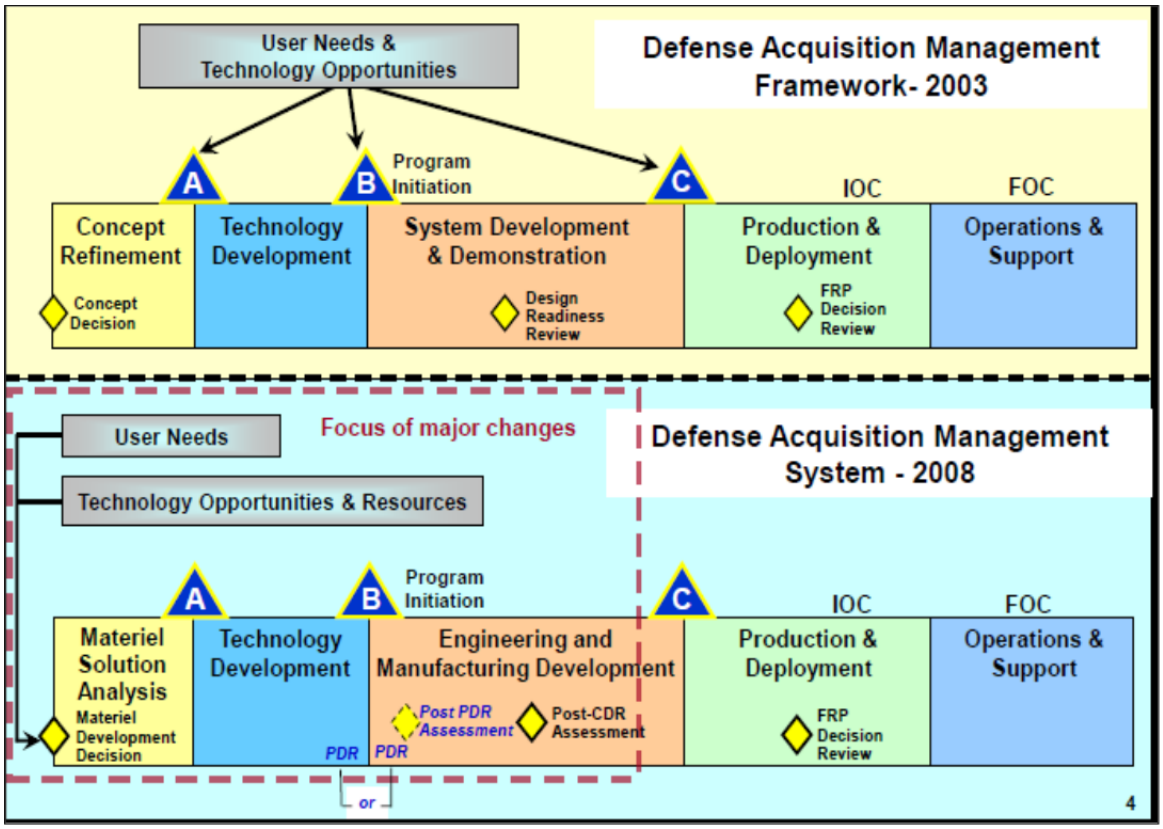

Figure 4 Comparison of 2003 and 2008 Versions of DoDI 5000.02 (Brown, 2009, p. 4)

Before 2008, legislation was being written, distributed, and consolidated on an ad hoc basis. Policy was approved and implemented in policy memos and responses to the GAO, Inspector General (IG), and Congress. Meanwhile, over 700 defense acquisition policy working group (DAPWG) comments were socialized with industry and other agencies (Brown, 2009, p. 3). The DoD was building the plane while flying it. In 2009, the DoD IG released a summary report of the general audits of acquisition and contract management between 2003 and 2008 (DoD IG, 2009). Within that time period, the DoD IG released 142 reports. Of the 12 deficiency areas discussed within the 142 reports, the top five are identified in Table 5, identifying the most recurring deficiency areas. The top five deficiency areas were identified by tallying the total number of audits that included that deficiency area for the fiscal years assessed in the report (totals in parentheses in Table 5).

Table 5. Top Five Issue Areas Contained in the DoD IG's Audits of Acquisition and Acquisition Contract Management (DoD IG, 2009, p. 28)

Deficiency Areas	Deficiency Area Criteria/Definitions
Completeness of Support (65)	Contents of contract files: • purchase request, acquisition planning information, and other pre-solicitation documents; • cost or pricing data and Certificates of Current Cost or Pricing Data or a required justification for waiver, or information other than cost or pricing data; • contract completion documents; • additional documents on what action was taken or that reflect actions by the contracting office pertinent to the contract.
Material Internal Control Weakness (58)	DoDI 5010.40, "Managers' Internal Control (MIC) Program Procedures," dated January 4, 2006, defines internal controls as the organization, policies, and procedures that help program and financial managers to achieve results and safeguard the integrity of their programs. The Instruction also defines a material weakness in internal controls as a reportable condition that is significant enough to report to the next higher level.
Oversight and Surveillance (55)	Oversight ensures that contractors are providing timely and quality services and helps mitigate any contractor performance problems. Surveillance is ongoing action throughout the performance period of the contract to ensure the government receives the goods and services it contracted for in a timely manner, including creating an official record documenting that the contractor's performance was acceptable or unacceptable.
Adequacy of Contract Pricing (52)	The DoD is generally required to obtain "fair and reasonable" prices for the goods and services it procures from responsible sources. The FAR provides procedures for

	making price determinations. Based on FAR 15.402, "Pricing Policy," the contracting officer must not obtain more information than necessary in establishing the reasonableness of the offered price. If the price is based on adequate price competition, then no additional information should be obtained unless adequate information cannot be obtained from the source. The contracting officer may request cost and pricing data to determine the fair and reasonable price. Information other than cost and pricing includes information related to prices such as established catalog or market prices or previous contract prices, information available within the government, information from other than the sources, and cost information that does not meet the cost and pricing data definition.
Sufficiency of Requirements (50)	DoDI 5000.2 requires each increment in an evolutionary acquisition program to include a system development and demonstration decision followed by a production and deployment decision. The Instruction identifies the mandatory, statutory, and regulatory documents that the program manager is required to submit in support of the system development and demonstration decision review. Some of the required documents for submission include an independent cost estimate, a manpower estimate, a technology development strategy, and an acquisition program baseline. Some of the required regulatory documents include an initial capabilities document, a capability development document, an acquisition strategy, an analysis of alternatives, an affordability assessment, a cost analysis requirements description, and a test and evaluation master plan.

973 recommendations were made as a result of the 142 DoD inspector general (IG) reports generated. As of September 2008, approximately 83% of the

recommendations had been closed. The deficiencies noted from the DoD IG reports reflect contracting process deficiencies.

11. Government Accountability Office High Risk Series

Annually, the GAO publishes a list of a functions within the government determined to be high risk being vulnerable to higher incidents of fraud, waste, abuse, and mismanagement. Programs also become part of this series because of the increased need for efficiency or effectiveness of the function. Since 2011, the DoD has expected to invest almost $343 billion (in FY 2011 dollars) on the development and procurement of major defense acquisition programs (GAO, 2011, p. 12). DoD contracting and weapons system acquisition have been on the high-risk series report since 1990 and 1992, respectively (GAO, 2011, p. 173). The notion that reform is necessary is no secret; however, each program is different, and so are the circumstances and responsibilities.

12. Weapons Systems Acquisition Reform Act (WSARA) of 2009

The WSARA (2009) gave clear guidance from Congress about the hot button issues dealt with as of 2012: organizational/personnel and acquisition policy and process changes, and Congressional reporting requirements. The act created four director positions appointed by the Secretary of Defense for cost assessment, test and evaluation, root cause analysis, and systems engineering (Lush, 2009). Concerning policies and processes, the Joint Requirements and Oversight Council (JROC) must obtain input from combatant commanders for joint requirements and set an initial operational capability (IOC) schedule objective for every requirement. Competition is the name of the game through options for competition throughout the life cycle at the prime and subcontract level, through prime make-or-buy decisions, and through competitive prototyping as required through Milestone B (Lush, 2009). At the signing ceremony, President Obama stated the goals of WSARA were to “limit cost overruns, strengthen oversight and accountability, enhance competition and end conflicts of interest” (The White House, Office of the Press Secretary, 2009). It is too soon to tell whether implementation was successful; however, commentary in Erwin (2010) illustrates the concerns government and industry has with the WSARA:

> If you take a hard look at what's wrong with acquisition, a big part of it is the suffocating level of oversight heaped on programs. GAO, IG, OSD, Service oversight, etc. A PM spends 95% of his or her time on compliance with non-value added oversight vice executing the program. Heaping yet more oversight is not going to solve the problem, but just make it worse. Don't get me wrong, you need oversight. You just need to rationalize and streamline the oversight. Right now the solution for poor execution is more oversight. These programs are mired in overlapping, conflicting and contradictory oversight. Moreover, the folks conducting the oversight frequently know very little about the programs or technology they are overseeing. And empowering the very organization [*sic*] that is suffocating the programs the most is not the answer. So yes, since the Packard Commission there have been studies after studies, and they have all resulted in more oversight. It's time to strip out the layers of oversight and to hold the remaining oversight accountable for mindlessly holding up programs for no good reason. It's no wonder DoD can't innovate with this model. A thousand people can say "no," and barely anyone can say "yes." (Erwin, 2010)

The Center for Strategic and International Studies (CSIS) completed a progress report on the implementation of WSARA. In their report, Berteau, Hofbauer, and Sanok (2010) agreed that it was too early to tell the true effects of the legislation on the acquisition system, since some of the requirements of the act had not been fully implemented. However, the spirit and intent of WSARA is in the right place, but it does not address the current state as to why today's acquisition system is the way it is, the nonexistence of competition (Berteau et al., 2010, p. 7). Spending on single-source contracts increased from 76 to87% from 2004 to 2008 (Berteau et al., 2010, p. 7). One of the goals of WSARA is to minimize the use of single-source contracts, but the supply of competition is simply not available. For FY 2012, the top five contractors, Lockheed Martin Corporation, the Boeing Company, General Dynamics, Raytheon Company, and United Technologies, account for 20% of DoD contract award dollars (USASpending.gov, 2012).

13. Better Buying Power Initiatives

In May 2010, Defense Secretary Robert Gates announced his efficiency initiative, which was aimed at reducing overhead, finding efficiencies within the force structure, and modernizing accounts. This would in effect enable the DoD to use resources more

effectively to support and sustain the warfighter. In response, the USD(AT&L) introduced the BBPi in September 2010. This guidance to the acquisition workforce, focusing on doing more without more, is changing how the DoD acquires systems, goods, and services (DAU, 2011).

The BBPi have five thrust areas identifying the responsibilities of program managers, the Services, and the OSD. The five thrust areas are: (1) target affordability and control cost growth; (2) incentivize productivity and innovation in industry; (3) reduce non-productive processes and bureaucracy; (4) promote real competition; and (5) improve tradecraft in the acquisition of services (OUSD[AT&L], 2010a). USD(AT&L) Kendall charged the acquisition workforce with some lofty goals. He acknowledged that the business arrangement of former contracts could not be undone and that new efficiencies would be primarily focused on new contracts (OUSD[AT&L], 2010a). Figure 5, Objectives of the BBPi, underscores the long-term efforts that the BBPi seek to achieve (OUSD[AT&L], 2010a).

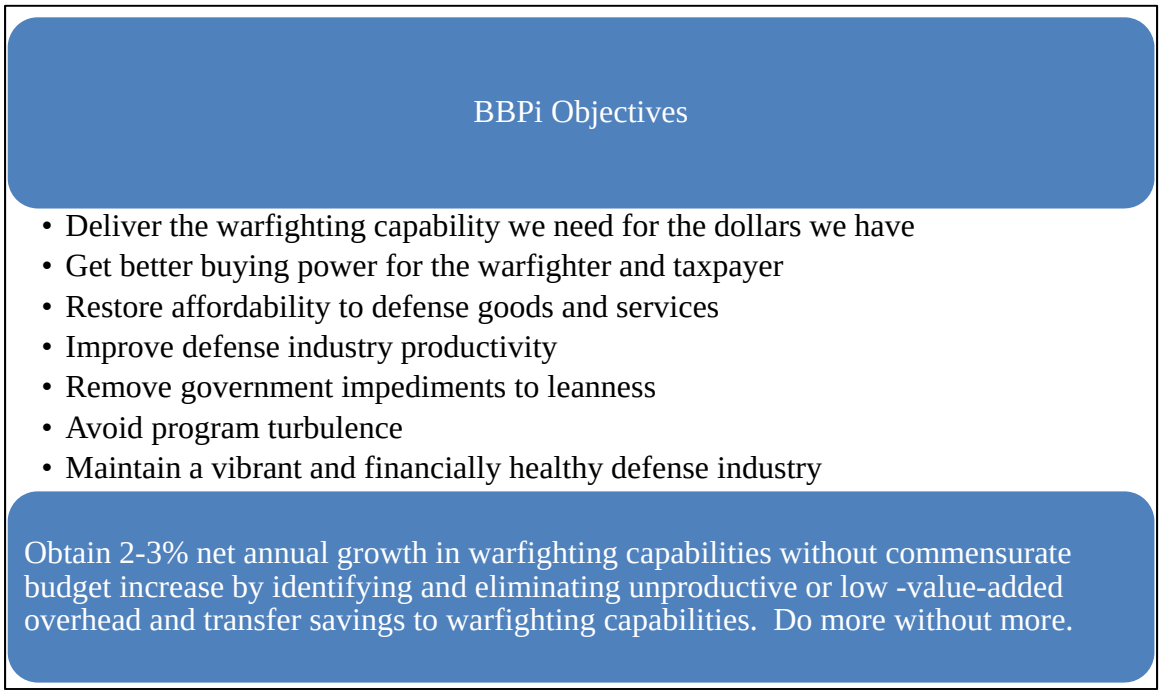

Figure 5 Objectives of BBPi (Adapted from OUSD[AT&L], 2010a)

The bottom-line reality is that the DoD must continue to grow its warfighting capabilities by 2–3% annually amidst diminishing budgets and smaller production runs (OUSD[AT&L], 2010a).

As part of the strategy for implementing the BBPi, to increase efficiency and productivity in acquisition, space programs have asked Congress for block buy authorization. The Air Force has adopted a streamlined strategy for implementing BBPi for space acquisition. Originally known as Evolutionary Acquisition for Space Efficiency (EASE), and, as of 2012, called Efficient Space Procurement (ESP), this strategy operates on the following four tenets:

- Tenet 1: Purchase satellites in block buys creating efficient production lines, buy economically sound quantities of parts, and reduce non-recurring engineering costs.
- Tenet 2: Use fixed-price contracting once satellites are no longer in development (where most of the cost/risk resides).
- Tenet 3: Establish stable research and development investments to improve the performance and lower the cost of follow-on systems.
- Tenet 4: Enlist a modified funding profile through advanced appropriations over multiple years to spread acquisition cost over multiple years while still meeting full funding requirements (Skotte, 2012).

The BBPi do not recreate the wheel of acquisition and contract management techniques. The initiatives place increased emphasis on the current economic and acquisition environment in areas where the DoD has been unsuccessful in meeting desired outcomes. Part of the impetus behind the BBPi is the relative success, or lack thereof, of the previous initiatives. The BBPi are an attempt to refocus program management professionals on some of the target areas for savings and efficiency that may not have been implemented in a complete fashion. DoD Instruction 5000.02 of December 2008 (OUSD[AT&L], 2008) and the WSARA of 2009 were previous attempts to introduce rigor and efficiency into the acquisition process. There is a good deal of synergy between the previous acquisition reforms and the BBPi (DAU, 2011).

The idea at the crux of the BBPi is three-fold: (1) It is a reform measure, streamlining those that have come before; (2) it is formulated as a mandate to follow pre-

established policy; and (3) it incorporates all of the best practices of the reforms enacted in the past.

14. BBPi 2.0

On April 24, 2012, Katrina McFarland, president of the DAU and assistant secretary of defense for acquisition (ASD[A]), briefed the progress of BBPi to date and the way ahead. In additional to the 23 original BBPi, she introduced nine new potential BBPi (McFarland, 2012). Six months later, on November 14, 2012, the USD(AT&L) formally introduced the seven new initiatives. The second iteration of BBPi (BBPi 2.0) includes seven thrust areas with 36 initiatives that build upon and place emphasis on initiatives within the initial BBPi memorandum (OUSD[AT&L], 2010a). The thrust areas are as follows: (1) achieve affordable programs, (2) control costs throughout the product life cycle, (3) incentivize productivity and innovation in industry and government, (4) eliminate unproductive processes and bureaucracy, (5) promote effective competition, (6) improve tradecraft in acquisition of services, and (7) improve the professionalism of the total acquisition workforce (OUSD[AT&L], 2012). BBPi 2.0, shown in Figure 6, is currently out for comment to government and industry until January 2013 (OUSD[AT&L], 2012). At that point, the BBPi will be revised, incorporating comments from government and industry.

Achieve Affordable Programs

- Mandate affordability as a requirement
- Institute a system of investment to derive affordability caps
- Enforce affordability caps

Control Costs Throughout the Product life cycle

- Implement "should-cost" based management
- Eliminate redundancy within warfighter portfolios
- Institute a system to measure the cost peformance of programs and institutions and to assess the effectiveness of acquisition policies
- Build stronger partnerships with the requirements community to control costs

Incentivize Productivity and Innovation in Industry and Government

- Align profitability more tightly with Department goals
- Employ appropriate contract types
- Increase use of fixed-price incentive contracts in Low Rate Initial Production
- Better define value in "best value" competitions
- When LPTA is used, define Technically Acceptable to ensure needed quality
- Institute a superior supplier incentive program
- Increase effective use of Performance-Based Logistics
- Reduce backlog of DCAA Audits without compromising effectiveness

Eliminate Unproductive Processes and Bureaucracy

- Reduce frequency of OSD level reviews
- Re-emphasize AE, PEO, and PM responsibility and accountability
- Eliminate requirements imposed on industry where costs outweigh benefits
- Reduce cycle times while ensuring sound investment decisions

Promote Effective Competition

- Emphasize competition strategies and creating and maintaining competitive environments
- Enforce open systems architecture and effectively manage technical data rights
- Increase small business roles and opportunities
- Use the Technology Development phase for true risk reduction

Improve Tradecraft in Acquisition of Services

- Assign senior managers for acquisition of services
- Adopt uniform services market segmentation
- Improve requirements definition/prevent requirements creep
- Increase use of market research
- Increase small business participation
- Strengthen contract management outside the normal acquisition chain--installations, etc.

Improve the Professionalism of the Total Acquisition Workforce

- Establish higher standards for key leadership positions
- Establish stronge professional qualification requirements for all acquisition specialities
- Increase the recognition of excellence in acquisition management
- Continue to increase the cost consciousness of the acquisition workforce--change the culture

Figure 6 Better Buying Power 2.0. (Adapted from OUSD[AT&L], 2012)

On September 20, 2012, USD(AT&L) Kendall commented that the BBPi of managing costs and establishing affordability caps have produced real results, while

others have been unproductive (as cited in Serbu, 2012, p. 1). Kendall also admitted that there was an "overreaction" to some of the initiatives initially, and many contracting officers look for the approved solution in the released memoranda (as cited in Serbu, 2012, p. 2). For example, Kendall cites the practice of using fixed-price contracts versus cost-plus contracts where appropriate. Kendall also echoed sentiments of establishing metrics, particularly of enforcing affordability targets in BBPi 2.0 (OUSD[AT&L], 2012).

The preceding section summarized acquisition reforms starting with the Packard Commission and ended with the BBPi. The following section identifies academic research pertinent to this research.

C. ACADEMIC RESEARCH ON DEFENSE ACQUISITION

Snider (1996) explored the price of professionalizing the acquisition workforce. DAWIA, which requires particular course requirements to achieve a level of certification in one's career field, has, in large part, created an insular and careerist acquisition workforce (p. 8). Instead of coming up through the ranks, learning about each important aspect of the acquisition process, practitioners become very specialized. Snider (1996) argued that instead of learning about what role each area of defense acquisition plays and the respective career fields, what has been created is a mindset of "ticket punching" for certifications. As a result, the notion of professionalism is associated with achieving the commensurate level of certification. Achieving a certification does not make someone a professional within that field; however, years of experience, working in many different areas with successful outcomes, do. Rendon (2010) argues that as the landscape of acquisition changes, so should the knowledge, education, and qualification requirements of the acquisition workforce. This falls in line with the premise of Snider and argues for holding the acquisition workforce accountable for their work product.

Cooper (2002) researched the DoD's effectiveness in implementing acquisition reform through workforce training. The research examined several acquisition reform initiatives proposed since 1990 and the DoD's primary sources of acquisition workforce training. Cooper (2002) conducted a survey to evaluate the effectiveness of training

sources as perceived by acquisition workforce members. The data gathered from the sample of 411 responses indicated survey respondents were only "somewhat" satisfied with the training received in support of acquisition reform. Cooper (2002) recommended that acquisition reform training be decentralized and that the DoD provide on-site reform advocates while increasing web-based DAU instruction (Cooper, 2002, p. i). Today, many major commands have on-site ombudsmen and competition advocates, as well as staff dedicated to training contract and acquisition personnel on the latest requirements. The SMC, home of the SBIRS program office, is in receipt of such training through the SMC University and the SMC/PK Directorate of Contracting.

Chenoweth, Hunter, Keltner, and Adamson (2003) assessed barriers to implementing acquisition reform. The study examined the incorporation of Contract Repair Enhancement Program (CREP) tenets in repair contracts at Warner Robins Air Logistics Center (WRALC). The study identified successful methods to incorporate various organizational levers, policies, and practices senior leadership can use to influence individual behavior to achieve policy objectives. The team found that organizational levers can help explain contract measures of success. Training in fostering positive attitudes toward acquisition reform, as well as effective teaming, had a consistent statistical relationship with contract innovation (Chenoweth et al., 2003, p. i).

Cooper (2002) and Chenoweth et al. (2003) identified reasons why reform has not always been as successful as originally intended. The general theme that came from both of these studies is at a cultural level—the culture of the acquisition community and the ability to effectively do one's job. Much of the narrative concerning the community is the negative accounts; however, the majority of the acquisition community is dedicated, intelligent, and extremely resourceful. Contracts and programs do not run autonomously. Many view the next reform as a "performance act," a passing phase, of Congress and senior leadership, and treat it as such (Jackson, 2011). These reforms are simply a restatement of the duties of program managers and contracting professionals. The "must dos" outlined are being completed; however, outcomes—even arguably successful outcomes—look quite different to each stakeholder. Frankly, a software engineer working on a program may not care that the payload software development special study

has to be determined as being fair and reasonably priced, but it makes all the difference to a contracting officer.

Layden (2012) published a telling paper on the Army program managers' perspective of the BBPi. One hundred respondents, consisting of O-6 equivalent civilians and their deputies, participated in a survey regarding the BBPi published guidance and its implementation (Layden, 2012, pp. 5, 39). Data were collected summarizing the views of the program managers within the following areas: familiarity with individual initiatives; perceived impact of initiatives on their programs; the value of additional BBP guidance, training, and tools; and, perspective on the cost-savings potential of each of the initiatives (p. 58). Layden concluded program managers are familiar with the initiatives at a basic level, but additional guidance would not bring about significant changes in the way business is conducted. Lastly, the group believed that not many of the BBPi have the potential to result in significant cost savings for the amount of resources required for successful implementation (p. 64).

D. FRAMEWORK FOR ANALYZING PUBLIC PROCUREMENT POLICY

Using an open-systems approach, Snider and Rendon (2008) elaborate on procurement policy by expanding other public procurement models (e.g., Harland, Gibbs, & Sutton, 2000; McCue & Gianakis, 2001; Thai, 2001) to provide explicit depiction of the units of analyses through structural and allocative elements (p. 294). Figure 7 highlights the five elements to the Snider and Rendon (2008) public procurement policy framework. The first element is structural policy. Structural policies include laws, statutes and regulations. The second element is allocative policy; allocative policies include the tangible goods that provide a benefit (i.e., contracts) as a result of implementing the structural policies. The third element is output; outputs are at the lowest level and are applied in allocative policies. The fourth element is outcome; outcomes, the next highest order, ensure integrity in the process. The last element is impact, the highest order element. Impact ensures integrity, accountability, and transparency in the acquisition process. Past experience shows that many allocative policies may follow the structural

policies to the letter of the law, but the impact of those policies may appear to be unfair or misguided.

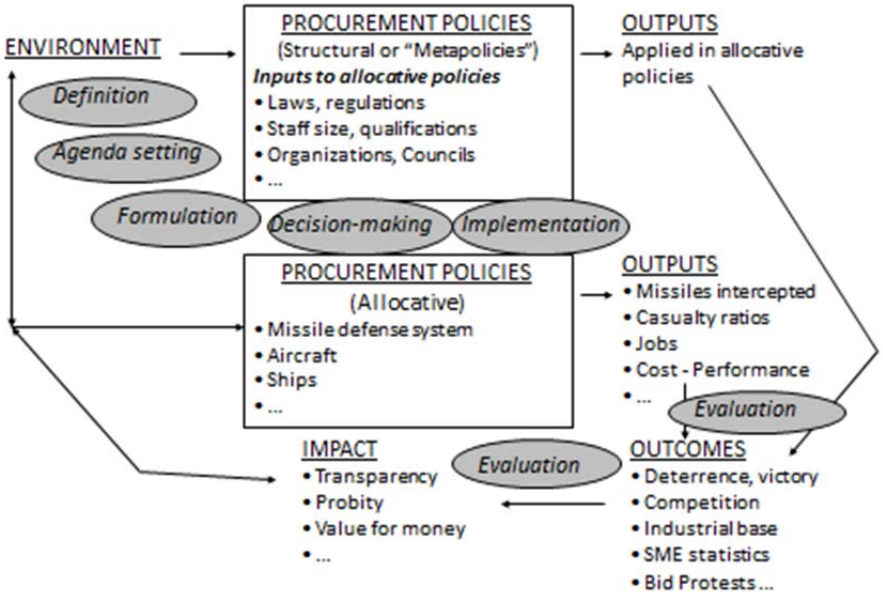

Figure 7 Framework for Analyzing Public Procurement Policy (Snider & Rendon, 2008, p. 295)

Snider and Rendon (2008) highlight the complexity of the public procurement policy with the development of this framework. As all of these inputs flow into the framework, it will take a significant period of time to collect data and identify whether BBPi policy will have a considerable effect on defense procurement programs. At the outset, DoD officials wanted to set up metrics that would provide feedback on how the BBPi was working six months after implementation. However, the ability to develop metrics without tangible data is impossible and the DoD will not be able to quantify the impact of the BBPi for a significant time after the BBPi have been fully implemented.

E. ACQUISITION REFORM AND KNOWLEDGE FLOW THEORY

Creating a knowledge flow of information and using that knowledge to execute new tasks is an important step in understanding where linkages in execution and training are not continuous. This is where the current research is relevant and worthwhile. Using

the BBPi and the training support that the DAU has provided, along with assessing the implementation and execution in the day-to-day work environment, this research highlights any gaps or missing linkages that may be helpful in training the future acquisition workforce.

Knowledge through action and subsequent performance secures a competitive advantage (M. E. Nissen, personal communication, October 9, 2012). This is the concept of knowledge flow theory. Acquisition professionals are constantly bombarded with information and data. Without the ability to synthesize and group that information/data into a meaningful context degrades our ability to increase the overall performance of the acquisition workforce. Acquisition processes, besides creating a competent and capable acquisition workforce, are the key to successful acquisition outcomes, which in turn support the warfighter and our competitive advantage on the battlefield.

In order to secure a competitive advantage, groups must perform at high levels, taking information from all pertinent resources and taking steps to synthesize that information and data into useable knowledge (M. E. Nissen, personal communication, October 9, 2012). Figure 8 illustrates the knowledge flow process in a multidimensional context. I will explain the DoD and its implementation of the BBPi in the context of this framework.

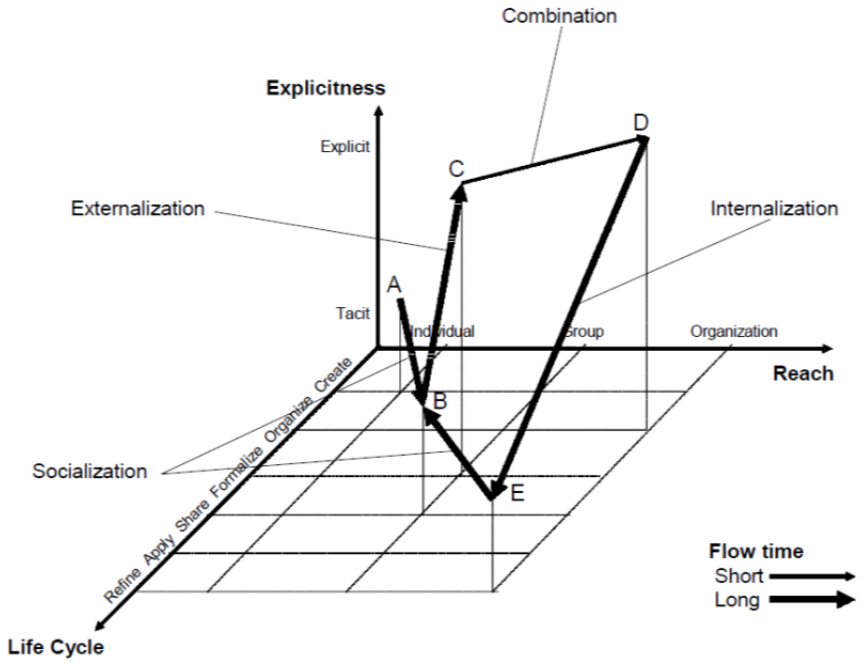

Figure 8 Multidimensional Knowledge Flow Visualization (Nissen, 2006)

As members of the acquisition workforce progress through the ranks and achieve the appropriate certifications requisite for their jobs and positions, the explicit knowledge acquired is then organized into useable chunks of information. This stage is known as socialization. Once they are able to organize that information and draw upon it to formulate their unique experiences, it becomes tacit knowledge, an invaluable asset to use in any applicable situation going forward. This stage is known as externalization, drawing from information synthesized as part of one's knowledge base. The stages of socialization and externalization are the continual process of learning. The flow time as shown in Figure 8 of both these stages is long. This means that it takes a significant amount of time (which will vary by individual) to get the next stage of understanding. As information is acquired, that information becomes part of one's knowledge base to be used and implemented in the context of future experiences. When transferring tacit knowledge from an individual to a group (work office, OSD to the workforce), this process is known as combination. While difficult to accomplish, the flow of knowledge from externalization from combination moves quickly (short flow time); however, up to this point, knowledge flows slowly as it takes time to develop experience that can be

drawn on for the greater good of the group. Internalization occurs over time throughout an organization.

To introduce the organizations that are the subject of the research, two case studies below outline pertinent information about the SBIRS program and Defense Acquisition University.

F. SBIRS CASE STUDY

1. Program Office

The Infrared Space Systems Directorate (Directorate) is located at the Space and Missile Systems Center, Los Angeles AFB in El Segundo, CA. Part of the Directorate is the SBIRS program, which is responsible for the multi-billion dollar SBIRS development activities. The Directorate is home to more than 650 government, military, aerospace, and contractor personnel. The $26.9 billion portfolio of space and ground systems includes SBIRS and DSP (SMC, 2012). The mission of the Infrared Space Systems Directorate is **"**to develop, acquire, and sustain space based infrared surveillance, tracking and targeting capabilities for missile early warning/defense, battlespace awareness and technical intelligence" (SMC, 2012).

2. Space Group

The SBIRS Space Group (Group) is responsible for the development, acquisition, integration, launch, and early orbit operations of the SBIRS GEO satellites and Highly Elliptical Orbit (HEO) sensors and operational sustainment of the DSP satellite constellation. The Group consists of more than 100 government personnel and a contractor team of over 1,400 personnel, spread throughout the 13 work locations across the United States (SMC, 2012). These systems are critical for protection against global and theater ballistic missile attacks against the U.S., its deployed forces, and its allies (SMC, 2012).

The SBIRS Operating Location (OL) was established in the summer of 2006 and is located at the Lockheed Martin facility in Sunnyvale, CA. The OL is the focal point for

the Space Group's Space Vehicle Division. The Space Vehicle Division manages integration, test, delivery, and launch of the first two GEO satellites.

3. Origins of the Program

The Air Force acquired the SBIRS to replace the DSP and related systems, including consolidation of DSP ground processing within the CONUS (SMC, 2012). Although it draws on previous efforts to develop a follow-on to the DSP (e.g., Follow-on Early Warning System [FEWS]; Alert, Locate, and Report Missiles [ALARM]), the SBIRS acquisition is not a direct continuation of these programs. The scope of the envisioned effort is considerably broader than the previous DSP (increase in costs). SBIRS High is an integrated system consisting of multiple space and ground elements, with incremental deployment phasing, simultaneously satisfying requirements in the following mission areas: missile warning, missile defense, technical intelligence, and battlespace awareness.

The SBIRS High program is intended to satisfy key requirements delineated in the SBIRS Operational Requirements document dated August 15, 1996, with Annex 1 dated July 17, 1998 (DoD, 2011). The constellation architecture for SBIRS High includes HEO sensors and GEO satellites, along with several ground elements: a continental United States-based Mission Control Station and Mission Control Station Backup, overseas Relay Ground Stations, Mobile Ground Stations, and associated communication links. The first increment of the SBIRS ground system supports mission processing of the legacy Defense Support Program (DSP) system satellites, SBIRS' predecessor (DoD, 2011).

4. Cost Considerations

The program has experienced four Nunn–McCurdy breaches since 1996 (OSD, 2005a). The USD(AT&L) signed the SBIRS High acquisition program baseline (APB) on January 26, 2012. The revised APB incorporates the latest reconciled cost estimates and establishes new schedule milestones for delivery of the GEO satellites and associated ground segment upgrades necessary to ultimately satisfy the SBIRS requirements. The program office is "aggressively pursuing cost efficiencies in all current and planned

contracts, consistent with Air Force and Under Secretary of Defense for Acquisition Technology and Logistics (USD(AT&L)) initiatives to ensure better buying power and implement should cost management" (DoD, 2011). Figure 9 identifies the costs associated with the 2013 President's Budget for the Future Years Defense Program (FYDP) for GEO satellites 1 through 6, HEO payloads 1 and 2 and future predicted ground modifications (DoD, 2011).

	BY1995 $M			BY1995 $M	TY $M		
Appropriation	SAR Baseline Dev Est	Current APB Development Objective/Threshold		Current Estimate	SAR Baseline Dev Est	Current APB Development Objective	Current Estimate
RDT&E	3016.6	8544.3	9398.7	8522.7	3386.5	10299.1	10304.8
Procurement	496.7	2512.0	2763.2	5127.4 [1]	584.5	3327.8	7176.9
Flyaway	496.7	--	--	4337.3	--	--	6062.0
Recurring	496.7	--	--	3529.2	--	--	4987.7
Non Recurring	0.0	--	--	808.1	--	--	1074.3
Support	0.0	--	--	790.1	--	--	1114.9
Other Support	0.0	--	--	790.1	--	--	1114.9
Initial Spares	0.0	--	--	0.0	--	--	0.0
MILCON	26.0	52.0	57.2	52.0	28.5	57.0	57.0
Acq O&M	140.2	137.5	151.3	137.3	147.8	161.1	161.1
Total	3679.5	11245.8	N/A	13839.4	4147.3	13845.0	17699.8

Figure 9 SBIRS Cost Summary (DoD, 2011)

5. Schedule Considerations

a. GEO 1 Space Vehicle

Nine years after the established date, GEO 1 Space Vehicle (SV) successfully launched aboard an Atlas V, with a Centaur upper stage, on May 7, 2011. The satellite deployments were successful, and the team received first light data on June 21, 2011. Early on-orbit system tests were completed on July 14, 2011. GEO 1 is transitioning to its operational location and is on track to complete its trial period and enter into operations in January 2013 (DoD, 2011).

b. GEO 2 SV

GEO 2 SV successfully completed baseline integration and deployment testing. Lockheed Martin delivered the GEO 2 space vehicle in June 2012.

The current launch manifest assigned GEO 2 a primary launch date in May 2013. Consequently, the program office is working with the development contractor to develop a storage plan and to assess associated costs and impacts (DoD, 2011)

c. GEO 3 & 4

Hardware production and affordability have been issues for the satellite (DoD, 2011). To combat problems in the future, the program office has begun integration and testing procedures on GEO 3 & 4. While maintaining its schedule, the SBIRS program is aggressively pursuing cost efficiencies in all current and planned contracts, consistent with USD(AT&L) initiatives and completing should-cost analyses (SMC, 2012).

d. GEO 5 & 6

As of June 2012, GEO 5 & 6 were in negotiations for non-recurring engineering and parts procurement. The USD(AT&L) strategy for the GEO 5 & 6 effort is to be established as a major subprogram to the SBIRS High program under Section 2430a of Title 10 of the *United States Code* (DoD, 2011). Selected Acquisition Reports (SARs) published at a later date will address the GEO 5 & 6 effort as a subprogram to SBIRS High (DoD, 2011). As of December 2012, GEO 5 & 6 are on contract to begin work.

6. SBIRS Capabilities

Sensors on the SBIRS satellite provide greater flexibility and sensitivity than its predecessor, DSP (Ramer, 2011, p. 23). SBIRS enhances mission capability with short and mid-range infrared signals increasing the range of systems SBIRS can support (p. 26). The SBIRS High system which includes GEO and HEO satellites have a scanning and staring sensor. Both sensors improve the capabilities for sensitivity in detection of threats, the ability to revisit previously identified targets increases the sensitivity of the satellites making the system flexibility for many uses (p.26). The GEO scanning sensor provides a shorter revisit time than DSP over its full field of view, while the staring sensor will be used for step-stare or dedicated stare operations over smaller areas (USAF,

2010). SBIRS GEO and HEO sensors process data that is transmitted to ground units projecting the situation observed in space (SMC, 2012). The first SBIRS HEO payload was delivered in August 2004 for integration, and the second HEO payload was delivered in September 2005 (DoD, 2011). In November 2006, the Air Force announced the successful on-orbit check-out of the first HEO-1 satellite.

Key Performance Parameters

The specifications of the Key Performance Parameters (KPP) are classified; however, the following KPPs focus on the performance objectives of the national missile defense system, which is SBIRS (an integrated system of systems) is a part of::

- KPP 1—Defense of the United States. The ability of the system design to meet threshold operational effectiveness requirements—negation and performance probabilities—given a specific attack size and sophistication of associated countermeasures.
- KPP 2—Human-in-Control (HIC). The ability of the system for positive control of the system by human operators for system functions such as battle redirection, weapon release, and engagement termination.
- KPP 3—Automated BMC3. The ability to provide automated battle management capability.
- KPP 4—Interoperability. The ability of the system to be interoperable and compatible with external systems such as Integrated Tactical Warning & Attack Assessment (ITW/AA) and the North American Aerospace Defense Command (NORAD). The operational benefit of interoperability will be enhanced flexibility, enabling the addition of new users or new missions and optimized information flow (DoD, 2000, p. 4).

7. SBIRS Source Selection

The Infrared Systems Directorate accomplished the objectives identified in an architecture study completed during the system development and demonstration (SDD) phases to implement the functions of earlier systems. Contractors were asked to provide feedback to complete a study during the SDD phase to develop capability (TSPR) and enhance requirements. Solicitations for the contracted effort were issued as Full and

Open competition for the SDD & EMD phases with cost-plus award/fixed fee (CPAF/CPFF) contracts.

The SDD phase will consist of system architecture level trades of performance, cost, and requirements and development of candidate solutions. The tasks included are as follows:

- developing options for transition to SBIRS High from the existing DSP,
- identifying risk areas and conducting appropriate risk mitigation activities, and
- assessing the performance and integration planning associated with the potential introduction of a LEO component in the SBIRS architecture in the next decade.

The EMD phase consisted of two parts:

- Phase One: Space and ground system and architecture-level trades of performance, cost, and requirements, and development of candidate solutions, after which a down-selection will take place (Commerce Business Daily, 1995).
- Phase Two: A single contractor team will mature, finalize, and integrate a selected design; validate manufacturing and production processes; produce elements of the architecture; and integrate, test, and evaluate the SBIR system (Commerce Business Daily, 1995).

Contractors were evaluated using the following evaluation criteria for technical and past performance metrics (Commerce Business Daily, 1995):

- systems architecture, engineering, and cost projection for complex space systems;
- design, development, analysis, and integration of space vehicles and associated ground systems meeting defined and derived requirements;
- subsystem and system integrated test and evaluation of space systems;
- critical surveillance technologies including their development and integration for future space systems;
- space system production capability;
- design and development of fixed and mobile ground systems for satellites; and
- launch vehicle operations including spacecraft/launch vehicle integration and test.

Contractor teams participating in the effort were Lockheed Martin/Loral/Aerojet and Hughes/TRW. Two CPFF contracts were awarded to Lockheed/Loral/Aerojet and Hughes/TRW in 1995 for the pre-SDD phase valued at $159 million (SMC, 1999). The Lockheed Martin team was selected for EMD and was awarded a contract for $2.1B (SMC, 1999). Lockheed won subsequent follow-on contracts for development and is currently in a sole-source arrangement for the production of future satellites.

8. Lessons Learned & Best Practices

At the 2005 Congressional Authorization conference, the Secretary of Defense was mandated to provide Congress a classified and unclassified report explaining most recent cost increases, schedule delays, and technical problems. Congress was concerned with the SBIRS Directorate because of a Nunn–McCurdy breach and recertification in FY 2002. Additional breaches occurred again in 2005, 2007, and 2009. SBIRS was re-baselined and continued to have problems, triggering the congressional report (OSD, 2005a). The report identified two main problems with the program and how they were addressed.

The first problem was contractor integration issues. The Directorate believed the contractor was not properly staffing the program with quality personnel (OSD, 2005a, p. 24). The SBIRS was a high-priority program, and the contractor should have had its highest quality employees working on it. Given that this program was a pilot for the program management technique of total system performance responsibility (TSPR), this is of no surprise. Lockheed fixed the concern by realigning personnel to improve the quality of staff. The contractor also hired additional resources from throughout the entire corporation to identify key personnel.

The second problem concerned cost growth from FY 2002 to 2004, which was not planned for and occurred shortly after the program restructure in FY 2002 (OSD, 2005a, p. 24). To address the issue, the Directorate identified three root causes traced to cost growth. The root causes identified were as follows: (1) latent defects caused insufficient product assurance in earlier design and production activities; (2) the schedule and budget were insufficient to ensure robust GEO first article integration and testing; (3) there were

process escapes deriving from human error, insufficient training, and fragile processes (OSD, 2005a, p. 25). The Directorate took steps to address the technological problems resulting from the latent defects, moving to an event-driven approach. This approach requires definitive entrance and exit criteria for each key milestone. If the criteria are not met to enter an event, the event is postponed until the technology is mature. There also has to be a high probability of success to obtain approval from the milestone decision authority (MDA) to enter the next milestone. If the government had employed sound program management principles instead of TSPR, perhaps many, if not all, of these failures could have been avoided.

G. DAU CASE STUDY

Prior to the passage of DAWIA, there were 12 different regulations addressing the training of acquisition personnel (Layton, 2007, p. 131). As part of DAWIA in 1990, the creation of a professional acquisition workforce with specifying standards for training proved to be challenging. Since the 1950s, the establishment of professional career paths in procurement and acquisition were a concern of Congress (Layton, 2007, p. 4).

1. Origins of DAU

DSMC (Defense Systems Management College), the DAU's predecessor, originated with four course curriculums in contracting, program management, quality assurance and business and financial management (Layton, 2007, p. 6). In December 1985, Deputy Secretary of Defense William H. Taft IV recognized the need to make improvements to workforce training and career development. Taft established the Acquisition Career Management (ACM) program office at DSMC (Layton, 2007, p. 9). The program office drafted a progress report on the state of the acquisition workforce (Hirsch, 1986). Up until that point, training was decentralized, fragmented, and often of poor quality (Layton, 2007, p. vi). As a result of the ACE report, DSMC became responsible for all training provided to the acquisition workforce, not just program managers (Layton, 2007, p. 9). Congress provided DSMC with the authority for all acquisition workforce training, which included legislation for the establishment of a university and general guidance about its structure and mission (Layton, 2007, p. 13).

The standards for training were issued in DoD Directive 5000.52 and DoD Manual 5000.52-M, Career Development Program for Acquisition Personnel (DoD, 1991a).

2. Establishing the DAU

Donald Yockey, principal deputy under secretary for acquisition, formed a board to create the DAU implementation plan as required by Congress. The six elements the board established were (1) a charter, (2) a mission, (3) lines of authority, (4) a framework for education, (5) a policy guidance council, and (6) a mechanism for resource allocation control (NDAA, 1991). In establishing a charter for the university, DoD Directive 5000.57 (DoD, 1991b) gave broad instruction on the functional structure and the responsibilities of DoD leadership to the university. The university was centrally managed, and DSMC now fell under its purview. From October 1991 to August 1992, Yockey and the implementation board made broad decisions for the future of the university. In August of 1992, the DAU opened its doors (Layton, 2007, p. 21). The mission of the DAU is to provide practitioner training, career management, and services to enable the Acquisition, Technology and Logistics communities to make smart business decisions and deliver timely and affordable capabilities to the warfighter (DAU, 2008).

3. Establishing an Educational Framework

The key to meeting the training needs of every DoD organization was to establish good internal and external relationships with its stakeholders. These relationships had been loosely defined by DoD 5000.57 (DoD, 1991b), but responsiveness and support were essential to providing courses to the acquisition workforce. Within the university (internally), a consortium of training programs managed by the ACE program office was formed to share the roles and responsibilities of delivering training. As an advantage of this consortium, the DoD was able to leverage the workload with the ability to be flexible to changing training requirements (Layton, 2007, p. 27). Under memoranda of agreement, the consortium included 12 components of the military departments and provided 24 mandatory courses in procurement and program management (Layton, 2007, p. 28).

The year following the DAU's opening, the university achieved small victories. Twenty-four thousand students graduated from 60 mandatory courses (Layton, 2007, p.

41). But the curricula offered to students was not original, but another offering of the same courses provided by consortium members (Layton, 2007, p. 41). DoD directives gave standards for certification and the material topics that are required to earn the certification, and the DAU is responsible for ensuring that the material is taught in a way that ensures educational effectiveness. The DAU is responsible for education processes and outcomes (Hawkins & Granzo, 1997). In June 1992, the Office of Federal Procurement Policy (OFPP) directed curriculum developers to establish competency-based training (Layton, 2007, p. 41). Competency-based training requires students to develop knowledge, skills, and abilities (KSAs) that apply the learned material in real-world scenarios.

Using a competency-based training model, the DAU established curriculum certification levels, including courses at various skill levels, ranging from those that established fundamental knowledge to those that represented the pinnacle of achievement (Layton, 2007, p. 42). Today, the DAU enlists a competency/criterion-based learning concept (DAU, 2010, p. 10). The competency/criterion-based learning concept defines relevance with respect to the knowledge/content base of any given field (DAU, 2010). The DAU developed its courses using the framework of Bloom's taxonomy (Layton, 2007, p. 42). In addition to the use of Bloom's taxonomy, shown in Figure 10, the DAU also follows a four-step course design process of analysis, design, develop, and evaluate (Layton, 2007, p. 43). Using this process, the university has adopted a more interactive learning environment using exercises, case studies, and simulations. Hands-on learning is the mantra of the DAU. Bloom's taxonomy is named after Benjamin Bloom, an educational psychologist who studied the classification of educational objectives and the theory of mastery learning (Bloom, 1985). Bloom's taxonomy is a classification of learning objectives divided into three domains: cognitive, affective, and psychomotor. Learning at a higher level is dependent on having the prerequisite KSAs at lower levels (Orlich, 2004). Bloom's model, paired with DAWIA curricula certification levels, is outlined in Figure 10.

President Obama announced his intention to achieve improvements in the acquisition system. As part of those improvements, a greater emphasis is placed on

having a high quality workforce with the right competencies and skill sets (DoD, 1991b). In October 2010, the GAO evaluated the DoD's training program provided by the DAU. The GAO found that the DAU "demonstrates the capability to provide effective training, though some attributes of an effective training program are lacking" (GAO, 2010). In FY 2009, the DAU records show that 90% of the acquisition workforce completed training commiserate with their grade and position, but the DoD does not maintain metrics on the skill sets of the acquisition workforce or employ methods to assess increased workplace efficiency through the training provided.

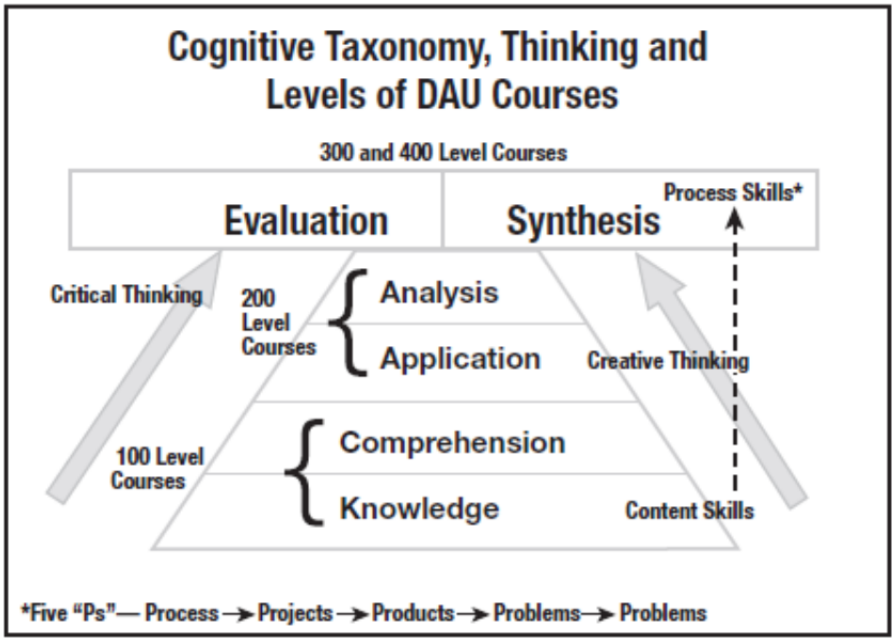

Figure 10 Bloom's Taxonomy and DAU Course Progression (Layton, 2007, p. 42)

H. SUMMARY

The Packard Commission set the tone for the acquisition reform initiatives that have followed behind it. Of note, almost all of the initiatives have highlighted some form of what the Packard Commission recommended. The goal has always been and continues to be to achieve the best value in terms of schedule, performance, and cost. By default, if acquisition reform continues to be a hot topic, perhaps the lessons learned were not effectively ingrained into the DoD and the acquisition workforce the first time; hence, there is a need for continued reform. The research on acquisition reform is plentiful;

however, studies do not do a good job after initial implementation to quantify the costs or effectiveness of the imposed reform. At the end of this chapter, I provide case study analyses of both organizations, setting the stage for the environments in which they currently operate. The goal of Chapter II was to cover the major acquisition reform initiatives from the Packard Commission through today's BBPi, provide relevant academic research on acquisition reform, along with providing pertinent information on the SBIRS program and the DAU. Chapter III explains the research methodology for this project.

III. METHODOLOGY

A. INTRODUCTION

Emphases on acquisition reform shift with each change of leadership. This research focuses specifically on the BBPi. The manner in which the Services execute the BBPi is not governed by USD(AT&L), so defining a common measure of success is necessary to ensure successful implementation. In this chapter, I describe the methodology used to develop a singular metric to measure the implementation of the BBPi by the Services. As the evolution of the BBPi is synergistic, I used the case-study approach. I review the approach used to address acquisition reform and current program issues. I also discuss the research design, how programs were selected for this research study, and the method of investigation used when visiting these organizations. Discussions in this chapter also include procedures for data collection and recording, organizations researched, and limitations to the research methodology.

B. INITIAL RESEARCH

Initial research for this topic began with a review of previous research conducted at the Naval Postgraduate School (NPS) and the Air Force Institute of Technology (AFIT). This analysis included prior research on acquisition reforms since Packard's Blue Ribbon Commission, published documentation, and correspondence to the acquisition workforce through 2012. After reviewing the available information, two areas were identified for further study:

- The status of the BBPi integrated into current MDAPs, and
- The training provided to the acquisition workforce, including new concepts as identified within the BBPi.

C. DESCRIPTION OF RESEARCH DESIGN/METHODOLOGY

The case-study methodology is the best way to study the SBIRS program, the DAU, and the USD(AT&L)'s BBPi. As Yin (2009) described, the case-study methodology deals with the situation when there are more variables of interest than data, when multiple sources of evidence are needed to make a complete picture, and when the

study benefits from the development of theories beforehand to guide data collection and analysis (p. 18).

This research study was designed as an exploratory case study that addresses current program events with respect to the BBPi analyzed through qualitative methods (Yin, 2009). The USD(AT&L) provided directives to all components and activities as to what actions to implement on their respective programs. As a result of the issuance of the initial memorandum (OUSD[AT&L], 2010a), subsequent memorandums were issued with additional guidance. Each program is at a different phase on the acquisition cycle, and because of that, has unique opportunities to implement the BBPi. Of the several memorandums issued, the memorandum from November 3, 2010 (OUSD[AT&L], 2010b) is an implementation directive for the MILDEPS and all Service agencies. The data collected in my study are responses from interviewee respondents. These data are then matched up against the Snider and Rendon (2008) analytical framework while using knowledge flow theory principles.

D. SELECTION OF RESPONDENTS

Requests for organizational approval were sent to the leadership of the organizations identified in Chapter I. The organizations were asked to identify points of contact. Once approval was received, the command identified points of contact that were e-mailed to set up interview times that best matched their daily work schedules. Respondents included in this study were limited to subject matter experts in the research areas: program managers and contracting officers.

E. INSTRUMENTATION

Research subjects were interviewed using predetermined research questions in the form of a questionnaire. These questions were open-ended to enable a robust discussion of topics. The questionnaire was not distributed prior to the interview, but subjects were provided with a general overview of topics to be discussed, along with the basis for the research. Data were collected during interviews in both group format and one-on-one interviews.

As part of the NPS Institutional Review Board, measures were taken to protect interview respondents. Once the data were collected and transcribed or copied, the original data, either electronic or hard copy, were destroyed. Consent was obtained to identify interview respondents by name in the report. However, no respondents were directly cited within the report. Interview questions are listed in Appendix B and Chapter IV—Findings and Analysis. Based on the current status of the SBIRS program, questions aligned with the five thrust areas to program specifics.

Research questions for the SBIRS program office were derived from the November 3, 2010, Implementation Directive of the BBPi (OUSD[AT&L], 2010b). Within that document, the OUSD(AT&L) highlights specific actions for agencies to take within the five thrust areas. The questions focused on familiarity of the guidance, technology maturity, system design, cost growth, and contract structure. Towards the end of the interview, broad questions were asked of the group to provide their individual perspective on the BBPi. The interview questions for the DAU were designed based on the September 14, 2010 memorandum (OUSD[AT&L], 2010a).

F. ORGANIZATIONS RESEARCHED

Two sites were visited to collect data for this project. The SBIRS program office at Los Angeles Air Force Base, CA, and the DAU at Fort Belvoir, VA, were the locations of the areas of study.

As documented by leaders in the DoD and Congress, the SBIRS has been highlighted as an example of what not to do when managing a major acquisition program. Because it is such an extreme case, the case-study method focuses on its nuances while highlighting the effect of the BBPi on current and future efforts concerning leveraging the DoD's buying power. The DAU, responsible for the professional training certification of the acquisition workforce, plays a key role in providing training for the workforce. As part of the analysis, the DAU provided feedback on how the initial training was deployed to the workforce and efforts in providing the most up-to-date training are discussed.

G. SUMMARY

Chapter III explained the research methodology. Although simple and straightforward, it allowed for an honest assessment of the BBPi solely on their merits. Assessing one of the most troubled acquisition programs in the Air Force, perhaps the DoD, and the organization responsible for the training of the acquisition workforce provides insight on how acquiring knowledge, developing positive acquisition outcomes while using that knowledge, and translating that into a competitive advantage to organize, train and equip or military forces is the focus of the next chapter. Chapter IV assesses implementation efforts from an execution standpoint through the Air Force's SBIRS program and also from a training perspective through the DAU. The chapter provides an analysis of the implementation efforts through the lens of knowledge flow theory (Nissen, 2006) and the Snider and Rendon (2008) framework for public procurement policy.

IV. FINDINGS & ANALYSIS

A. INTRODUCTION

So now that all of the latest and greatest acquisition reforms since the 1980s have been explored, how do the latest BBPi fit into the mix and how has the DoD implemented them into its on-going acquisitions? The BBPi are not a plug-and-play solution but enable the DoD to use tools created in a strategic way to create effective acquisition outcomes from a financial and end user perspective. Many of the BBPi fall within the realm of the program manager; however, contracting has a key stake in determining and bringing those successful acquisition outcomes to fruition. It is in the best interest of the acquisition workforce, particularly the contracting workforce, to facilitate the use of the BBPi. Within this chapter, the implementation efforts of the BBPi by the SBIRS program at SMC and the training efforts by the DAU are discussed.

The purpose of this chapter is to assess the DoD's implementation of the BBPi using the information obtained in interviews conducted at the DAU and SBIRS. At the conclusion of this chapter, the following research questions are answered:

- Question #1: How has the DoD responded to implementing the BBPi execution within MDAP programs from the perspective of the SBIRS program, focusing particularly on the November 3, 2010, memorandum?
- Question #2: How has the DAU responded to the training needs of the acquisition workforce with respect to the BBPi?

The research utilizes the Nissen (2006) model of knowledge flow theory, along with the Snider and Rendon (2008) framework for analyzing public procurement policy to analyze the research findings.

B. RESPONDENTS' DEMOGRAPHIC INFORMATION

1. SBIRS Program Office

The group from the SBIRS program office included five individuals working in the functional areas of program management, contracting and business/financial

management. These individuals are currently working on the production of GEO 3 & 4 and the acquisition of GEO 5 & 6. The personnel interviewed were senior-level military members in the grade O-5, one company-grade officer in the grade of O-3 (with prior enlisted contracting experience), and two mid-grade civilians, GS-13. Their years of experience ranged from five to 17 years in their respective fields. The interviews were conducted in both one-on-one and group formats. Table 6 summarizes the SBIRS respondent group by functional area. The "Other" respondent functional area is part of the business/financial management workforce.

2. DAU

The group from the Defense Acquisition University included five respondents. The group included the current center directors for acquisition management and contracting, DAU liaisons to the Business Senior Integration Group (B-SIG), deputy director of the Learning Capabilities and Integration Center (LCIC) and deputy director for the OUSD(AT&L) Human Capital Initiatives. Those working in a capacity for the DAU served in a civil service position or on active duty prior to assuming their post at the University. Many are retired officers with multiple years of experience in operational and systems contracting environments. Interviews were conducted in a one-on-one format. Table 6 summarizes the DAU respondent group by functional area.

Table 6. Respondent Demographics

Functional Area	SBIRS Program Office	DAU
Contracting	3	2
Program Management	1	4
Other	1	0

C. RESPONSES TO INTERVIEW QUESTIONS

The following are responses to interview questions posed to the SBIRS program office and the DAU. The answers to the questions are summary paraphrases of the interview transcripts.

The interview questions for the SBIRS program office are created from the USD(AT&L)'s November 3, 2010 BBPi memorandum (OUSD(AT&L), 2010b). The memorandum was an implementation directive to the Services based on the five thrust areas and 23 initiatives of the September 14, 2010, memorandum (OUSD[AT&L], 2010a). The interview topics focused on the BBPi to include technology maturity, system design, affordability, and contract structure.

The interview questions for the DAU are created from the USD(AT&L)'s September 14, 2010, memorandum (OUSD[AT&L], 2010a). The memorandum provided Carter's initial guidance to the workforce mandating to deliver better value as well as the accompanying initiatives. The interview topics focused on the BBPi, namely how the course curricula had been modified to include the BBPi.

1. SBIRS Program Office

Question 1: Are you familiar with the BBPi guidance from the USD(AT&L)?

SBIRS program personnel were familiar with the BBPi memoranda put out by the USD(AT&L), but were not immediately familiar with the rapid deployment training (RDT) provided by the DAU. The program manager in the group highlighted that he felt

there was ambiguity in the guidance put forth and that it had been the subject of discussion and often misinterpreted.

Question 2: Would you say that these areas have been a focus of your program more, less, or the same since the issuance of the BBP initiatives were issued?

The focus of SBIRS is to ensure mission assurance in a timely manner and on cost. BBPi has not generated new initiatives simply because of its implementation, but it has generated a dialogue about possible alternatives that may increase the productivity and output of a program. The SBIRS program office has engaged in separate focused training sessions that drill down into the concepts of fixed-price incentive contracts and how they are administered. DAU also provided mission assistance training to SMC during a three day course. The SMC Directorate of Contracting through their contracting unit assigned to each of the program offices has also taken measures across the Center to implement the BBPi through ESP. The Center has reduced the use of H clauses and more specifically SBIRS has implemented a Program Operating Plan (POP) with Lockheed Martin that governs how meetings are conducted decreasing some of the overhead work, details procedures for administrative issues and gives escalation procedures should an issue be unable to be reached at lower levels. A program management official stated that the POP limits the amount of meetings that we are having or supposed to have that generates—kind of turns into a savings and cost as well. Based on the reduction of the use of H clauses, a contracting official identified that SMC as a whole predicts a projected $120M cost reduction from minimizing their use. None of these savings have been realized, but they are example of some the measures taken to realize affordability.

Question 3: Would you say that the critical technologies and system designs are mature?

A program management official explained that the satellite design is mature. For the ground system, the software is not yet in place to fully exploit the data. GEO 1 has been launched, and GEO 2 has been tested and is in storage awaiting launch. GEO 3 & 4 are currently in production, and GEO 5 & 6 are in negotiations to be placed on contract.

There is a requirement for dual band GPS and a secondary payload; however, the requirement is unfunded. However, the option to add this capability is included in the contract. Technically GEO 5 & 6 is a mature design, but the ability to add this contingency if necessary is available.

Question 4: As background, from October 1996 to July 2011, the total program costs increased from $919M to approximately $3B. Are contract incentives in place to curtail cost growth in the future?

GEO 3 & 4 is a cost-plus award fee contract and is being examined to incorporate more of BBPi, focusing on controlling costs. As part of the contract, the incentive has multiple parts: a base fee and a called program execution performance portion that assesses cost, schedule, and performance, as well as mission success incentives (MSI). The MSI are a delivery incentive. If Lockheed Martin delivers on time and meet certain criteria, then they receive an incentive.

GEO 5 & 6 is predominantly a fixed-price incentive fee contract. The design is mature, and the program office only addresses obsolescence to deal with risk as a cost incentive. That cost incentive, as they execute to the contract and delivery, represents a 50% split between the satellites. Lockheed Martin is given an opportunity to earn an on-orbit incentive. The incentive is to meet scheduled costs and then balance it to make sure a mission capable satellite is built. In addition, SBIRS holds a percentage of the contract cost to ensure immediate launch success and then five years down the line to ensure mission capability. If either of these two provisions are not met, Lockheed would have to incrementally pay back the government if they do not meet the criteria of the on orbit incentive.

Question 5: Are there any value engineering clauses in the contract? Have they been used?

There are value engineering clauses in each of the contracts; however, when addressing their use, to suggest that Lockheed Martin submit value engineering proposals was something that was out of the question. The program office would not ask for these types of proposals because of the negative experience SBIRS had when using TSPR as a

program management approach. The program manager offered a unique perspective: it was stated that advocating for value engineering proposals introduces risk (cost and schedule) into a mature design. While they welcomed good ideas, the program office did not want to "shoot themselves in the foot".

Question 6: Did issues with parts obsolescence play into the strategy for the contract type selected?

Parts obsolescence was a critical issue as there was a four year lag in the production of GEO 3 & 4 and GEO 5 & 6. To remedy this issue, the program office asked that Lockheed provide an obsolescence report through 2016. By knowing that issue is on the horizon, the risk (schedule) can be mitigated. Risk from a technical standpoint is minimized as the design is mature, and the risk stems from new supplier contracts. To mitigate the risk, the program office projects a 10 to 12 month lead-time between the first contract action and when production would commence. Availability of parts is critical when you are only producing two satellites at any one time.

Question 7: How was the mandate of affordability integrated into the baseline and mission areas?

On GEO 5 & 6, the acquisition strategy was socialized and approved under a stable and mature design with unit costs realized on GEO 3 & 4. The program management official stated the largest hurdle in getting affordability integrated into the baseline was getting buy-in from Lockheed Martin. If what they proposed on GEO 3 & 4 (cost-plus incentive) is an accurate target, there should be no issue with the affordability of GEO 5 & 6. As production moves along on GEO 3 & 4, the program office has more insight into what the numbers look like on GEO 5 & 6.

Question 8: Do you think it is important to target cost growth as a priority?

In order to target cost growth as a priority, the program office has had to make tradeoffs. For example, GEO 5 & 6 is a fixed-price contract arrangement; whereas GEO 3 & 4 and the contract effort for EMD are cost type arrangements. A contracting official explained that Lockheed Martin is incentivized to control costs much more under a CPAF contract arrangement than a fixed-price incentive fee (FPIF) contract arrangement. A

contracting official explained that there should be no surprise when important areas such as technical capability and schedule fall by the wayside when a heavy emphasis is placed on targeting cost growth as a priority.

2. DAU

Question 1: What are some of the measures that DAU has taken to provide guidance as a result of the initiatives?

The DAU assessed the environment from a strategic and a tactical perspective and is taking a phased implementation approach to the BBPi. From a strategic point of view, the B-SIG met and continues to meet regularly to ensure the efforts met those of all involved. A program management official explained that the B-SIG is chaired by USD(AT&L) Kendall and all of the service acquisition executives and the component acquisition executives from the different DoD agencies under Kendall or AT&L's purview were represented.

At the tactical level, a three-phase approach was taken. The first phase was to complete the RDT for the workforce. RDT is a type of training that we create and execute for major policy revisions within the DoD or the federal government. As explained by the program management official who developed the RDT, its target audience was O6s and GS-15s in acquisition centers of concentration. The second phase was to provide in depth training on demand at an acquisition organization via mission assistance modules. The DAU sends personnel to provide training tailored to the needs of an organization. The third phase is implementing and infusing the first and second phase into the curricular material. The DAU has revised the training with respect to the first round of the BBPi and BBPi 2.0.

Question #2: At the acquisition research symposium, sponsored by the Naval Postgraduate School in June, Ms. McFarland spoke about certification vs. qualification—the tacit (experience) knowledge to do your job versus the explicit (book) knowledge. Is DAU concerned about this issue?

The DAU is concerned with the certification achieved after the requisite course completion and the applicable time requirement and the knowledge gain when completing the tasks expected of those within the workforce. For this reason, the DAU has set up the Workforce Management Group. A program management official explained that the Workforce Management Group assesses issues associated with implementing a certification to qualification (C to Q) framework within a largely civilian workforce. With active duty military, mandates for qualification standards are the standard; however, requirements like those for the civilian workforce can get problematic and cumbersome quickly. Conditions of employment, creating organizational ownership in the process (qualification/expertise for those identified as qualification "validators") failing to qualify or willfully refusing to obtain the requisite qualification are just some of the issues when creating a qualification requirement for a largely civilian workforce. From an active duty perspective, many have achieved their certification by meeting the time requirement in a billet coded for a particular career field. They have or may not have necessary acquisition expertise. As explained by a program management official, an acquisition workforce member obtaining their DAWIA Level III program management certification requires only one of the needed four years of experience be in a program office. An individual might have gained the required time requirement, but may not have gained specific experience aligned to the competencies expected of them.

The OSD approved an on-the-job training (OJT) tool for use by the contracting workforce. On the floor or experiential OJT is the method to learn the details of an occupation. The tool builds on the explicit knowledge gained in online and in-resident DAU courses and allows new personnel to work with seasoned professionals to transfer corporate knowledge. Explained by a contracting official, as part of the 2010 Capable Contracting Workforce (CCW) subcommittee action items, the DAU was charged with developing a new, more robust OJT tool for the contracting workforce. The DAU fulfilled the CCW's action item by modeling the OJT tool after military training reports/records. The tool covers 28 contracting technical competencies and 10 professional quantities. In 2011, the CCW charged the DAU with refining the implementation approach to the OJT tool for the contracting workforce. In a December

2011 DPAP memorandum, components were advised to use the OJT tool at their discretion (DPAP, 2011). As part of a viable and capable acquisition workforce, the ability to demonstrate contracting tasks and functions properly is important. The first time many people are asked to demonstrate the tasks learned, they are in a real-time environment.

Program management is also leaning forward with the Program Management Acquisition Qualification Standards (PM AQS) modeled after Navy Qualification Standards. A program management official explained that PM AQS is a pilot program to assist the workforce member track to see if they are gaining the right experiences for their career path and to work with their supervisor. While the pilot program is still in process, the DAU hopes to make a decision on implementation with data from the initial findings.

> *Question #3: Many people are thrown into situations that they are not ready to manage with only a certification stating they have completed the applicable curriculum courses necessary to maintain that certification. Is DAU looking at ways to measure explicit knowledge prior to providing course completion records?*

A program management official identified the end state for a competent workforce is that everyone who touches acquisition in a meaningful way is qualified in the skill sets required to achieve successful acquisition results. The qualification framework is given by career field specific requirements and organizational functional progression. Using training and application methods (simulation or OJT), assessments would be developed to determine proficiency. Workforce qualification would be competency based with a well-documented performance reference model, to include OJT with identified learning assets, measured proficiency confirmed through demonstrated competencies (McFarland, 2011). As part of BBPi 2.0, a single qualification framework has yet to be developed, but would mimic the example in Figure 11.

In addition to tools being created, congressional legislation was drafted for inclusion in the 2011 NDAA for career-path requirements. A contracting official explained that this legislation (NDAA, 2011) established requirements for OJT and

demonstration of qualifications in the critical acquisition-related duties and tasks of the career path, in addition to academic programs, self-development activities, and development of key work experiences. In addition to the development of career-path requirements, Congress has also limited the number of months spent in an academic training program towards fulfilling the new legislative requirement. Personnel can earn no more than 12 months toward the qualification requirements. In addition to establishing qualification requirements, Congress has given the OUSD(AT&L) guidance to establish periodic renewal of an individual's certification once every five years (NDAA, 2011, § 874).

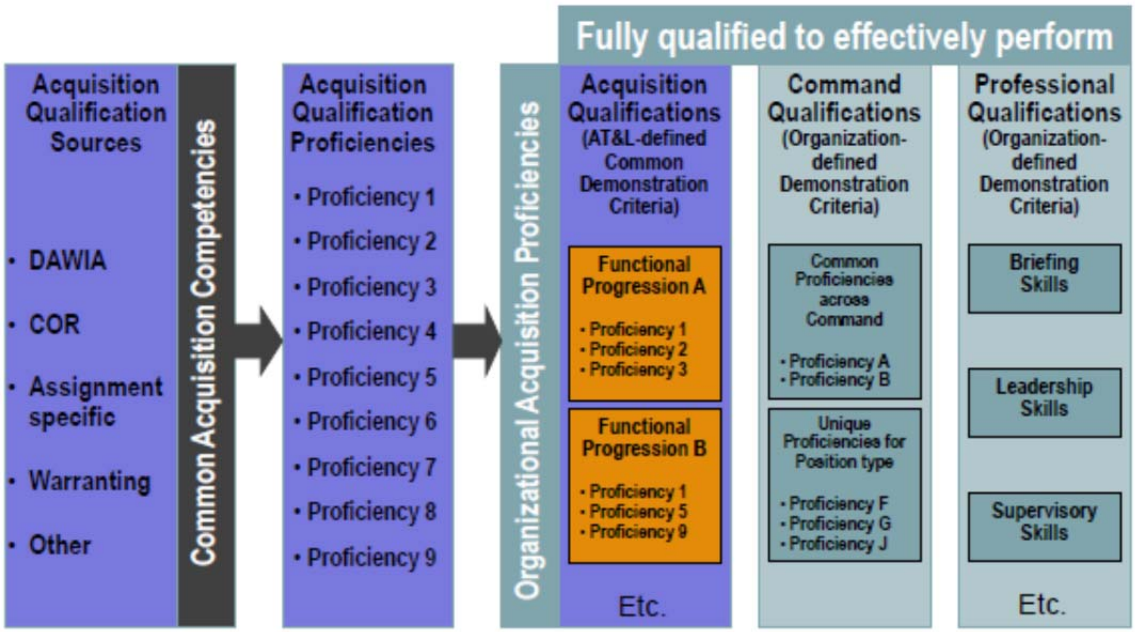

Figure 11 Qualification Framework (McFarland, 2011, p. 13)

Question #4. Are there any barriers to successful outcomes—providing training at the level you think you should be able to?

Both program management and contracting officials identified culture as the largest barrier to change and implementing the BBPi. From their perspective, the checklist mentality has gotten in the way of progress for the future. During our dialogue, examples were given about how the individual installations were interpreting and implementing the BBPi. Although the Services are directed to implement the BBPi at

some level, not every action is appropriate for all situations. A program management official provided a prime example of using the BBPi as a checklist item. One installation visited for a mission assistance call held 30-day competitions for purchase card buys to ensure competition. In fact, this is an incorrect implementation of BBPi as it flies in the face of the use and efficiency of the government purchase card as well as the consideration of micro-purchases. This story highlights the issue that units are not using the BBPi where it is not advantageous, but using the initiatives as checklist item or blanket policies.

Question #5: Lots of rhetoric that says more policy won't fix acquisition, but a well-trained quality workforce will. What is DAU doing to improve the training, tacit versus implicit knowledge of the workforce?

A contracting official identified that investment in the workforce (proper training and experience) is of utmost importance. There is a fine line between the outcomes of developing processes or developing competent personnel. Without streamlined processes, the workforce lacks an effective model to complete their jobs. Without a competent acquisition workforce, the mission stops. Somewhere in between is the right answer, not one or the other. As a professional career field, enlisting honest people and holding them accountable for their actions is how acquisition is remedied.

Question #6: Feedback from the workforce on OJT modules: any feedback or changes made since initial deployment?

Having taken this opportunity to update the course curriculum to include BBPi, the entire contracting course curriculum (DAWIA Level I through III) was revamped simultaneously. As explained by a contracting official, feedback from the contracting career field was hard-hitting because as people were completing courses, the requirements for certification were changing as they were completing their curriculum. Although this burden is self-imposed, the workforce must be flexible to meet ever-changing needs. A program management official responsible for the RDT for the workforce experienced feedback stating that the information was too much too soon. Even though the RDT was at a different target audience, those who would be working

with the BBPi intimately needed to be familiar with the material, more so than senior leadership.

> *Question #7: From a certification perspective, what specific changes were made to training courses (Level I through III for contracting and program management) and what was the rationale behind it?*

The DAU course curriculum for contracting was completely revamped as a result of the introduction of the BBPi. In many cases, the BBPi are implemented into course curriculum through case studies and active discussion within the courses. A contracting official explained that individual changes are tracked by course and are highlighted by instructors within their teaching notes. A matrix of the DAU course offerings is included in Appendix A, showing all of the courses implementing the BBPi into their training plans.

D. ANALYSIS OF INTERVIEWS

1. SBIRS Program Office

The November 3, 2012, memorandum (OUSD[AT&L], 2010b) gave specific actions to execute immediately or in the timeframes outlined in the September 14, 2010, memorandum (OUSD[AT&L], 2010a). Three of the five thrust areas are applicable to SBIRS—target affordability and control cost growth, incentivize productivity and innovation in industry, and reducing non-productive processes and bureaucracy. SBIRS has been successful in executing the intent of the initiatives as written. The program early on was plagued with management and performance issues. The use of TSPR and the need to get a system in place quickly caused a ripple effect. On the front end of development, programs can subtract and delete capability to get to pre-determined affordability targets. The problem occurs where that did not occur or was not completed to the level of scrutiny required. In fact, at the outset of the program, affordability was not on the radar of decision-makers. The DoD as a whole wanted the capability of SBIRS quickly, so they received it quickly—plagued with cost overruns and capability delivered significantly behind schedule.

The sentiments echoed by the Layton (2012) study also rang true during the interview of the SBIRS program office. At some point, it is not efficient, nor does it make good business sense, to undo progress based on new acquisition reform if its outcome is unknown or results in a marginal increase in dollars saved or performance improvements. The SBIRS program office is making headway in delivering the long awaited capability. GEO 1 launched in 2011, GEO 2 is awaiting launch, GEO 3 & 4 are moving towards production and GEO 5 & 6 are on contract to begin work. While they have incorporated the thrust area of incentivizing productivity and innovation in industry going forward (using stable designs, negotiating SBIRS GEO satellites as block buys with FPIF contract structures, reducing the use of H clauses), there is little they can do to fix the errors of the past that still plague the program. Although it is too soon to tell if the affordability targets established will be met, the measures taken are a step in the right direction.

2. DAU

The research shows that the DAU is revising course material to contain a dialogue about the BBPi with respect to each of their courses it affects. While the DAU's policy is to provide competency/criterion-based training, they have met that requirement. However, the extent of the effectiveness of that dialogue (case studies, exercises, class discussion, and evaluation of current MDAP programs) using the current training model is unknown. The DAU has two subjects that require their expertise: formal requirements for qualification under DAWIA and re-certification as outlined in Section 873 of the NDAA of FY 2011. Implementing standards for qualification and re-certification is a good idea, but the DAU and DoD must be careful going forward in determining what is included in the guidelines for qualification and re-certification.

E. ANALYSIS USING KNOWLEDGE FLOW THEORY

As discussed in Chapter II, knowledge flow theory can be applied to the OSD working with the DoD to implement the BBPi. The tacit and explicit knowledge bases have been gained within the organizations separately; however, the socialization of those experiences and recognition of the importance they hold take time to filter throughout the whole of the DoD. Many of the BBPi are solely the responsibilities of the program

manager; however, Layden (2012) states that program managers do not need any more management tools, but they need the resources (funding, qualified people) to execute programs to ensure successful outcomes. Should-cost analysis and affordability determinations can be created all day; however, if the knowledge gained does not have an impact on outcomes within an organization, they will continue to fail to meet the affordability targets they were asked to identify. This is an instance of instituting policy without practice.

The DAU's efforts to move from a certification to a qualification framework are favorable. However, the MILDEPs as well as the DAU have a lot of work to complete concerning implementation. The issues that must be addressed are funding for course instruction, improving the DAU's capacity to increase student enrollment, and decentralizing certification within the MILDEPS or delegating it to individual units. Under the qualification framework, members of the acquisition community are solely responsible for their success and/or failure in learning the profession.

During my interview with SBIRS, I learned that SMC provided their own training and tailored it to their specific needs. Space acquisition has challenges. There is no reset button to bring a satellite back after launch. In addition, it takes longer on average for a system to go through the complete life cycle framework (Brandwein, 1996). Some argue that there may be better space programs to evaluate for this study—SBIRS is fifteen years in the making and is just now getting its footing. Despite that fact, the ability to achieve efficient and effective acquisition outcomes in any program, no matter its current state, is a goal to continually strive to achieve. Figure 8 highlights the multidimensional knowledge flow visualization model. SMC is currently between the stages of externalization and combination on the knowledge flow visualization model. Externalization occurs more on an individual level, whereas combination of knowledge occurs at every level, from the individual, to the group and eventually the organization. Within the life cycle of knowledge (as depicted in Figure 8), the process of combining information spans from its creation to its formalization and sharing within a group. The DoD and the Services, while having initially implemented the spirit and intent of the BBPi, are still working to figure out what the true effects of imposing these initiatives on

their respective MDAPs and what the impact will be on future outcomes. When asked, two out of the three respondents in the group interview were unaware that the DAU had developed training modules for the BBPi initiatives, but they had received local training on the effort through SMC.

F. ANALYSIS OF THE BBPI & SNIDER & RENDON FRAMEWORK FOR ANALYZING PUBLIC PROCUREMENT POLICY

Chapter II outlined the five elements of the Snider and Rendon (2008) framework. The structural policy of this acquisition reform initiative is the BBPi. Structural policies include laws, statutes and regulations. The allocative policies include the tangible goods that provide a benefit (e.g., contracts). In this case, the allocative policies would be contracts awarded with the BBPi throughout. The output of a contract let with the BBPi results in decreased cost growth, efficiencies in technology, and capability delivered to the warfighter. The outcome of that contract let with the BBPi competition is afforded at each milestone decision point; industry is incentivized to be more efficient and innovative with their solutions while facilitating an open dialogue between government and industry. The impact is integrity in the acquisition process, accountability within industry and the DoD, and transparency in the process.

In an ideal environment, this is why the BBPi works. Instead of the ideal environment described above, reality is much different. Within the acquisition environment, stakeholders have differing agendas on the decision making process and subsequent implementation of ideas, negatively impacting the outputs and outcomes. Instead of the positive outcomes previously identified, as a result of BBPi implementation, competition can be restricted forcing industry to be limited on the solutions they can provide to the government. Another negative outcome of BBPi is the potential negative impact on the industrial base. Both of these examples diminish the integrity, accountability and transparency of the acquisition process. Contracts written with the intent and spirit of the BBPi can follow its mandates very closely, but what the future impact that BBPi has on acquisition outcomes has yet to be realized. An example of the misinterpretation of the BBPi was highlighted during one the DAU interviews. A program management official was providing mission assistance training to a unit was

shortly after the BBPi was released. While discussing the thrust area of Improving Tradecraft in Service Acquisition, it was revealed that the unit was conducting 30-day solicitation periods on government purchase card buys because the BBPi memorandum provided guidance concerning one bid proposals.

G. RECOMMENDATIONS

My recommendations for the BBPi, based on the September 14 and November 3, 2010, memoranda (OUSD[AT&L], 2010a, 2010b) are outlined in the following sections.

1. Recommendations for Programs

First, programs should internally define metrics for the BBPi by thrust areas identified in the September 14, 2010, memorandum (OUSD[AT&L], 2010a). The memorandum states that military capability must increase 2–3% annually. Is this in terms of contract dollars saved or spent? Is this 2–3% for each military department? This is an example of the more nuanced language needed as part of the BBPi to give the workforce something to work from. In addition, success will look somewhat different depending on the desired outcome. Without guidance from the OSD as to what defines success, MDAPs should define their own metrics in line with the capabilities and desires of their Services. Being proactive in this situation ensures that the owners of the requirement are driving the objectives and not someone else.

Second, the BBPi, current and 2.0, should be refined to include inputs from the acquisition community. If MDAPs are held to these performance standards, their inputs should be heard early and often. BBPi and BBPi 2.0 have lofty goals that the OSD and the Service Acquisition Executives (SAEs) fully intend to execute. While some of the initiatives may seem germane, their potential impact is far reaching. Not all of the first 23 initiatives have had as much of a stirring impact as the DoD hoped. BBPi 2.0 provides more language to fill in the gaps from the first round of BBPi initiatives (for example, contract length, methods of evaluation [LPTA vs. trade-off], and reducing profits; Moore, 2012). In addition to contracting and program management, BBPi 2.0 also affects the acquisition workforce and the potential for qualification requirements for acquisition coded billets.

2. Recommendations for DAU

The DAU must persuade the DPAP to make use of the OJT tool mandatory for the training programs of all new acquisition workforce personnel. The development of the OJT tool, while making its use optional by the MILDEPs, undermines progress before it starts. This is another example of policy without practice. A consortium of experts from each of the MILDEPS should be formed to define the scope and impact of the OJT tool in acquisition workforce training programs. Repeatable, actionable processes along with a qualified workforce are the key components to DoD acquisition righting itself. Establishing a baseline of knowledge, to which everyone is held accountable, is a good start to that goal.

The DAU should create formal requirements for qualification under DAWIA, as well as recertification requirements as outlined in Section 873 of the NDAA of FY 2011. Although easy to recommend, these two issues will take much time and forethought to implement in a proper and meaningful way. The DAU along with the OSD are working in concert to make both a reality. Many outside acquisition see the function as an administrative and support role. If the DoD is intent on changing the perception of the acquisition workforce outside of itself, it must be addressed immediately. The landscape of our current MDAPs is high risk. We need competent and capable acquisition workforce professionals leading the charge to achieve the lofty rewards associated with those risks. BBPi 2.0 seeks to remedy this by codifying a qualification framework.

H. CONCLUSION

The DoD should review acquisition reform initiatives three to five years after implementation, before formulating additional measures. The impact of any one decision is not immediate due to the second- and third-order effects. By implementing the above course of action, the DoD would gain experience and eliminate duplication of reform efforts, many of which are implemented but never superseded or overwritten by new mandates.

At the highest levels, policy-makers understand and see the urgency to implement these initiatives swiftly. At the working level, implementation is taking longer than

expected. The acquisition workforce is not sure what the expectation is concerning BBPi. Determining the importance and the effect that the initiatives have, let alone the impact of full implementation and vetting, has left more questions than answers.

I. SUMMARY

The purpose of this chapter was to assess the DoD's implementation of the BBPi at the DAU and the SMC/IS SBIRS program office. The DoD has implemented the intent of the BBPi as well as possible, given the guidance and the expectation set by the USD(AT&L). In addition, the DAU has provided many assets, such as RDT, to meet the needs of the acquisition workforce; however, without implementing a qualification standard to obtain the necessary credentials under DAWIA, the DAU is not able to ensure successful educational outcomes. Although the definition of educational outcomes was never explicitly addressed, a reasonable conclusion can be drawn that the acquisition workforce that enrolls in courses and completes the required material has a baseline of competency and has achieved the commensurate certification. In Chapter V, I recap Chapters I through IV and provide conclusions based upon the research and recommendations for future research.

V. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS FOR FUTURE RESEARCH

A. INTRODUCTION

The purpose of this chapter is to summarize the previous chapters and provide conclusions and recommendations based on the research conducted. To summarize the research, one of the tenets of Jim Collins' (2001) book *Good to Great* provides an overarching theme concerning this project: get the right people on the bus, the wrong ones off. The right personnel and processes are the key to alleviating concerns about procurement and acquisition.

B. SUMMARY

The intent of this study is to provide a benchmark for other Services and programs so they can use knowledge management in determining and transferring that information into better acquisition outcomes. In Chapter I, I highlighted the current state of fiscal stress in the United States. When resources are constrained, leadership must make the tough decisions about priorities without diminishing the ability to organize, train, and equip our military forces. In Chapter II, I provided a review of acquisition reform from the Packard Commission of 1986, then evaluated the reform that highlights the SBIRS program as a pilot for new acquisition reforms—from TSPR and CAIV to today's BBPi. In Chapter III, I outlined the methodology used in this research. As the evolution of the BBPi is ever-changing, I used the case-study approach to study the SBIRS program office and the DAU. The chapter reviewed the approach used to address acquisition reform and current program issues, data collection and recording, the research design, and the method of investigation I used when visiting the organizations researched. In Chapter IV, I provided an assessment of the DoD's implementation of the BBPi using the information obtained in interviews conducted at the DAU and the SBIRS program office. At the conclusion of the chapter, I answered the research question within the framework of Nissen's (2006) knowledge flow theory and Snider and Rendon's (2008) framework for analyzing public procurement policy.

C. CONCLUSIONS

Chapter IV answered the research questions. The conclusions are specific to the two case studies identified within this research. Based on the interview responses and the analysis, I have arrived at the following conclusions:

- Question #1: How has the DoD responded to implementing the BBPi execution within MDAP programs from the perspective of the SBIRS program, focusing particularly on the November 3, 2010, memorandum?

The research conducted is a small subsection of all of the efforts taken by program offices to implement the BBPi. For the purposes of this paper, I looked at one organization as a representative sample for what is occurring across DoD acquisition programs. The research found that BBPi is a good first step; however, there are prerequisites that must be met in order for BBPi to be successful. Those prerequisites are as follows: (1) processes must be streamlined across the Services, and (2) there must be a standard level of competency within career fields that define the acquisition workforce.

As far as implementing the BBPi with respect to the November 3, 2010, Implementation directive (OUSD[AT&L], 2010b), new programs are having success because these principles were addressed during acquisition planning. The proper forethought was given to how to structure programs to prevent errors of the past. SBIRS is in a unique position because they are able to capitalize on many of the BBPi within its program due to ESP. Because ESP governs space acquisition concerning BBPi, they have been able to build in affordability by purchasing satellites in block buys. While these contracts are negotiated in a fixed-price environment, the savings identified are merely theoretical. However, with stable and mature system designs, the projected savings can be achieved.

It is hard for programs that have a long, arduous period in the development cycle to fully benefit from any elements of the BBPi. The time spent in development is a trade-off between delivering capability to the warfighter and implementing requirements that are over and above what is necessary to carry out the mission. In this case, the SBIRS program is the poster child of problematic programs. BBPi can and should be

implemented where it makes sense, since it does not make sense to disrupt established schedules and baselines for a marginal benefit in schedule or performance.

- Question #2: How has the DAU responded to the training needs of the acquisition workforce with respect to the BBPi?

The DAU has met the initial intent of the USD(AT&L) with respect to providing training to the senior-level acquisition workforce. Those that execute the initiatives created at a lower level are in need of training assistance. The RDT modules were focused at senior leadership and not those who complete the work day in and day out. The DAU is attempting to remedy that misstep with BBPi 2.0, but caution should be taken with respect to generating more policy. The initial premise of BBPi was to get "back to basics" and that should be streamlining processes across the services and focusing on quality training and experience for the acquisition workforce. As highlighted in the GAO (2010) report, the effectiveness of the BBPi course curricula update is unknown because the DAU does not track metrics to assess the results in enhancing capability through their training efforts.

D. RECOMMENDATIONS FOR FUTURE RESEARCH

I provide three recommendations for future research.

The first recommendation is for future researchers to replicate this study within their Services with their respective MDAPs. By replicating this study, additional research creates a body of knowledge for this current acquisition reform initiative and may provide insight on how to proceed with future reform initiatives.

The second recommendation is to create a body of knowledge documenting the progression of implementation of the BBPi. This body of knowledge provides a living history of the BBPi as intended and as they were implemented across the DoD to avoid similar negative outcomes in the future or to replicate effective and efficient acquisition outcomes in the future.

The third recommendation is to evaluate the Services' business processes with respect to the education and training of the acquisition workforce. The only way to

implement DAWIA qualification is to revamp the current processes so that military and civilians alike can be held accountable for the proficiency of their work products.

APPENDICES

A. DAU BBPI COURSE UPDATES

BBPi Thrust Areas	ACQ 101	ACQ 201A	ACQ 265	LOG 206	PMT 202	PMT 257	PMT 251	PMT 202	PMT 203	PMT 257	PMT 352A	LOG 235	LOG 236	PMT 304	CON 090	CON 100	CON 215	CLL 011	CON 218	PMT 352B	BCF 211	BCF 107	CON 353	LOG 103	LOG 206	LOG 350	CON 217	CON 218	PMT 313	BCF204	PMT 254	PMT 304	CLL 056	SYS 302	IRM 202	IRM 304	SAM 301	ACQ201B	BCF 301	PQM 101	PQM 201	PQM 301	SYS 101	STM 303	CON 115	CON 214	CLE 012	CLE 013	FUTURE CLL 052	FUTURE LOG 215
Target Affordability and Control Cost Growth																																																	
Mandate affordability as a requirement	X	X			X	X	X							X						X	X	X		X	X	X																							
Drive Productivity growth through Will Cost/Should Cost management				X							X									X		X				X			X																			
Eliminate redundancy within warfighter porfolios.																				X																	X												
Make production rates economical and hold them stable.					X				X												X												X				X	X	X	X	X	X						
Set shorter program timelines and manage to them.		X				X	X				X									X																X												
Incentivize Productivity and Innovation in Industry																																																	
Reward Contractors for successful supply chain and indirect expense management		X		X							X									X																X												
Increase the use of Fixed-Price Incentive Firm Target (FPIF)contract type where appropriate using a 50/50 share line and 120 percent ceiling as a point of departure		X			X	X									X				X	X	X		X				X									X												
Adjust progress payment to incentivize performance										X	X				X				X	X			X				X							X														
Reinvigorate industry's independent research and development and protect the defense technology base																																	X									X	X					
Promote Real Competition																																																	
Present a competitive strategy at each program Milestone							X			X	X				X	X	X			X			X				X																						
Remove obstacles to competition						X	X				X			X						X								X																					
Require open systems architectures and set rules for acquisition of technical data rights											X			X						X													X	X	X	X									X	X	X	X
Increase dynamic small business role in defense marketplace competition		X				X	X				X				X	X	X			X			X																						X			
Improve Tradecraft in Services Acquisition																																																	
Create a senior manager for acquisition of services in each component, following the Air Force's			X																																													
Adopt uniform taxonomy for different types of services			X																																													
Address causes of poor tradecraft in services acquisition.			X									X	X					X																														
Increase small business participation in providing services.			X																																													
Reduce Non-Productive Processes and Bureaucracy																																																	
Reduce the number of OSD-level reviews to those necessary to support major investment decisions or to uncover and respond to significant execution issues	X	X				X	X				X									X																X												
Eliminate low-value-added statutory processes	X	X				X	X				X									X																X												
Reduce by half, the volume and cost of internal and congressional reports	X	X				X	X				X									X																X												
Align Defense Contract Management Agency (DCMA) and Defense Contract Audit Agency (DCAA) processes to ensure work is complementary	X	X				X	X				X				X	X			X	X												X				X												
Increase use of Forward Pricing Rate Recommendations (FPRRs) to reduce administrative costs	X	X				X	X				X									X																X												

B. INTERVIEW QUESTIONS

1. SBIRS Interview Questions

Question 1: Are you familiar with the BBP guidance from the USD(AT&L)?

Question 2: Would you say that these areas have been a focus of your program more, less or the same since the issuance of the BBP initiatives were issued?

Question 3: Would you say that the critical technologies and system designs are mature?

Question 4: As background, from October 1996 to July 2011, the total program costs increased from $919M to approximately $3B. Are contract incentives in place to curtail cost growth in the future?

Question 5: Are there any value engineering clauses in the contract? Have they been used?

Question 6: Did issues with parts obsolescence play into the strategy for the contract type selected?

Question 7: How was the mandate of affordability integrated into the baseline and mission areas?

Question 8: Do you think it is important to target cost growth as a priority?

2. DAU Interview Questions

Question 1: What are some of the measures that DAU has taken to provide guidance as a result of the initiatives?

Question #2: At the acquisition research symposium, sponsored by the Naval Postgraduate School in June, Ms. McFarland spoke about certification vs. qualification—the tacit (experience) knowledge to do your job versus the explicit (book) knowledge. Is DAU concerned about this issue?

Question #3: Many people are thrown into situations that they are not ready to manage with only a certification stating they have completed the applicable curriculum courses necessary to maintain that certification. Is DAU looking at ways to measure explicit knowledge prior to providing course completion records?

Question #4: Are there any barriers to successful outcomes—providing training at the level you think you should be able to?

Question #5: Lots of rhetoric that says more policy won't fix acquisition, but a well-trained quality workforce will. What is DAU doing to improve the training, tacit versus implicit knowledge of the workforce?

Question #6: Feedback from the workforce on OJT modules: any feedback or changes made since initial deployment?

Question #7: From a certification perspective, what specific changes were made to training courses (Level I through III for both contracting and program management) and what was the rationale behind it?

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