



NAVAL POSTGRADUATE SCHOOL

MONTEREY, CALIFORNIA

MBA PROFESSIONAL REPORT

**Analysis of Government Accountability Office and
Department of Defense Inspector General Reports
and Commercial Sources on Service Contracts**

**By: Anthony J. Seifert, and
 Ilia K. Ermoshkin
 June 2010**

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REPORT DOCUMENTATION PAGE			Form Approved OMB No. 0704-0188	
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instruction, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188) Washington DC 20503.				
1. AGENCY USE ONLY (Leave blank)		2. REPORT DATE June 2010	3. REPORT TYPE AND DATES COVERED MBA Professional Report	
4. TITLE AND SUBTITLE: Analysis of Government Accountability Office and Department of Defense Inspector General Reports and Commercial Sources on Service Contracts			5. FUNDING NUMBERS	
6. AUTHOR(S) Anthony J. Seifert and Ilia K. Ermoshkin				
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Naval Postgraduate School Monterey, CA 93943-5000			8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES) N/A			10. SPONSORING/MONITORING AGENCY REPORT NUMBER	
11. SUPPLEMENTARY NOTES The views expressed in this report are those of the author(s) and do not reflect the official policy or position of the Department of Defense or the U.S. Government.				
12a. DISTRIBUTION / AVAILABILITY STATEMENT Approved for public release; distribution is unlimited			12b. DISTRIBUTION CODE	
13. ABSTRACT (maximum 200 words) The purpose of this MBA Project was to investigate and provide a comprehensive analysis of data based on government service contracts during the six phases of the government contract process (procurement/planning, solicitation planning, solicitation, source selection, contract administration and contract closeout/termination). Primary deficiencies and best practices in contracting will be identified for each government report, and an analysis will be conducted to identify trends within and across the above categories. Specifically, this research will identify common deficiencies and best practices in contracting based on GAO reports, DoD IG reports, and articles based on services acquisition in the commercial sector. This will provide the basis for further study of the subject, as well as material for improvement of DoD contracting practices as compared to commercial best practices in contracting.				
14. SUBJECT TERMS Accountability, Benchmarking, Best Practices, Building Information Modeling, Contract Administration, Contract Closeout, Contract Termination, Contracting Officer Representative, GAO Reports, Government Contracts, IG Reports, Price Growth, Program Growth, Procurement, Service Contracts, Solicitation, Source Selection, Total Ownership Cost			15. NUMBER OF PAGES 89	
			16. PRICE CODE	
17. SECURITY CLASSIFICATION OF REPORT Unclassified	18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified	19. SECURITY CLASSIFICATION OF ABSTRACT Unclassified	20. LIMITATION OF ABSTRACT UU	

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**ANALYSIS OF GOVERNMENT ACCOUNTABILITY OFFICE AND
DEPARTMENT OF DEFENSE INSPECTOR GENERAL REPORTS AND
COMMERCIAL SOURCES ON SERVICE CONTRACTS**

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Submitted in partial fulfillment of the requirements for the degree of

MASTER OF BUSINESS ADMINISTRATION

from the

**NAVAL POSTGRADUATE SCHOOL
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LIST OF ACRONYMS AND ABBREVIATIONS

ACE	Army Corps of Engineers
ARP	Acquisition Research Program
BIM	Building Information Modeling
COR	Contracting Officer Representative
DoD	Department of Defense
FPDS-NG	Federal Procurement Data System—Next Generation
GAO	Government Accountability Office
GDP	Gross Domestic Product
IG	Inspector General
NAICS	North American Industry Classification System
PPIRS	Past Performance Information Retrieval System
PWS	Performance Work Statements
SOW	Statement of Work
TCC	Total Cost Contracting
TOC	Total Ownership Cost
WBS	Work Breakdown Structure

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ACKNOWLEDGMENTS

We would like to thank our wonderful wives, Janna and Sarah, for supporting our research and allowing us to spend the endless hours we devoted to this MBA project.

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I. INTRODUCTION

A. BACKGROUND

Service contracts are the majority of contracts executed by the U.S. Department of Defense (DoD) both in scope and in value. However, this trend has not been accompanied by changes in DoD practices and policies. The majority of procurement training, research and attention are directed toward weapons systems. Prior research identified in Acquisition Research Program (ARP) reports, and specifically discussed in *“Managing the Service Supply Chain in the Department of Defense: An Empirical Study of Current Management Practices”* (U. Apte, A. Apte, & Rendon, 2008), addresses the DoD’s management of services acquisition. The data analysis identifies a great range of services acquisition practices and corresponding results regarding services acquisition in which the Government Accountability Office (GAO) and DoD Inspector General (IG) identified as lacking proper training, supervision and prone to serious violations resulting in significant financial losses. These problems have been noted for 18 years, in which the GAO reports classified government acquisition and contract management as “High Risk Areas” since 1992 (U.S. GAO, 2010).

Accountability¹ within the contracting chain of management can easily be broken when DoD uses commercial contractors to perform a task. Government agencies must be able to manage the work of contractors and ensure that the contract provisions permit effective management. Contracting at forward located sites in the Middle East can only be accomplished by a select few companies, and in some instances a sole source is directed because no other contractors can fulfill a requirement. When a commercial contractor holds a monopoly, effective government management is nearly impossible (Cohen & Eimicke, 2008, pp. 96–97).

Outsourcing services through contracting is occurring across the government spectrum. County, state, and federal outsourcing vendors are rapidly expanding to meet the needs of the organizations. The main reason for privatizing services includes cost

¹ Accountability is the degree to which a person can be held responsible for a task.

savings, lack of state personnel, or expertise and flexibility (Chi, Arnold, & Perkins, 2003). These services include highway construction, maintenance, design and engineering, information technology and inspections, research and development, medical services, operation of government owned facilities, transportation, travel, and relocation (GAO, 2003). Wyoming's transportation agency head stated, "it was easier to hire temporary consultants and contractors rather than to put permanent employees on payroll: this practice created less concern for layoffs" (Chi, Arnold, & Perkins, 2003).

Although the best practices in contracting among private and government services acquisition are not identical, in that the private goal is to generate profit whereas public policy states that the government is responsible to make the best use of taxpayers' dollars, the efficiency required to gain profit is equally important to saving taxpayers' dollars (GASB, 2006). Government efficiency that would otherwise gain profit is equally important to saving taxpayers' dollars and supporting future appropriations.

B. PURPOSE

The objective of this MBA project is to classify, organize and analyze the deficiencies and best practices in contracting within the six phases of contracting based on GAO and DoD IG reports on services contracts between 1999 and 2009. This analysis will be used for further research in a study "Managing the Service Supply Chain in the Department of Defense: An Empirical Study of Current Management Practices," sponsored by the Acquisition Research Program and led by Dr. Uday Apte, Dr. Aruna Apte, and Dr. Rene G. Rendon.

C. RESEARCH QUESTIONS

This research addresses the following questions regarding the services contracts in the Department of Defense.

- What deficiencies and trends in the services contracting process have been identified in the GAO and DoD IG reports?
- What are the best practices in contracting identified in the commercial environment that can be applied to government services contracting?
- Which of the identified best practices in contracting can be applied to improve the DoD services contracting process?

D. BENEFITS AND LIMITATIONS

This research will contribute to the broad understanding of the issues facing the acquisition of services in the DoD. It will provide the basis for further recommendations for improvement of the acquisition process. This research is limited to the review and analysis of the 31 GAO and 157 DoD IG reports related to services contracts between 1999 and 2009 and reports, books and articles on commercial practices of services acquisition. The evaluation of government services contract deficiencies and corresponding commercial best practices in contracting will identify recommendations that, if adapted, may have an immediate and beneficial effect on government services contracting. As part of the larger study, this research will provide the data and findings for further research and evaluation, contributing to the improvement of the government services supply chain.

Maintaining simplicity within the best practices in contracting is important because a long or extremely detailed list of best practices in contracting would lead to the same problem that has been identified by Professor Rene Rendon, “the policy is there, the problems are in the practice” (2010). Ideally, the solution for flawless contracting is to follow all of the procedures and regulations. Matching the best practices in contracting to the six phases of contracting, shown in Figure 2, enabled the identification of trends and consistencies throughout the contracting process. The commercial reports and articles were limited to recognizable industry leaders in contracting and authors that included these leaders in their research.

The DoD spends between 4–6 percent of the Gross Domestic Product ² (GDP), of that approximately 40 percent is spent on contracting services (Bennett, 2007; CIA, 2010). Roughly two percent of the GDP is spent in government services contracting. The DoD spends more on services than it has on supply and equipment (McMaster, 2008). Obligations on services contracts grew from \$85.1 billion in fiscal year 1996 to more than \$151 billion in fiscal year 2006 (GAO-07-832T, 2007). In 2008, the Federal Procurement Data System—Next Generation (FPDS-NG)³ identified errors in accounting for the services, in which the DoD obligated approximately \$200 billion on services contracts in fiscal year 2008. The DoD has since indicated that the fiscal year total was overstated by \$13.9 billion to reflect a total of \$186 billion spent on services in 2008 (GAO-10-284, 2010). Limitations or inaccuracies within this report may occur as a result of further accounting revisions dictated by future government audits or recognition of government responsibility for shared, intra-agency contracts.

E. METHODOLOGY

The GAO and DoD IG reports on government services contracts are analyzed based on twelve issue areas of deficiencies. The commercial best practices in contracting are derived from the review of the available literature on the subject. Recommendations, based on commercial best practices in contracting, are grouped within the six phases of the contracting process. Recommendations were assigned to each report based on the analysis of identified deficiencies. The results were analyzed and classified to identify trends within and across the above categories. Many GAO and IG reports addressed several components of the DoD in a single report; therefore each was counted separately to derive analytical presentation of the breakdown of deficiencies and recommendations on DoD component basis.

² The GDP (purchasing power parity) is estimated at \$14.26 trillion, which is defined as the sum value of all goods and services produced in the country valued at prices prevailing in the United States.

³ FPDS-NG is the primary government-wide contracting database, providing information on government contracting actions, procurement trends, and achievement of socioeconomic goals, such as small business participation.

F. ORGANIZATION OF REPORT

This report consists of five chapters. The introductory chapter provides background information, purpose of the report, research questions, benefits and limitations, and methodology. Chapter II reviews services contracting in the Department of Defense. Chapter III analyzes the best practices in contracting and provides a list of recommended practices that can be applied to the DoD. Chapter IV analyzes the data on deficiencies found by the GAO and IG and correlating best practices in contracting. Chapter V provides an overall summary of the data analysis, answers to the research questions, and recommendations for improvement of the services contracting process.

G. SUMMARY

This chapter formulated the research questions and provided background, purpose, and methodology of this project. The next chapter will discuss DoD services contracting.

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II. DOD SERVICES CONTRACTING

A. INTRODUCTION

Chapter I established the basis of this research. This chapter is intended to provide an overview of the DoD services contracting and an outline of the issues facing government acquisition. This overview will provide better understanding of the formulation of the best practices in contracting recommendations in Chapter III and the analysis of data in Chapter IV.

B. SERVICES CONTRACT MANAGEMENT

As documented in the prior research within Professors Apte and Professor Rendon's study, the Department of Defense is the federal government's largest purchaser of services. Government contracts cover a wide and complex range of services, such as professional, administrative, and management support; information technology services; research and development; medical services; operation of government-owned facilities; and transportation, travel, and relocation (McMaster, 2008).

In many cases, the user community on a services contract is a military base commander or operational commander. However, these users are not accustomed to thinking of themselves, or operating, as requirements generators. They are not staffed or trained to perform these responsibilities, and for this reason, requirements for services contracts are often poorly written. (The Panel on Defense Acquisition Reform, 2010)

The DoD has spent more on services than it has on supply and equipment goods (McMaster, 2008). The growth in obligations on services contracts—from \$85.1 billion in fiscal year 1996 to more than \$151 billion in fiscal year 2006 (GAO-07-832T, 2007). In 2008, the Federal Procurement Data System—Next Generation (FPDS-NG)⁴ identified errors in accounting for the services, in which the DoD obligated approximately \$200 billion on services contracts in fiscal year 2008. The DoD has since indicated that the fiscal year total was overstated by \$13.9 billion to reflect a total of \$186 billion spent on

⁴ FPDS-NG is the primary government-wide contracting database, providing information on government contracting actions, procurement trends, and achievement of socioeconomic goals, such as small business participation.

services in 2008 (GAO-10-284, 2010). This was 41 percent of the \$481.4 billion 2008 DoD base budget, or 35 percent of total DoD budget (including \$93.4 billion supplemental). This increased trend in spending is not matched with the number of personnel on the contracting teams. Figure 1 shows the dramatic change in spending and inverse manpower trend of the acquisition workforce. Although the manpower trend of the acquisition workforce is decreasing, the growth in procurement appropriations due to price growth⁵ and program growth⁶ is rapidly increasing.

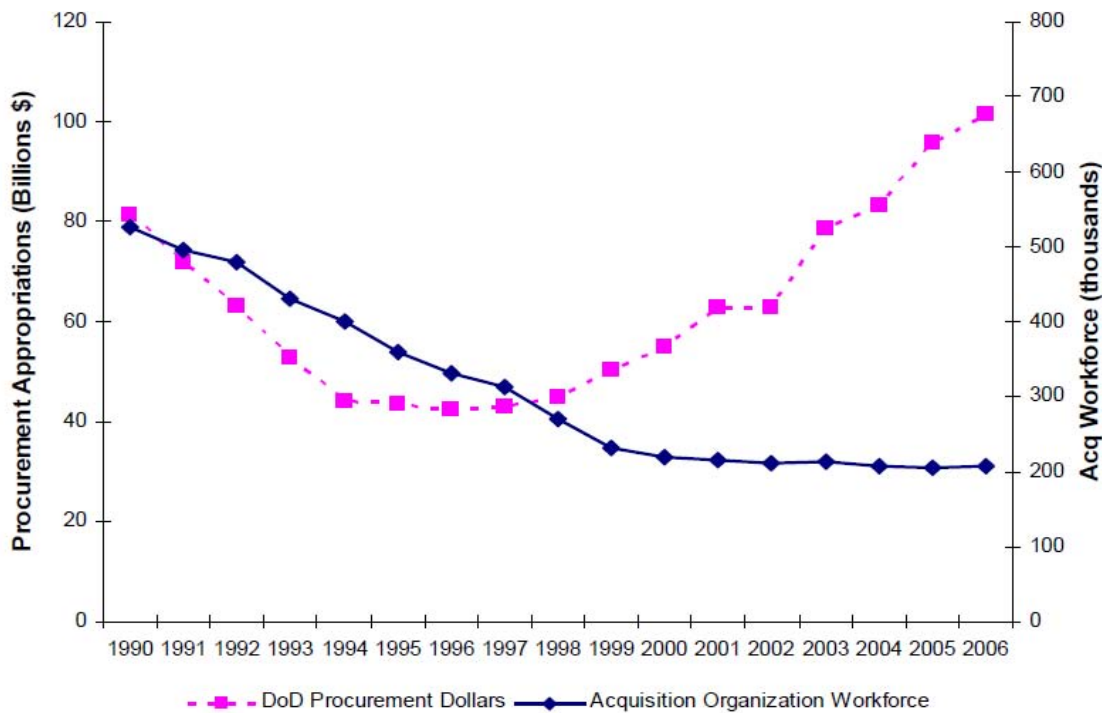


Figure 1. Defense Acquisition Spending and Workforce (From: Gansler, 2009)

The procurement of services is divided into six phases: procurement planning, solicitation planning, solicitation, source selection, contract administration, and contract closeout or termination as depicted in Figure 2. Procurement planning involves outsource analysis, defining requirements, producing requirements documents, such as work

⁵ Price growth is identified when the same product or service is purchased at a greater price than the previous product or service.

⁶ Program growth is experienced when an additional program is required to complete the mission, or another separate mission.

breakdown structures (WBS), performance work statements (PWS) and statement of work (SOW), market research, budget and cost estimates, determining contract type, and conducting risk analysis. The solicitation-planning phase involves document preparation, which requires documenting requirements and identifying potential sources. The solicitation phase focuses on gathering information in the form of bids and proposals from potential sellers. The source selection phase involves negotiating with suppliers, applying the proposal evaluation criteria to select a supplier, and executing the contract award strategy. The contract administration phase involves ensuring that each party involved in the contract meets the terms and conditions of that contract. The final phase of the contract management process is contract closeout or termination. This phase consists of verifying all administrative matters are concluded on a physically complete contract (Stambersky, 2009; Rendon, 2008).

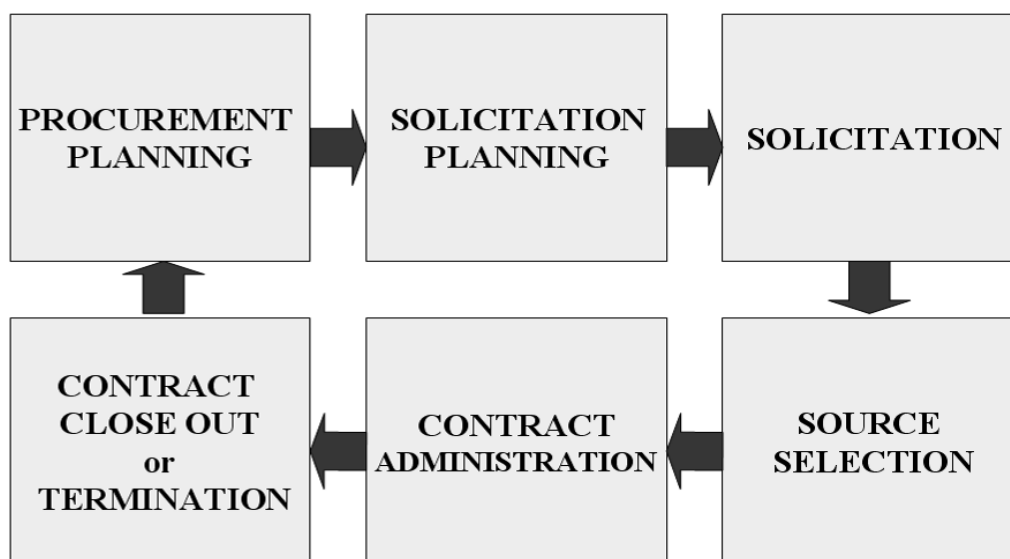


Figure 2. The Contract Management Process (From: Rendon & Snider, 2008, p. 164)

C. CURRENT ISSUES

Management of acquisition within DoD has drawn sharp criticism at all levels of the government and media. President Obama has issued the Presidential Memorandum on the subject early in his presidency requiring a review of contracting practices by all executive departments and agencies (Obama, 2009). Since 1992, the GAO has designated

DoD contract management as a high-risk area (U.S. GAO, 2010). The following statements are some of the representative quotes of advice directed towards then President-Elect Obama regarding DoD procurement:

David Walker, former Comptroller General of the United States and head of the Government Accountability Office; President and CEO of the Peter G. Peterson Foundation:

The next President is going to need to set the tone very, very quickly. The next President is going to have to end up with a short priority list that they want to focus on immediately. In looking at what the priorities ought to be, I think acquisition, sourcing, and contract management government-wide with a special emphasis on the Defense Department clearly should be one of those areas. I don't mean in regard to policy issues, but the operation and execution of government. (Advice for the Next U.S. President: Fix Military Acquisitions, 2008)

Paul Kaminski, former U.S. Undersecretary of Defense for Acquisition and Technology:

It's not that we have bad people in the system today; it's that many of them don't have sufficient domain experience. The new President will need to strongly support providing education, training, and domain experience to both military and civilian staff involved in acquisition so that they are equipped with the tools and experience needed to do their jobs well. Simply adding another level or two of supervision, which is the frequently suggested quick solution, isn't going to fix the problem. (Advice for the Next U.S. President: Fix Military Acquisitions, 2008)

J. Ronald Fox, Professor Emeritus at Harvard Business School

A new president is likely to be faced with a continuation or increase in the acquisition cost growth practices of the past. With respect to acquisition reform, my advice for the President would be to focus on making measurable improvements in achieving more practical training and longer assignments of government program managers and their staffs.

As the Government Accountability Office and others have highlighted repeatedly during the past decade, it is essential that the incentives for contractors, program managers, and program executive officers be changed significantly before program cost estimates will become more realistic and before there will be any significant reduction in acquisition costs. Adding more regulations and paperwork is likely to be counterproductive. (Advice for the Next U.S. President: Fix Military Acquisitions, 2008)

Many of the current issues mentioned above have been addressed in previous GAO and IG reports. The following issues have been specifically identified in prior research by Stammersky and Rau (2009):

- Managing services acquisition within the DoD is reactive, largely fragmented, and uncoordinated with little visibility at the government department level
- Inadequate management and assessment of contractor performance, none of which measures cost-effectiveness or quality of services obtained
- Lack of competition
- DoD information system data on amount spent on services is questionable and seldom used
- Procurement processes within DoD not carried out efficiently and effectively
- Insufficient guidance, leadership, and contractor oversight personnel at deployed locations
- The DoD does not effectively leverage its buying power (Stammersky & Rau, 2009)

D. SUMMARY

This chapter reviewed the basics of services contracting and current issues facing the DoD. DoD services acquisition increased dramatically over the last decade; however the management of the process has not kept up with the demand. The criticism of the DoD concentrates on the lack of trained personnel, insufficient supervision and oversight of DoD personnel and commercial contractors, and inadequate documentation.

The next chapter outlines the review of literature and the development of the best practices in contracting recommendations.

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III. COMMERCIAL BEST PRACTICES IN CONTRACTING

A. INTRODUCTION

Chapter II reviewed the DoD services contracting process and current issues facing the department. The purpose of this chapter is to summarize the development of the best practices in contracting recommendations that will be utilized for data analysis in Chapter IV.

The Department of Defense contracts for services according to the laws set forth in the Federal Acquisition Regulation. These strict, precise laws dictate the format in which all government contracts are conducted. President Obama's Memo to the Office of Management and Budget (OMB) emphasized his concern and dedication to reforming services acquisition, which has drawn significant attention to DoD contract management (Obama, 2009). IG and GAO reports documented contracting deficiencies sporadically throughout the last decade. Notable results are discussed with the application of the best practices in contracting in each phase of the contracting life cycle.

B. PURPOSE OF CHAPTER

The best practices in contracting have been identified and mapped into the six phases of government contracting. In many ways, the relationship of commercial and government best practices in contracting are similar, but it is important to identify the differences for rational comparison. This chapter will identify the commercial best practices in contracting and describe the logic used in choosing them, as being applicable to the defense contracting process.

C. LITERATURE REVIEW

Literature reviews were focused on the commercial best practices in contracting to include industry leaders, such as American Express, Boeing, GE, and IBM (Nelson, Moody, & Stegner, 2001).

The following books were most helpful in identifying commercial related to acquisition of services.

- World-Class Contracting: 100+ Best Practices for building Successful Business Relationships by Gregory A. Garrett (Garrett, 1997)
- The Purchasing Machine: How the Top Ten Companies Use Best Practices to Manage Their Supply Chains by Nelson et al. (Nelson, Moody, & Stegner, 2001)
- The Responsible Contract Manager, Protecting the Public Interest in an Outsourced World by Steven Cohen and William Eimicke (Cohen & Eimicke, 2008)

Also reports and articles by the DoD IG (D-2000-100), GAO (GAO-08-294, 2008; GAO-09-342, 2009; GAO-09-643T, 2009; GAO-09-1040T, 2009; GAO-10-39, 2010), and RAND (Camm, 2006) were used to further expand the list of commercial best practices in contracting. Please see the bibliography for a complete list of references.

Commercial contracts do not generally get audited in the same manner as the DoD does with IG and GAO reports. The deficiencies that were noted in the procurement practices of the commercial contractors were resultant of litigation or prosecution. Although commercial contractors may receive reports on their operations from auditing teams, the results are not available or transparent like the U.S. government reports. Businesses maintain their opportunistic advantages by maintaining “secrets of the trade” or proprietary agreements with the agencies they hire. Understanding the best practices in contracting of a commercial procurement division or commercial contractor can be found in their mission statements, company financial statements or statements of governance.

Identifying the leaders in industry was based on various rankings from teachers at the Naval Postgraduate School, Monterey, CA, Nelson et al. and Garrett’s books, magazines and television correspondents. The starting list of best practices in contracting could be much longer, but the results would not likely have increased the number of best practices in contracting finally identified in this report. Aligning commercial best practices in contracting with the laws and statutes governing government services acquisition guided the development of this simple yet useful list of 30 best practices in contracting.

The initial compilation included over two hundred best practices that were identified by the above sources and many others. Further analysis eliminated or combined identical and similar entries. In the next step, best practices in contracting that were not applicable to the DoD process due to laws and statutes were eliminated. A list of 47 best practices in contracting was originally determined as being reasonably applicable to government contracting, but after aligning the 188 reports and their multiple deficiencies to the 47 best practices in contracting, a final list was evaluated and pared down. Practices that were not observed in the reports because of the lack of relevance were eliminated, so the list was finally reduced to 30 best practices in contracting that can be used by government contracting personnel. The breakdown of these recommendations in relation to the six phases of contracting is shown in Table 1. Section D discusses the development and justification of the selected best practices in contracting in more detail.

“It's important to not rely on benchmark data, which may not be applicable to your needs and environment” (Microsoft’s Top 10 Business Practices for Environmentally Sustainable Data Centers, 2010). Understanding and framing the requirement is simplified if a contract has been administered previously for the same requirement. Often requirements are new and urgent, so benchmarking is not applicable and cost estimation is limited by the historical data available for similar requirements. “Cost estimation is always precise but never accurate” (Nausbaum, 2010), so determining an accurate estimate for the requirement is only as good as the definition of the requirement and the length of time given to determine the cost estimate.

Requirement are defined within the SOW, whether it is focused on function, performance, design, or level of effort. An objective of the SOW is to gain understanding and agreement with the contractor concerning the specific nature and technical requirements to be performed. Ideally the SOW defines what the contractor is going to perform and what the buyer is going to receive (Burt, Petcavage, & Pinkerton, 2010).

Collaboration with the contractor improves the working relationship and promotes the identification of problems and solutions for efficiencies (Eastman, 2008). Requiring contractors to maintain digital communications enhances the accountability through virtual files that can be maintained by a digital feedback loop (Microsoft’s Top 10

Business Practices for Environmentally Sustainable Data Centers, 2010). Communication has evolved over the past decade to the point where contracting teams and contractors can report in real time throughout the contract. According to Nelson et al., American Express leads the financial industry because they are better than the more traditional financial institutions- specifically in moving money and making contracts. Forty global commodity managers are responsible for buying all products and services on-line, and their outsourcing guidance is “building cross-cultural capabilities around supplier evaluation and tracking” (Nelson, Moody, & Stegner, 2001).

In the early 1990s IBM transitioned to a strategic procurement methodology that enabled them to consolidate procurement and develop services as their keystone for growth. IBM transitioned to a powerful business that was based on what Bill Schaefer, IBM vice president of procurement services, called the “three-legged stool- hardware, software, and services.” From 1991 to 1998, IBM averaged 20 percent growth per year and became the leading service business in the industry (Nelson, Moody, & Stegner, 2001).

The best practices in contracting were identified and similarities among them were consolidated and developed to formulate the best practices in contracting within this project. The recurrent best practices in contracting among all sources emphasized planning, defining requirements, market research, determining a reasonable price for estimating cost, project management, collaboration, and oversight. The best practices in contracting were then correlated with the six phases of contracting shown in Figure 2: procurement planning, solicitation planning, solicitation, source selection, contract administration, and contract closeout and termination (Rendon & Snider, 2008).

	Best Practice Code	Recommended Best Practices
PHASE 1: Procurement Planning		
Benchmarking	1.1.1	Decide what services needed
	1.1.2	Understand requirements and prepare executable changes and submission for solicitation
Market Research	1.2.1	Has it been bought previously, who bought it, when, why, where, for what price, etc.
	1.2.2	Clearly define expectations of success for the contract
PHASE 2: Solicitation Planning		
Organizational Structure	2.1.1	Clearly document government contracting team responsibilities
	2.1.2	Communicate the needs in terms of performance
Identify Risks	2.2.1	Develop the methodology to identify and correct risks and issues
Identify Sellers	2.3.1	Identify qualified sellers and review PPIRS
PHASE 3: Solicitation		
Communicate	3.1.1	Set strategic objectives and measurement process
Motivate Sellers	3.2.1	Positive and negative incentives with defined limits
PHASE 4: Source Selection		
Seller Research	4.1.1	Research Sellers
	4.1.2	Rank according to BEST VALUE
Presentations	4.2.1	Utilize highly skilled negotiators who know what is/(is not) negotiable to lead the contract negotiation process
Costing	4.3.1	Define roles and expectations for contractor and government staff
	4.3.2	Understand the long and short term costs, and that EVERYTHING affects price
	4.3.3	Verify data accuracy
Selection	4.4.1	Document and analyze the results
PHASE 5: Contract Administration		
Review	5.1.1	Review all goals for efficiency and effectiveness at designated periods
Changes	5.2.1	Appoint appropriate people to make contract changes and take corrective action
	5.2.2	Follow up on all changes
Communicate	5.3.1	Document all changes and meeting minutes
	5.3.2	Create a digital feedback loop
	5.3.3	Report on progress internally and externally
Organization and oversight	5.4.1	Periodically review implementation of all goals for effectiveness and efficiency
	5.4.2	Regularly monitor performance and provide feedback
	5.4.3	Develop an organizational structure with clearly documented government and commercial contracting team responsibilities
PHASE 6: Contract Close Out/ Termination		
Communicate	6.1.1	Discuss life cycle objectives and concerns
Verify completion	6.2.1	Thorough inspection and agreement of satisfactory results
After Action Report	6.3.1	Lessons learned from all elements internal and external
	6.3.2	Conduct immediately and as required (quarterly, annual)

Table 1. Recommended Commercial Best Practices in Contracting for the DoD

D. DEVELOPMENT OF BEST PRACTICES IN CONTRACTING RECOMMENDATIONS

1. Phase I—Procurement Planning

Based on the literature review, Procurement Planning is separated into two main subtopics: Benchmarking⁷ and Market Research. Completely understanding what needs to be done and identifying the industry standard for that service is essential to planning the procurement. One may identify the solution or end-state, but the details of the requirement's market analysis, negotiations, cost, schedule and performance of the service's acquisition are required. Conducting market research on a well-defined service can streamline the procurement-planning phase, especially if the service has been previously contracted and documented with lessons learned. "In order to reach the right solutions, we must be as informed as possible" (Buffet & Munger, 2010). Identifying the expectations of the contract may be similar to the current requirements, but identifying the minute aspects of the requirement is important to developing a concise contract and streamlining the remaining five phases of contracting.

The literature review has shown that the most crucial part of contracting is deciding what is needed. The needs drive the scope of the performance and must be understandable without ambiguous tasking. Developing a SOW that is factual and exacting in its requirements can eliminate misinterpretation by the sellers. Explaining all of the nuances and defining broad requirements enables the sellers to accurately bid the project and levels the playing field among the bidders.

The existence of a contract manifests itself through communication by words and deeds. It is difficult for one person to know what is in the mind of another; thus, the subjective intentions of the parties are not as important as what they actually communicated to one another when they made their agreement. (Garrett, 2001)

⁷ The process of determining who sets the industry standard and what that standard is in order to gain perspective on organizational performance.

Outsourcing services through contracting is prevalent across the government spectrum. County, state, and federal procurement are rapidly expanding to meet the needs of the organizations. Determining which activities are inherently governmental⁸ (FAR, 2005) requires discretion because it is prohibited by the FAIR Act for commercial contractors to provide services that are inherently governmental (Federal Activities Inventory Reform Act of 1998).

The services that are required for a particular function within the DoD may be simple or complex. The following questions should be asked by the government contracting team prior to planning the procurement: Is the status quo good enough? Is this a new service? What are the best performance factors? What are acceptable performance factors? Can the service be provided by a department within the organization? Benchmarking and market research assist in determining the estimated cost, schedule, and performance required for service's requirement. The definition of each item to be accomplished could be minute or broad. However, broad requirements can invite misinterpretation by the contractor to make decisions based on profit criteria, not necessarily to the benefit of the government.

When contracting out a function is recommended, expert judgment is crucial to the procurement-planning phase. Expertise from individuals or groups within the organization, or consultants, educators, technicians, and industry groups is considered when planning the requirements of the contract (Garrett, 2007).

2. Phase II—Solicitation Planning

According to the literature review, Solicitation Planning is separated into three main subtopics: Organizational Structures, Identify Risk, and Identify Sellers. Clearly identifying the government contracting team responsibilities helps to hold the individuals accountable throughout the phases of the contract. Not only must these responsibilities be assigned and annotated, but they must be verbally described using cross-talks. Interacting with the team is important early in the contracting process because it sets the tone for the

⁸ Inherently governmental functions, conditions and facts restrict the discretionary authority, decision-making responsibility, or accountability of government officials using contractor services or work products. Contracts shall not be used for the performance of inherently governmental functions.

life cycle. Especially notable is the government turnover rate because of deployments and transfers. Each government-contracting member must be well versed in their responsibilities so they can describe and train their relief upon transfer.

Trade-offs must be made within the cost, schedule and performance of the contract. It is the Program Managers job to ensure that these factors are balanced. Each of the three factors limits the other two, so the contracting team must completely understand the purpose and the scope of their positions and motivate each other to maintain the schedule and promote a balance of efficiency and equity⁹ (Equity-Efficiency Tradeoff, 2010).

The literature review identified contract incentives were beneficial to motivating the sellers and encouraged collaboration between contracting parties. The government incentivizes contracts based on cost, schedule and performance similar to Total Cost Contracting (TCC), which has been effectively used globally and was particularly successful in Hong Kong. TCC in the Hong Kong Mass Transit Railway project referred to the incentive as, “share the gain and the pain.” This sharing of positive and negative¹⁰ (FAR, 2005) schedule adherence or cost maintenance reinforces the collaborative efforts from the buyer and sellers, since the gain is shared 50:50 with each, depending on the situation (Mass Transit Railway Corporation, 2003). The Hong Kong-based Mass Transit Railway Corporation successfully completed a subway project seven months ahead of the 36 month schedule, saving HK\$14.8 million, of which the government and the contractor each benefited by HK\$7.4 million. The collaborative process also proved that working together was more efficient, and motivated the contractor to recommend efficient changes that saved money during the construction (Wong, 2006). Establishing the personal relationship supported by coordination efforts allowed the contractor to share ideas on product improvement, which lead to a superior result and seamless contract closeout.

⁹ The production possibilities frontier explains the trade-off where any additional gains in production efficiency must be offset by a reduction in the economy's equity.

¹⁰ The FAR 2.101 defines “cost sharing” as an explicit arrangement under which the contractor bears some of the burden of reasonable, allocable, and allowable contract cost.

Incentivizing contracts poses risk to the commercial contractor, especially if they “share the pain.” The government dedicates substantial time to assessing and briefing risk potential in various situations in everyday life, however procurement brings in a more granular approach. Naturally, a risk assessment should also be applied to contracting services. The government contracting team should maintain a thorough comprehension of change orders, deviations from the cost, schedule, and performance of service. The members of the government contracting team and end-users for the service must understand the risks, identify the chain of command for reporting, and develop courses of action to remedy potential issues prior to solicitation.

3. Phase III—Solicitation

Based on the literature review, the Solicitation phase was separated into two main subtopics: Communication and Motivation of Sellers. During the solicitation phase, the government contracting team is required by the Competition in Contracting Act (CICA) and FAR to set the strategic objectives for “full and open competition”¹¹ (FAR, 2005). The big picture is essential to capture the bidding audience. Oral presentations¹² conducted among industry leaders in an open conference or panel setting (FAR, 2005) can align the strategic objectives, which they may be altered based on the feedback generated by the offerors input or capabilities. Focusing on the overall requirement and identifying the specific milestones allows the offerors to efficiently bid the project and provides them with a thorough understanding of goals throughout the contract (Trench, 1991). The measurement of goals helps to define the SOW and project completion percentage.

The schedule is important to maintain for project completion, and providing incentives (positive and negative) can motivate the contractor to achieve the goals on time or ahead of schedule. Applying incentives to motivate the seller can expedite the

¹¹ “Full and open competition,” when used with respect to a contract action, means that all responsible sources are permitted to compete.

¹² Oral presentations by offerors as requested by the government may substitute for, or augment, written information. Use of oral presentations as a substitute for portions of a proposal can be effective in streamlining the source selection process.

project and additionally provide more time for rework, should the need arise. Penalizing the contractor for sub-standard work or falling behind schedule could potentially result in exponentially disastrous results for the seller, should it lead to them being labeled in Past Performance Information Retrieval System (PPIRS) as poor performers for future contract solicitations.

4. Phase IV—Source Selection

According to the literature review, Source Selection is separated into four main subtopics: Seller Research, Presentations, Costing, and Selection. Seller Research in the source selection phase is an extension of the earlier mentioned market research, in that it focuses on the group of sellers and their historical performance. Best value¹³ and Total Ownership Cost (TOC)¹⁴ (Microsoft’s Top 10 Business Practices for Environmentally Sustainable Data Centers, 2010) should always be considered for contracts, regardless of the scope. Identifying the level of risk for a project has led to the lack of necessity for “value” contracts. Simply because there is little risk should not preclude the government contracting team from selecting the contractor that provides the best service in the short and long term.

The experts in the service required or government contracting team may not be sufficiently eloquent or convincing. In regards to commercial acquisition, Frank Camm from the RAND Corporation questions whether federal personnel are “well prepared to apply FAR Part 12 in ways that improve such alignment... to align organizational priorities in the way that best commercial service acquisition practices do?” (Camm, 2006). Understanding the “sales pitch” enough to convince offerors to conform to the requirements, specifically cost, schedule, and performance, is a skill that can be

¹³ Best Value continuum defined by the FAR 15.101: an agency can obtain best value in negotiated acquisitions by using any one or a combination of source selection approaches. In different types of acquisitions, the relative importance of cost or price may vary. For example, in acquisitions where the requirement is clearly definable and the risk of unsuccessful contract performance is minimal, cost or price may play a dominant role in source selection. The less definitive the requirement, the more development work required, or the greater the performance risk, the more technical or past performance considerations may play a dominant role in source selection.

¹⁴ The lowest total cost of ownership is dictated by the competition of motivated manufacturers to be price competitive, drive innovation, and provide the most efficient product or service throughout the project life cycle.

contracted out. There are motivational speakers that earn their living talking about how to be successful. These same talented, convincing negotiators can frame the solicitation to conform to the desired bid price, or less. The government contracting team and end-users have developed skills within their field, and may be experts in the service required, but that does not qualify them to negotiate or present a services requirement to a cohort of commercial contractors. The government contracting team would benefit from contracting a negotiator that is versed in marketing to develop the buyer/seller relationship.

After a contractor is identified, the government contracting team can collaborate with the contractor to define the roles of the participants. Once the members of the contracting parties and their tasks are defined, they must have a thorough understanding of the services requirement, with even greater understanding of the effects caused by changes in the plans. Minor changes in the development of a project can have exponential changes in the results of a contract, so communication must be stressed to identify changes throughout the project life cycle. Within the source selection phase, data management is critical to the remaining phases of contracting. Verifying the SOW specifications' accuracy is a rudimentary task that can be easily overlooked, but considering defense contracts can have payable amounts in the \$10's of millions and billions, eyes must be placed on the specifics of the contract to ensure proper delegation of tasking. Commercial contractors' past performance must be maintained to develop lessons learned for future contracting. Because government contracts are prevalent in the contracting universe, the chance of a duplicate requirement is very likely. Just as the FAR requires agencies to report their contractors' performance, as of July 1, 2009, the results of the source selection should be documented and maintained for future reference (PPIRS, 2010).

5. Phase V—Contract Administration

Based on the literature review, Contract Administration is separated into four main subtopics: Review, Changes, Communication, and Organization and Oversight. Maintaining accurate data regarding the project progression and changes for efficiency or

betterment of the project is essential to contract administration. The personnel responsible for the project review and evaluations must be familiar with the project and understand the projects goals or milestones. Thorough evaluations and data collecting enable the stakeholders¹⁵ to recognizing requirements changes, areas to improve efficiency and product quality. A best practice is appointing centralized contractual authority to a limited number of people that are authorized to make contract changes and take action, which controls the project from unnecessary changes and cost overruns. Tracking the changes and collaborating with the contracting officers and commercial contracting decision makers helps to control the project progression. Immediate coordination of follow-up responses to contract changes instills a mutual responsibility from the buyer and seller.

Communication between the stakeholders, supported by periodic meetings with documented minutes that are shared within a digital feedback loop, can highlight the contract progress. Internal and external progress reports develop the working relationship throughout the chain of command. The financial, scheduling, safety and performance aspects of the service are equally important to the project completion.

Development of proper organization with clearly designed responsibilities and managerial oversight ties together the service functions with the desired end state. Reviewing the goals, monitoring performance and providing feedback to motivate both contracting parties garners team building. Organizational responsibilities and oversight must be understood by the government and commercial contracting teams. Proper oversight and simply knowing who is responsible for the different aspects of a service or project enables the subordinate personnel to ask questions and get feedback that may avoid cost overruns, safety mishaps, or encourage more efficient or effective results (Buffet & Munger, 2010).

Visualizing the services requirements can be difficult, but in construction, contracting a similar three-dimensional view has been developed to track and identify

¹⁵A stakeholder is defined as anyone that has an interest in a project or service. This can include the commercial contractors, suppliers, logistics teams, government contracting team, end users and maintenance support.

changes. A similar format could be applied to the cost, schedule, and performance triad as used in services acquisition projects. Contract administration has been addressed by the Army Corps of Engineers (ACE), which has utilized Building Information Modeling (BIM) as a technology designed to enable a three-dimensional view of a project. The benefits to the ACE are evidenced by showing early clash detection, which reduces change orders and time delays that may result from two-dimensional drawings. BIM has been used on many large projects to include Yankee Stadium and Citi Field (Dillenberger, 2008). Government contracts are with prime contractors that often sub-contract portions of their services (U.S. GAO, 2010). Collaboration is mandatory within the BIM and holds each person responsible for its contribution to the model, tracking each change and notably the sub-contractors inputs. The BIM electronic tracking ensures visibility that can hold the sub-contractors responsible for changes, or disallow the sub-contractors from making any changes.

6. Phase VI—Contract Closeout/Termination

According to the literature review, the subsets of Contract Closeout and Termination include Communication, Verify Completion, and the After Action Report. Open cross talks during the project's objectives and organizational concerns enable the contracting parties to adjust their priorities to achieve the completion of the contract. Maintaining thorough inspections and verifying the completion of the project within satisfactory specifications enables a smooth contract closeout.

Identifying the lessons learned throughout the contract and collecting input from both government and contractor's internal and external observations are vital to future defense contracting. Providing lessons learned can be viewed as negative or unnecessary, but the benefits of identifying problems or successes are important to the Past Performance Information Retrieval System (PPIRS) records.

E. SUMMARY

This chapter provided an overview of the best practices in contracting integrated into the six phases of government contracting and created a list of such practices to be used in the data analysis (Table 1). In summary, there are many benchmarks that apply to

successful commercial contracting, but the government is limited from operating identical to commercial contractors by the FAR, specifically because of public policy and statutory requirements. Hundreds of the best practices in contracting were evaluated to develop 30 succinct, easily understandable practices that the government could implement to ensure future successful contracts.

The next chapter applies the identified best practices in contracting to the analysis of an eleven-year collection of DoD IG and GAO reports.

IV. DATA ANALYSIS

A. INTRODUCTION

This chapter reviews and summarizes the data collected through the study of 31 GAO and 157 DoD IG reports related to contracting for services that were published between 1999 and 2009. The objective of this work was to identify the trends of deficiencies discovered by GAO and IG and to analyze the appropriate best practices in contracting applicable to the issues cited in the reports.

B. OVERVIEW OF DATA COLLECTED

GAO reports tend to be more general in nature. They often address issues affecting DoD as a whole, or explore several DoD components in a single report. Therefore, each mention was counted separately to derive analytical presentation of the breakdown of deficiencies and recommendations on DoD component basis. Of 31 GAO reports 23 addressed DoD Civilian Agency or the whole Department of Defense, 10 addressed Army, seven Air Force, four Navy and one Joint. Similarly, of 157 IG reports DoD Civilian Agencies were mentioned in 69, Army in 64, Air Force 55, Navy 41, and Joint eight times. The data for Overall portions of analysis was based on reports only, without breakdown into service categories and was calculated using unsegmented data. The deficiencies found by GAO and DoD IG reports were analyzed based on a twelve issue areas as outlined in DoD IG Report, “Summary of DoD Office of Inspector General Audits of Acquisition and Contract Administration” (United States Department of Defense Inspector General, D-2009-071). These twelve areas of deficiencies are:

1. *Completeness of Acquisition Support Data.* Federal Acquisition Regulation (FAR) 4.801 requires maintaining documentation to provide a complete history and background to justify decisions made in the acquisition process. Examples of such documentation are purchase requests, acquisition planning information, cost and pricing data, and contract completion documents. (FAR 4.801)
2. *Sufficiency of Requirements.* Department of Defense Instruction 5000.2 identifies steps and documentation for determination of requirements. (DoDI 5000.2)

3. *Adequacy of Contract Pricing.* FAR requires the contracting officer to establish reasonableness of the offered price especially in a case without adequate price competition. Example of deficiency of this type is lack of pricing data and insufficient analysis if the price is “fair and reasonable.”
4. *Commercial Acquisition.* Commercial item acquisition allows for procurement of commercially available items without obtaining full “cost and pricing” information. Deficiencies in this area are inappropriate use of this type of acquisition contract.
5. *Sole-Source Selection.* Justification for sole-source contracts was not adequate in accordance with FAR.
6. *Past Performance.* Evaluation of past performance data is required for a competitive acquisition. Deficiencies include lack of past performance data or insufficient analysis of such data.
7. *Multiple-Award Contracting.* Multiple-awards of indefinite-quantity contracts are required to be made for supplies or services. Deficiencies in this area include not utilizing multiple-awards and inappropriate use of such contracts.
8. *Performance-Based Service Contracts.* FAR requires use of performance-based service contracts to obtain in the most cost-efficient manner identifiable and measurable services.
9. *Oversight and Surveillance.* Documented oversight and surveillance of contractor performance is required by FAR to ensure efficiency and effectiveness of contractor performance.
10. *Inter-Agency Contracting/Military Interdepartmental Purchase Requests (MIPR).* FAR requires documented determination if MIPR is in the best interest of the government and provides specific procedures for such purchases.
11. *Potential Anti-deficiency Act Violations.* These are violations that resulted in potential unlawful use of appropriated funds.
12. *Material Internal Control Weaknesses.* This area overarches the span of contracting activities and is defined by DoD Instruction (DoDI) 5010.40 as the organization, policies, and procedures that help program and financial managers to achieve results and safeguard the integrity of their programs. (DoDI 5010.40)

The 30 best practices in contracting developed in Chapter III were applied to all reports and resulting data was analyzed for trends and used to assign recommendations in Chapter V.

C. DATA ANALYSIS

1. Deficiencies Identified in GAO Reports

Many GAO reports explore several DoD components in a single report. Therefore, each mention was counted separately to derive analytical presentation of the breakdown of deficiencies and recommendations on DoD component basis. Table 2 shows the number of discovered deficiencies, (i.e., the number of reports wherein a given deficiency was identified) by DoD component.

	Number of Reports	1 Completeness of Acquisition Support	2 Sufficiency of Requirements	3 Adequacy of Contract Pricing	4 Commercial Acquisition	5 Sole-Source Selection	6 Past Performance	7 Multiple-Award	8 Performance-Based Service Contract	9 Surveillance and Oversight	10 Inter-Agency Contracting/MIPRS	11 Potential Antideficiency Act	12 Material Internal Control Weakness
ARMY	10	2	4	6	2	0	0	0	0	7	0	0	0
AIR FORCE	7	1	3	4	2	0	0	0	0	5	0	0	0
NAVY	4	1	3	2	0	0	0	0	0	3	0	0	0
JOINT	1	0	1	1	0	0	0	0	0	1	0	0	0
DoD	23	5	11	13	4	4	2	0	2	15	3	0	0
OVERALL	31	5	15	18	7	4	2	0	2	21	3	0	0

Table 2. Deficiencies by Service Component as Identified in GAO Reports

Table 3 and Figure 3 are based on Table 3 and present the analysis of 31 GAO reports between 1999 and 2009 in terms of the breakdown and trends overall and by the DoD component. Individual component percentages were calculated by dividing the number of reports regarding that component, which contain the specific deficiency by the total number of reports that mentioned that individual DoD component (proportion of deficiency occurrence to the number of reports on the DoD component). For example, Table 2 shows that of the ten reports for the Army, four had Sufficiency of Requirements Deficiency; this corresponds to 40% occurrence for this deficiency for the Army in Table 3. (Please note that as only one GAO report referred to a joint activity; every recommendation generated for that report resulted in a 100 percent observation in the

Joint column). The data for overall portions of analysis was based on reports only, without breakdown into DoD component categories and was calculated using unsegmented data.

		1	2	3	4	5	6	7	8	9	10	11	12
%	Number of Reports	Completeness of Acquisition Support	Sufficiency of Requirements	Adequacy of Contract Pricing	Commercial Acquisition	Sole-Source Selection	Past Performance	Multiple-Award	Performance - Based Service Contract	Surveillance and Oversight	Inter-Agency Contracting/MIPRS	Potential Antideficiency Act	Material Internal Control Weakness
ARMY	10	20%	40%	60%	20%	0%	0%	0%	0%	70%	0%	0%	0%
AIR FORCE	7	14%	43%	57%	29%	0%	0%	0%	0%	71%	0%	0%	0%
NAVY	4	25%	75%	50%	0%	0%	0%	0%	0%	75%	0%	0%	0%
JOINT	1	0%	100%	100%	0%	0%	0%	0%	0%	100%	0%	0%	0%
DoD	23	22%	48%	57%	17%	17%	9%	0%	9%	65%	13%	0%	0%
OVERALL	31	16%	48%	58%	23%	13%	6%	0%	6%	68%	10%	0%	0%

Table 3. Deficiencies Percentages by Service Component as Identified in GAO Reports

The same information presented in the graphic format reveals dominant trends of deficiencies across services.

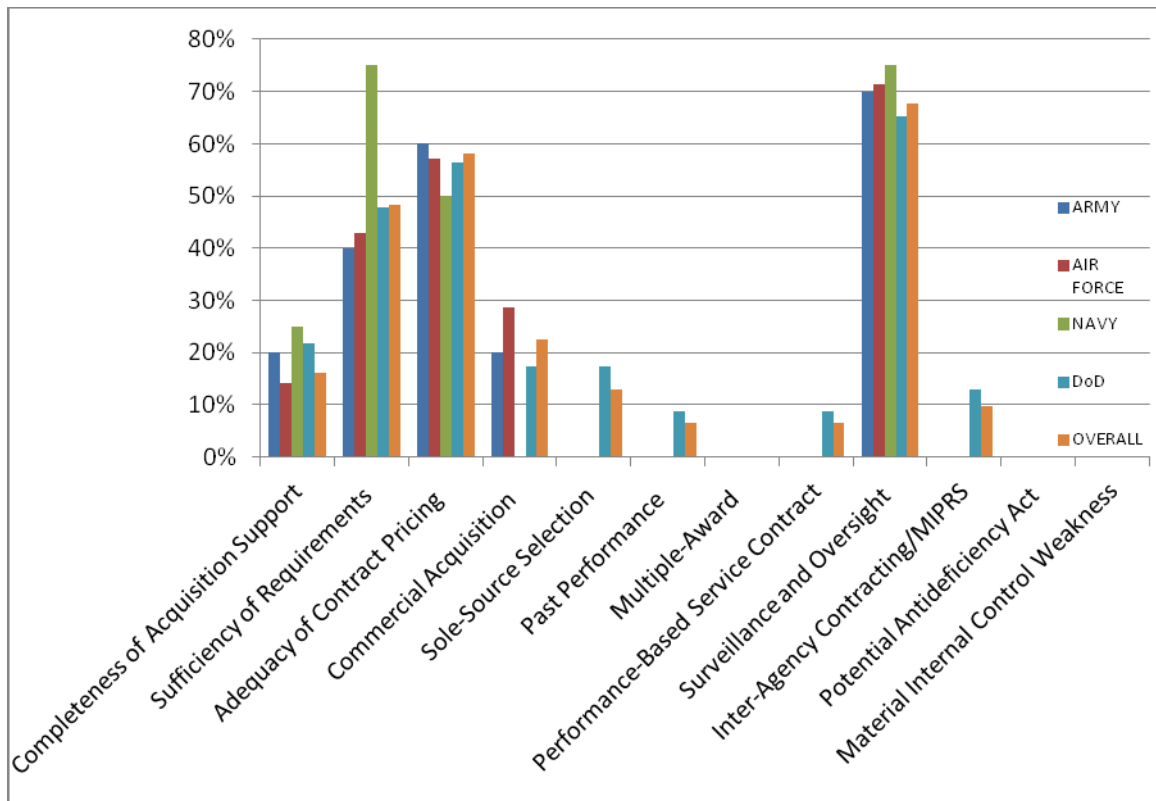


Figure 3. Deficiencies by Service Component as Identified in GAO Reports

Figure 4 presents the overall trend by the number of deficiencies identified in GAO reports.

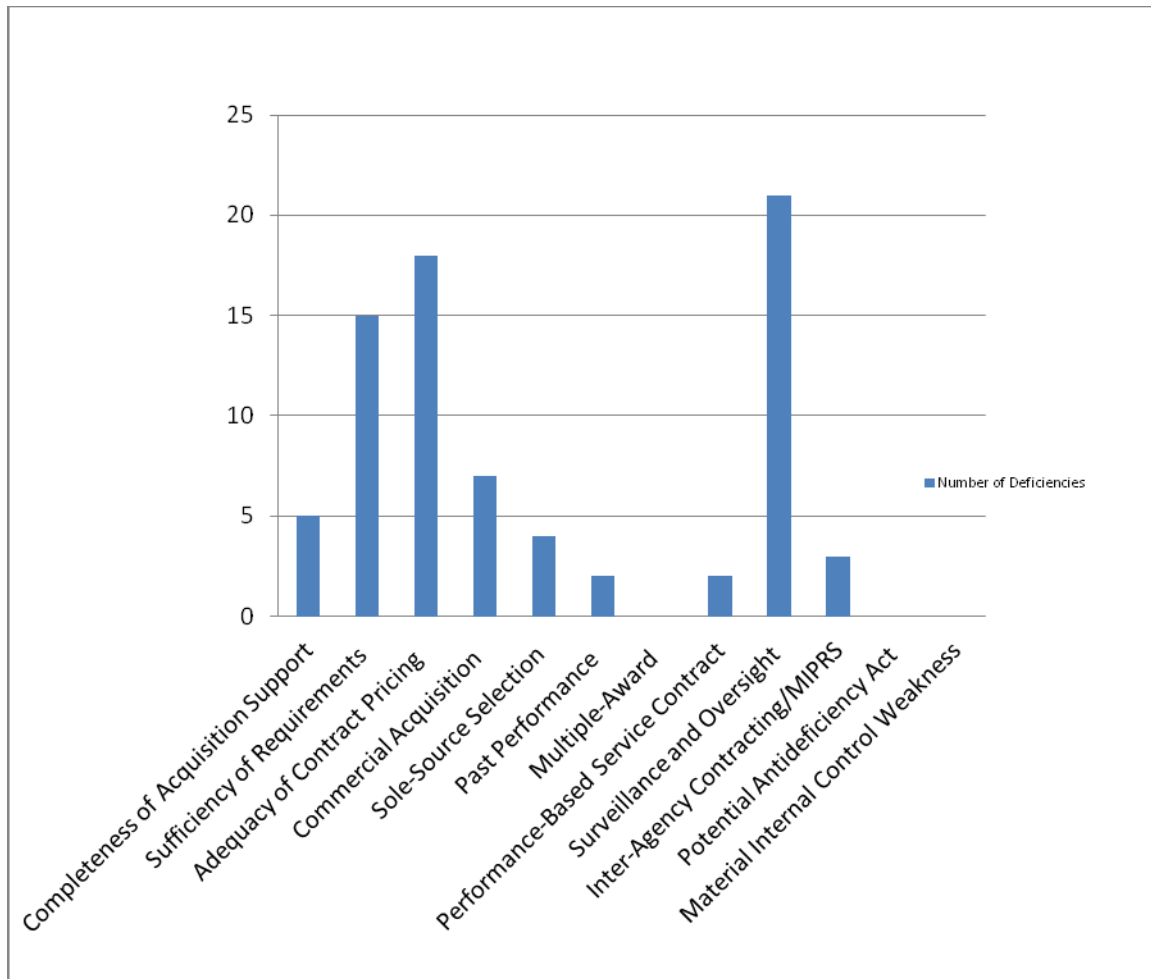


Figure 4. Overall Deficiencies Trend by Number of Occurrence as Identified by GAO Reports

The most common deficiencies occur in the areas 2, 3 and 9:

- Sufficiency of Requirements (48 percent). This deficiency area is identified as incomplete and/or insufficient steps and documentation for determination of requirements.
- Adequacy of Contract Pricing (58 percent). Example of deficiency of this type is lack of pricing data and insufficient analysis if the price is “fair and reasonable.”
- Surveillance and Oversight (68 percent). This deficiency is defined by lack of documented oversight and surveillance of contractor performance as required by FAR to ensure efficiency and effectiveness of contractor performance.

This trend appears to be uniform across the service components with one exception: Sufficiency of Requirements, Navy (75 percent).

2. Best Practice Recommendations Applied to GAO Reports

The best practices in contracting identified in Chapter III were applied to the 31 GAO reports from 1999 to 2009. Table 4 shows the results of the analysis of the reports presented by number of recommendations by service component.

Best Practice Code	Best Practice Description	ARMY	AIR FORCE	NAVY	JOINT	DOD	OVERALL
1.1.1	Decide what services needed	3	3	2	1	12	16
1.1.2	Understand requirements and prepare executable changes and submission	3	3	2	1	11	15
1.2.1	Has it been bought previously, who bought it, when, why, where, for what price, etc.	4	4	2	0	12	16
1.2.2	Clearly define expectations of success for the contract	4	2	1	0	12	14
2.1.1	Clearly document government contracting team responsibilities	2	1	1	0	4	6
2.1.2	Communicate the needs in terms of performance	4	3	2	1	8	13
2.2.1	Develop the methodology to identify and correct risks and issues	1	1	1	1	2	4
2.3.1	Identify qualified sellers and review PPIRS	4	3	2	0	9	12
3.1.1	Set strategic objectives and measurement process	1	2	1	1	8	11
3.2.1	Positive and negative incentives with defined limits	1	0	0	0	3	3
4.1.1	Research Sellers	5	4	2	0	13	17
4.1.2	Rank according to BEST VALUE	5	3	2	0	11	14
4.2.1	Utilize skilled negotiators to lead the contract negotiation process	0	0	0	0	0	0
4.3.1	Define roles and expectations for contractor and government staff	5	3	1	1	13	18
4.3.2	Understand the long and short term costs, and that EVERYTHING affects price	3	2	1	1	4	8
4.3.3	Verify data accuracy	4	3	0	0	9	13
4.4.1	Document and analyze the results	4	2	2	1	7	10
5.1.1	Review all goals for efficiency and effectiveness at designated periods	7	5	3	1	15	21
5.2.1	Appoint appropriate people to make contract changes and take corrective action	1	1	0	0	1	2
5.2.2	Follow up on all changes	1	1	0	0	1	2
5.3.1	Document all changes and meeting minutes	0	0	0	0	0	0
5.3.2	Create a digital feedback loop	0	0	0	0	0	0
5.3.3	Report on progress internally and externally	0	0	0	0	0	0
5.4.1	Periodically review implementation of all goals for effectiveness and efficiency	6	4	2	1	16	21
5.4.2	Regularly monitor performance and provide feedback	7	5	3	1	17	23
5.4.3	Develop an organizational structure with clearly documented government and commercial contracting team responsibilities	7	4	2	0	13	18
6.1.1	Discuss life cycle objectives and concerns	1	0	0	0	3	3
6.2.1	Thorough inspection and agreement of satisfactory results	2	0	1	1	4	5
6.3.1	Lessons learned from all elements internal and external	5	2	2	0	19	22
6.3.2	Conduct immediately and as required (quarterly, annual)	0	0	0	0	0	0
	NUMBER OF REPORTS	10	7	4	1	23	31

Table 4. Best Practice Recommendations by Service Component Applied to GAO Reports

Table 5 shows the results of the analysis of the reports as a percentage of recommendations to the number of reports on the individual service component (Please note that as only one GAO report referred to a joint activity, every recommendation generated for that report resulted in a 100 percent observation in the Joint column).

Best Practice Code	Best Practice Description	ARMY	AIRFORCE	NAVY	JOINT	DOD	OVERALL
1.1.1	Decide what services needed	30%	43%	50%	100%	52%	52%
1.1.2	Understand requirements and prepare executable changes and submission	30%	43%	50%	100%	48%	48%
1.2.1	Has it been bought previously, who bought it, when, why, where, for what price, etc.	40%	57%	50%	0%	52%	52%
1.2.2	Clearly define expectations of success for the contract	40%	29%	25%	0%	52%	45%
2.1.1	Clearly document government contracting team responsibilities	20%	14%	25%	0%	17%	19%
2.1.2	Communicate the needs in terms of performance	40%	43%	50%	100%	35%	42%
2.2.1	Develop the methodology to identify and correct risks and issues	10%	14%	25%	100%	9%	13%
2.3.1	Identify qualified sellers and review PPIRS	40%	43%	50%	0%	39%	39%
3.1.1	Set strategic objectives and measurement process	10%	29%	25%	100%	35%	35%
3.2.1	Positive and negative incentives with defined limits	10%	0%	0%	0%	13%	10%
4.1.1	Research Sellers	50%	57%	50%	0%	57%	55%
4.1.2	Rank according to BEST VALUE	50%	43%	50%	0%	48%	45%
4.2.1	Utilize skilled negotiators to lead the contract negotiation process	0%	0%	0%	0%	0%	0%
4.3.1	Define roles and expectations for contractor and government staff	50%	43%	25%	100%	57%	58%
4.3.2	Understand the long and short term costs, and that EVERYTHING affects price	30%	29%	25%	100%	17%	26%
4.3.3	Verify data accuracy	40%	43%	0%	0%	39%	42%
4.4.1	Document and analyze the results	40%	29%	50%	100%	30%	32%
5.1.1	Review all goals for efficiency and effectiveness at designated periods	70%	71%	75%	100%	65%	68%
5.2.1	Appoint appropriate people to make contract changes and take corrective action	10%	14%	0%	0%	4%	6%
5.2.2	Follow up on all changes	10%	14%	0%	0%	4%	6%
5.3.1	Document all changes and meeting minutes	0%	0%	0%	0%	0%	0%
5.3.2	Create a digital feedback loop	0%	0%	0%	0%	0%	0%
5.3.3	Report on progress internally and externally	0%	0%	0%	0%	0%	0%
5.4.1	Periodically review implementation of all goals for effectiveness and efficiency	60%	57%	50%	100%	70%	68%
5.4.2	Regularly monitor performance and provide feedback	70%	71%	75%	100%	74%	74%
5.4.3	Develop an organizational structure with clearly documented government and commercial contracting team responsibilities	70%	57%	50%	0%	57%	58%
6.1.1	Discuss life cycle objectives and concerns	10%	0%	0%	0%	13%	10%
6.2.1	Thorough inspection and agreement of satisfactory results	20%	0%	25%	100%	17%	16%
6.3.1	Lessons learned from all elements internal and external	50%	29%	50%	0%	83%	71%
6.3.2	Conduct immediately and as required (quarterly, annual)	0%	0%	0%	0%	0%	0%
	NUMBER OF REPORTS	10	7	4	1	23	31

Table 5. Best Practice Recommendations Percentages by Service Component Applied to GAO Reports

A graph format better reveals the dominant trends in recommendations for the GAO reports as depicted in Figures 5 and 6.

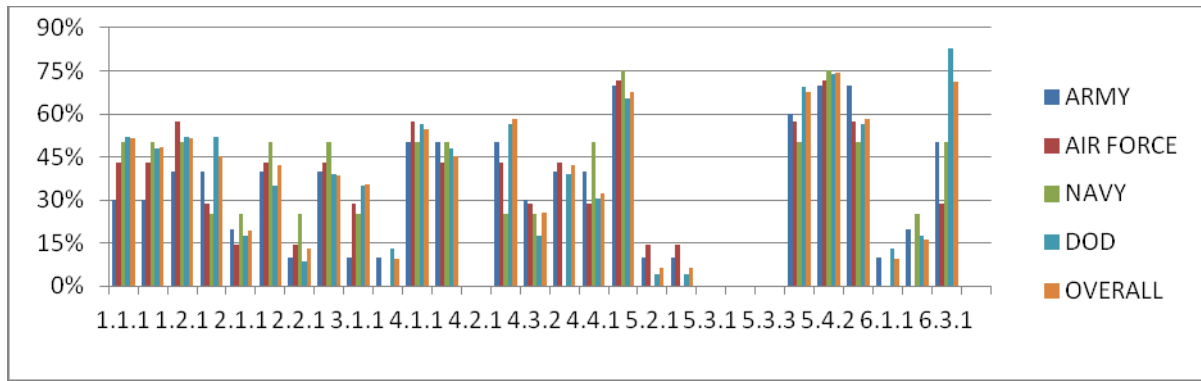


Figure 5. Best Practice Recommendations by Service Component as Applied to GAO Reports

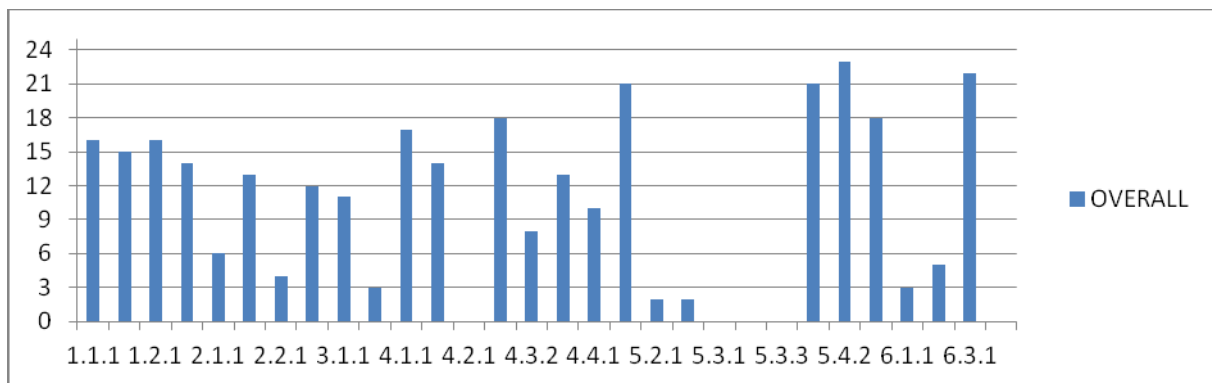


Figure 6. Best Practice in Contracting Recommendations Overall Trend by Number of Occurrence as Applied to GAO Reports

All service components displayed similar trends. Most frequently occurring recommendations were observed during Phases I, IV, V and VI:

- 1.1.1.1 Decide what services are needed (52 percent)
- 1.1.1.2 Understand requirements and prepare executable changes and submission for solicitation (48 percent)
- 1.2.1.1 Has it been bought previously, who bought it, when, why, where, for what price, etc. (52 percent)
- 1.2.2.1 Clearly define expectations of success for the contract (45 percent)

- 4.1.1 Research sellers (55 percent)
- 4.1.2 Rank according to best value (45 percent)
- 4.3.1 Define roles and expectations for contractor and government staff (58 percent)
- 5.1.1 Review all goals for efficiency and effectiveness at designated periods (68 percent)
- 5.4.1 Periodically review implementation of all goals for effectiveness/efficiency (68 percent)
- 5.4.2 Regularly monitor performance and provide feedback (74 percent)
- 6.3.1 Lessons learned from all elements internal and external (71 percent)

3. Deficiencies Identified in DoD IG Reports

Some DoD IG reports explore several DoD components in a single report. Therefore, each mention was counted separately to derive analytical presentation of the breakdown of deficiencies and recommendations on DoD component basis. Table 6 shows the number of discovered deficiencies, (i.e., the number of reports wherein a given deficiency was identified) by DoD component.

	Number of Reports	1 Completeness of Acquisition Support	2 Sufficiency of Requirements	3 Adequacy of Contract Pricing	4 Commercial Acquisition	5 Sole-Source Selection	6 Past Performance	7 Multiple-Award	8 Performance-Based Service Contract	9 Surveillance and Oversight	10 Inter-Agency Contracting/MIPRS	11 Potential Antideficiency Act	12 Material Internal Control Weakness
ARMY	64	30	23	20	2	13	3	8	5	27	6	11	35
AIR FORCE	55	27	15	26	5	16	7	8	6	23	6	9	20
NAVY	41	23	10	19	2	11	4	6	7	17	6	7	19
JOINT	8	3	3	2	1	1	1	0	2	3	2	2	3
DoD	69	37	18	32	5	23	3	9	4	29	15	18	34
OVERALL	157	77	53	55	10	36	9	14	14	64	21	28	61

Table 6. Deficiencies by Service Component as Identified by DoD IG Reports

Table 7 and Figure 7 are based on Table 6 and present the analysis of 157 DoD IG reports between 1999 and 2009 in terms of the breakdown and trends overall and by the DoD component. Individual component percentages were calculated by dividing the number of reports regarding that component, which contain the specific deficiency by the

total number of reports that mentioned that individual DoD component (proportion of deficiency occurrence to the number of reports on the DoD component). The data for Overall portions of analysis was based on reports only, without breakdown into DoD component categories and was calculated using unsegmented data.

		1	2	3	4	5	6	7	8	9	10	11	12
%	Number of Reports	Completeness of Acquisition Support	Sufficiency of Requirements	Adequacy of Contract Pricing	Commercial Acquisition	Sole-Source Selection	Past Performance	Multiple-Award	Performance-Based Service Contract	Surveillance and Oversight	Inter-Agency Contracting/MIPRS	Potential Antideficiency Act	Material Internal Control Weakness
ARMY	64	47%	36%	31%	3%	20%	5%	13%	8%	42%	9%	17%	55%
AIR FORCE	55	49%	27%	47%	9%	29%	13%	15%	11%	42%	11%	16%	36%
NAVY	41	56%	24%	46%	5%	27%	10%	15%	17%	41%	15%	17%	46%
JOINT	8	38%	38%	25%	13%	13%	13%	0%	25%	38%	25%	25%	38%
DoD	69	54%	26%	46%	7%	33%	4%	13%	6%	42%	22%	26%	49%
OVERALL	157	49%	34%	35%	6%	23%	6%	9%	9%	41%	13%	18%	39%

Table 7. Deficiencies Percentages by Service Component as Identified by DoD IG Reports

The same information presented in the graphic format reveals dominant trends of deficiencies across services.

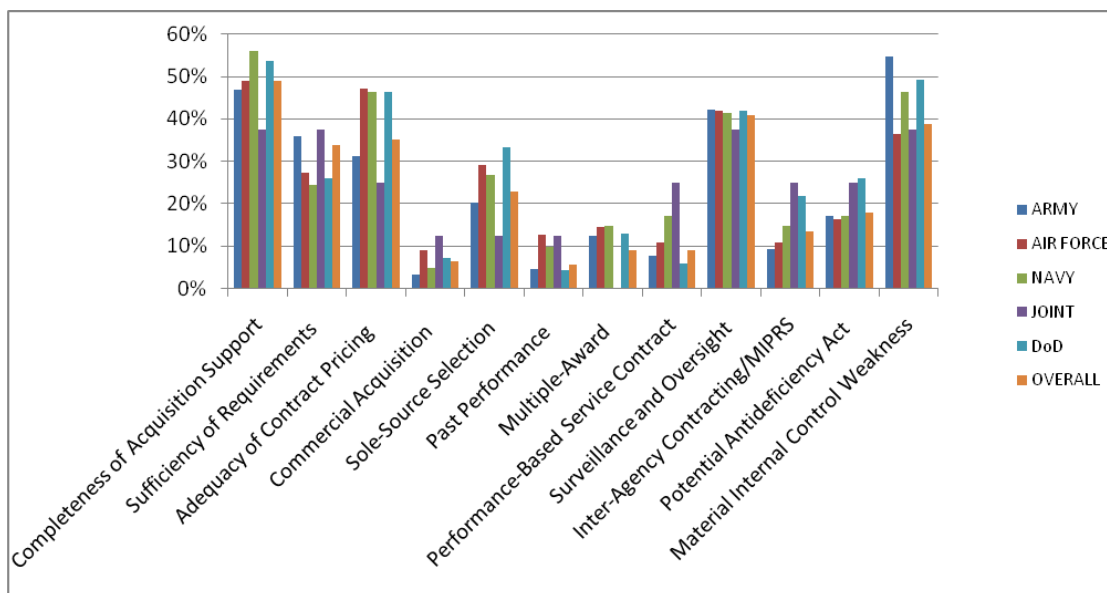


Figure 7. Deficiencies by Service Component as Identified by DoD IG Reports

Next figure illustrates overall trends of deficiencies identified by DoD IG reports.

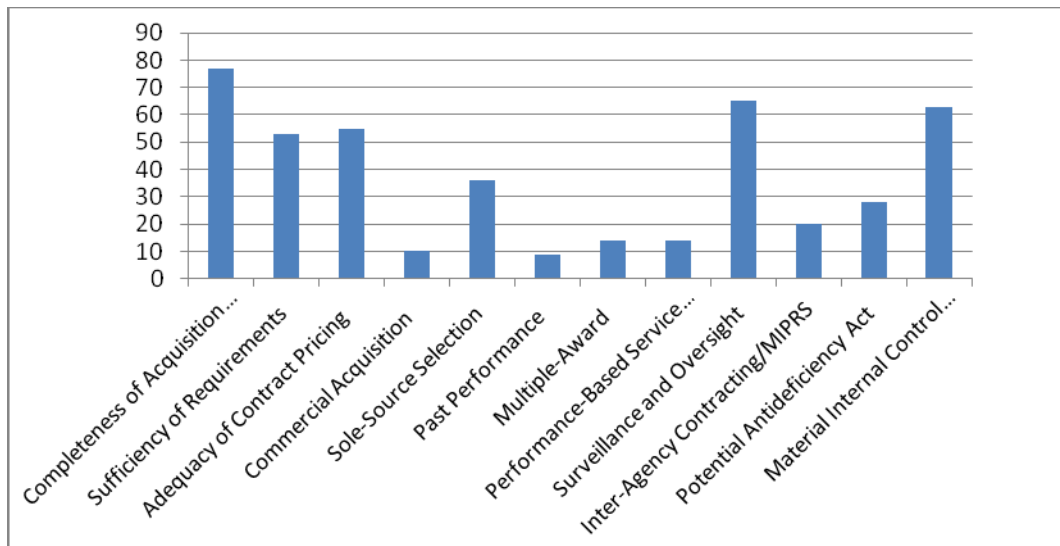


Figure 8. Overall Deficiencies Trend by Number of Occurrence as Identified by DoD IG Reports

The most common deficiencies occur in the areas 1, 2, 3, 9 and 12:

- Completeness of Acquisition Support (49 percent). Commonly this deficiency is lack of documentation to provide a complete history and background to justify decisions made in the acquisition process.
- Sufficiency of Requirements (34 percent). This deficiency area is identified as incomplete and/or insufficient steps and documentation for determination of requirements.
- Adequacy of Contract Pricing (35 percent). Example of deficiency of this type is lack of pricing data and insufficient analysis if the price is “fair and reasonable.”
- Surveillance and Oversight (41 percent). This deficiency is defined by lack of documented oversight and surveillance of contractor performance as required by FAR to ensure efficiency and effectiveness of contractor performance.
- Material Internal Control Weaknesses (39 percent). This area overarches the span of contracting activities and is defined by the inadequacy of the organization, policies, and procedures that help program and financial managers to achieve results and safeguard the integrity of their programs.

This trend appears to be uniform across the service components and is clearly similar to that of the GAO reports.

4. Best Practice Recommendations Applied to DoD IG Reports

The best practices in contracting identified in Chapter III were applied to the 157 DoD IG reports from 1999 to 2009. Table 8 shows the results of the analysis of the reports presented by number of recommendations by service component.

Best Practice Code	Best Practice Description	ARMY	AIRFORCE	NAVY	JOINT	DOD	OVERALL
1.1.1	Decide what services needed	28	16	18	4	18	53
1.1.2	Understand requirements and prepare executable changes and submission	20	17	13	3	17	41
1.2.1	Has it been bought previously, who bought it, when, why, where, for what price, etc.	20	18	15	2	22	40
1.2.2	Clearly define expectations of success for the contract	22	20	17	4	19	50
2.1.1	Clearly document government contracting team responsibilities	10	7	5	2	12	21
2.1.2	Communicate the needs in terms of performance	22	13	12	4	18	49
2.2.1	Develop the methodology to identify and correct risks and issues	12	10	7	2	9	26
2.3.1	Identify qualified sellers and review PPIRS	14	19	11	2	25	42
3.1.1	Set strategic objectives and measurement process	11	7	9	2	10	23
3.2.1	Positive and negative incentives with defined limits	1	1	3	0	2	4
4.1.1	Research Sellers	19	23	12	2	34	63
4.1.2	Rank according to BEST VALUE	19	25	12	1	28	54
4.2.1	Utilize skilled negotiators to lead the contract negotiation process	1	2	1	0	2	2
4.3.1	Define roles and expectations for contractor and government staff	14	22	16	1	27	45
4.3.2	Understand the long and short term costs, and that EVERYTHING affects price	5	9	5	0	6	14
4.3.3	Verify data accuracy	13	26	12	0	24	44
4.4.1	Document and analyze the results	19	28	19	3	34	66
5.1.1	Review all goals for efficiency and effectiveness at designated periods	28	20	18	4	26	62
5.2.1	Appoint appropriate people to make contract changes and take corrective action	6	3	1	1	2	9
5.2.2	Follow up on all changes	5	5	2	0	1	11
5.3.1	Document all changes and meeting minutes	0	2	0	0	0	2
5.3.2	Create a digital feedback loop	0	1	1	0	1	2
5.3.3	Report on progress internally and externally	4	4	1	0	2	10
5.4.1	Periodically review implementation of all goals for effectiveness and efficiency	24	19	18	3	23	60
5.4.2	Regularly monitor performance and provide feedback	32	25	20	5	29	74
5.4.3	Develop an organizational structure with clearly documented government and commercial contracting team responsibilities	20	13	10	4	13	38
6.1.1	Discuss life cycle objectives and concerns	6	2	4	1	1	12
6.2.1	Thorough inspection and agreement of satisfactory results	6	5	5	2	5	17
6.3.1	Lessons learned from all elements internal and external	8	9	7	1	9	15
6.3.2	Conduct immediately and as required (quarterly, annual)	1	2	1	0	1	2
	NUMBER OF REPORTS	64	55	41	8	69	157

Table 8. Best Practices in Contracting Recommendations by Service Component Applied to DoD IG Reports

Table 9 shows the results of the analysis of the reports as a percentage of recommendations to the number of reports on the individual service component.

Best Practice Code	Best Practice Description	ARMY	AIR FORCE	NAVY	JOINT	DoD	OVERALL
1.1.1	Decide what services needed	44%	29%	44%	50%	26%	34%
1.1.2	Understand requirements and prepare executable changes and submission	31%	31%	32%	38%	25%	26%
1.2.1	Has it been bought previously, who bought it, when, why, where, for what price, etc.	31%	33%	37%	25%	32%	25%
1.2.2	Clearly define expectations of success for the contract	34%	36%	41%	50%	28%	32%
2.1.1	Clearly document government contracting team responsibilities	16%	13%	12%	25%	17%	13%
2.1.2	Communicate the needs in terms of performance	34%	24%	29%	50%	26%	31%
2.2.1	Develop the methodology to identify and correct risks and issues	19%	18%	17%	25%	13%	17%
2.3.1	Identify qualified sellers and review PPIRS	22%	35%	27%	25%	36%	27%
3.1.1	Set strategic objectives and measurement process	17%	13%	22%	25%	14%	15%
3.2.1	Positive and negative incentives with defined limits	2%	2%	7%	0%	3%	3%
4.1.1	Research Sellers	30%	42%	29%	25%	49%	40%
4.1.2	Rank according to BEST VALUE	30%	45%	29%	13%	41%	34%
4.2.1	Utilize skilled negotiators to lead the contract negotiation process	2%	4%	2%	0%	3%	1%
4.3.1	Define roles and expectations for contractor and government staff	22%	40%	39%	13%	39%	29%
4.3.2	Understand the long and short term costs, and that EVERYTHING affects price	8%	16%	12%	0%	9%	9%
4.3.3	Verify data accuracy	20%	47%	29%	0%	35%	28%
4.4.1	Document and analyze the results	30%	51%	46%	38%	49%	42%
5.1.1	Review all goals for efficiency and effectiveness at designated periods	44%	36%	44%	50%	38%	39%
5.2.1	Appoint appropriate people to make contract changes and take corrective action	9%	5%	2%	13%	3%	6%
5.2.2	Follow up on all changes	8%	9%	5%	0%	1%	7%
5.3.1	Document all changes and meeting minutes	0%	4%	0%	0%	0%	1%
5.3.2	Create a digital feedback loop	0%	2%	2%	0%	1%	1%
5.3.3	Report on progress internally and externally	6%	7%	2%	0%	3%	6%
5.4.1	Periodically review implementation of all goals for effectiveness and efficiency	38%	35%	44%	38%	33%	38%
5.4.2	Regularly monitor performance and provide feedback	50%	45%	49%	63%	42%	47%
5.4.3	Develop an organizational structure with clearly documented government and commercial contracting team responsibilities	31%	24%	24%	50%	19%	24%
6.1.1	Discuss life cycle objectives and concerns	9%	4%	10%	13%	1%	8%
6.2.1	Thorough inspection and agreement of satisfactory results	9%	9%	12%	25%	7%	11%
6.3.1	Lessons learned from all elements internal and external	13%	16%	17%	13%	13%	10%
6.3.2	Conduct immediately and as required (quarterly, annual)	2%	4%	2%	0%	1%	1%
	NUMBER OF REPORTS	64	55	41	8	69	157

Table 9. Best Practices in Contracting Recommendations Percentages by Service Component Applied to DoD IG Reports

Figures 9 and 10 graphically reveal the dominant trends in recommendations for the GAO reports:

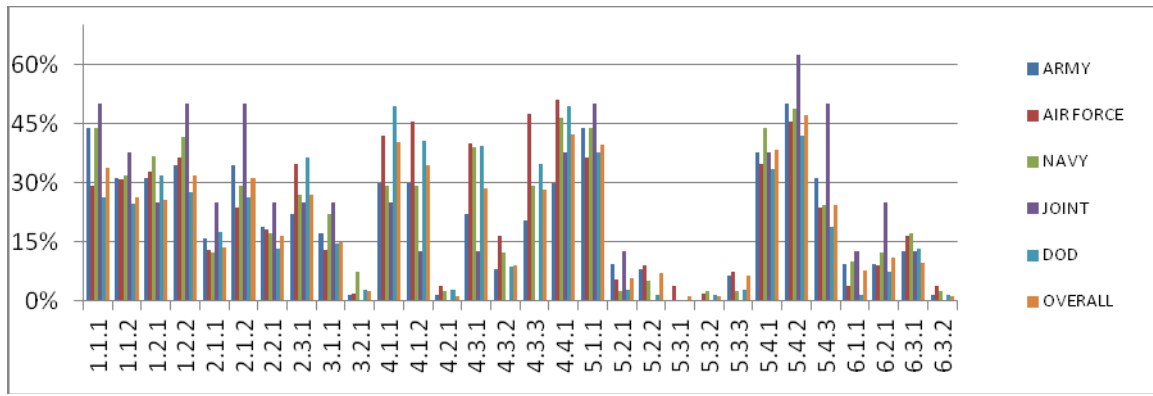


Figure 9. Best Practice Recommendations by Service Component Applied to DoD IG Reports

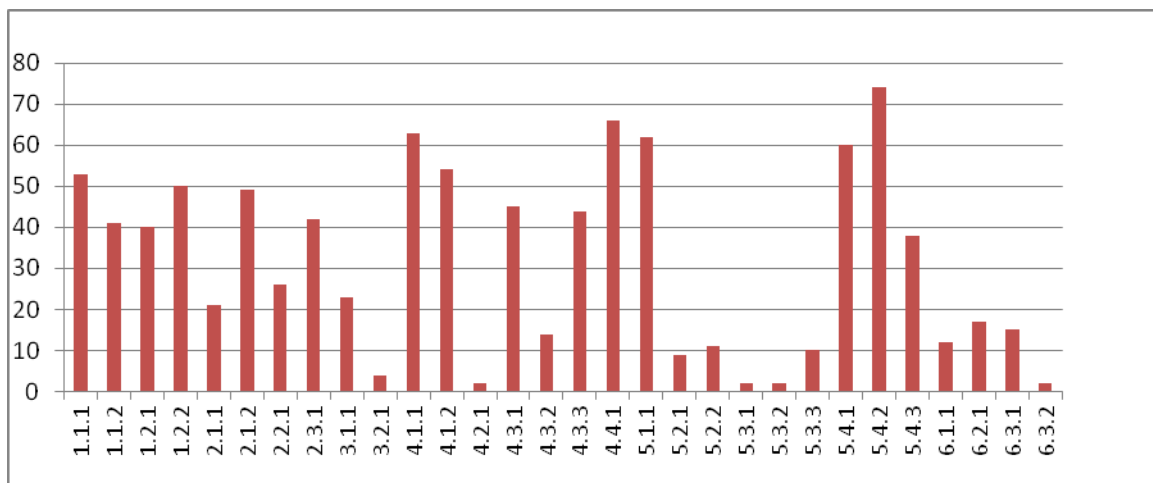


Figure 10. Best Practice Recommendations Overall Trend by Number of Occurrence as Applied to DoD IG Reports

All service components displayed roughly similar trends. Most frequently occurring recommendations were observed during Phases I, IV, and V:

- 1.1.1 Decide what services are needed (34 percent)
- 1.2.2 Clearly define expectations of success for the contract (32 percent)
- 2.1.2 Communicate the needs in terms of performance (31 percent)
- 4.1.1 Research sellers (40 percent)
- 4.1.2 Rank according to best value (34 percent)
- 4.4.1 Document and analyze the results (42 percent)

- 5.1.1 Review all goals for efficiency/effectiveness at designated periods (39 percent)
- 5.4.1 Periodically review implementation of all goals for effectiveness and efficiency (38 percent)
- 5.4.2 Regularly monitor performance and provide feedback (47 percent)

5. Summary Analysis of Deficiency Trends

Both GAO and IG reports displayed similar trends in discovered deficiencies. These trends were also consistent across various DoD components. Most deficiencies were observed in the areas of sufficiency of requirements, adequacy of contract pricing and surveillance and oversight.

6. Summary Analysis of Best Practice Recommendations Trends

Both GAO and IG reports displayed similar trends in recommended best practices in contracting. These trends were also substantially similar across various DoD components. Most recommendations were observed in Phases I, IV, and V:

- Phase 1: Procurement Planning
 - 1.1.1 Decide what services are needed
 - 1.2.2 Clearly define expectations of success for the contract
- Phase 4: Source Selection
 - 4.1.1 Research sellers
 - 4.1.2 Rank according to best value
- Phase 5: Contract Administration
 - 5.1.1 Review all goals for efficiency/effectiveness at designated periods
 - 5.4.1 Periodically review implementation of all goals for effectiveness and efficiency
 - 5.4.2 Regularly monitor performance and provide feedback

D. SUMMARY

The analysis of available data presented the trends of deficiencies in DoD service contracting that are consistent with the view of the senior government officials outlined in Chapter II. All DoD components displayed substantially similar trends that did not

allow singling out any of them for significant deviation from the overall trend in the Department. The recommended best practice trends followed the same pattern. In general, both deficiencies and best practices in contracting are well identified and understood by the Department of Defense.

The next chapter will answer the research questions, provide recommendations, and suggest further research.

V. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

A. INTRODUCTION

The previous chapter provided analysis of data from the GAO and DoD IG reports and identified trends in deficiencies and most frequent best practices in contracting. The purpose of this chapter is to answer the research questions and provide recommendations for improvement of DoD services procurement process.

B. SUMMARY

This research established that the trends of deficiencies in DoD services contracting are consistent with the current issues identified by DoD leadership. There were no significant deviations in these trends across DoD components. Most deficiencies were observed in the areas of Sufficiency of Requirements, Adequacy of Contract Pricing and Surveillance and Oversight. Most recommendations were observed in contract management Phases I, IV, and V: Procurement Planning, Source Selection, and Contract Administration.

C. CONCLUSION

1. What Deficiencies and Trends in the Services Contracting Process Have Been Identified in the GAO and DoD IG Reports?

Most deficiencies across services and noted by both GAO and IG occurred in the following areas:

- Sufficiency of Requirements
- Adequacy of Contract Pricing
- Surveillance and Oversight

2. What Are the Best Practices in Contracting Identified in the Commercial Environment That Can Be Applied to the DoD Services Contracting?

The following best practices in contracting were identified as the most common recommendations based on the analysis of the GAO and IG reports. This list is in numerical order using the best practices in contracting codes from Table 1:

- 1.1.1 Decide what services are needed
- 1.2.2 Clearly define expectations of success for the contract
- 4.1.1 Research potential offerors
- 4.1.2 Rank according to best value
- 5.1.1 Review all goals for efficiency/effectiveness at designated periods
- 5.4.1 Periodically review implementation of all goals for effectiveness and efficiency
- 5.4.2 Regularly monitor performance and provide feedback

3. Which of the Identified Best Practices in Contracting Can Be Applied to Improve the DoD Services Contracting Process?

All of the 30 identified best practices in contracting can be applied to improve the DoD services contracting process. However, to achieve immediate improvements closest attention should be paid to the areas of requirement definition, market research, review of performance, and accumulation and utilization of lessons learned.

Complying with public policy objectives and best utilizing taxpayers' resources is essentially the government's equivalent to generating profits in a commercial business, which is accomplished by operating efficiently and making the best use of resources. Government contracting for services has steadily increased over the past decade. As non-inherent government tasks are streamlined by contracting the routine services to private "specialized" businesses, the need for collaboration among the buyers and sellers has become evident.

Developing the requirements during pre-solicitation conferences or conducting a pre-proposal conference to iron out the requirements or perceptions of the services required can eliminate the ambiguity of the buyers' needs and the misinterpretation of the sellers understanding of the requirements. Collaboration is critical to mutual development of succinct contracts.

Assigning responsibility and providing oversight throughout the contracting process instills workplace importance and pride in ownership. Identifying concerns and suggestions, internal and external, with documented follow up substantiates an open

relationship with the contractor and government personnel. Maintaining documentation by collecting lessons learned and making them available for future contracting will enhance the defense-contracting environment.

D. RECOMMENDATIONS

1. Introduction

The President and DoD leadership are aware of the deficiencies in acquisition practices and are committed to making a dedicated effort to correct them (Obama, 2009). Since 1992, the GAO has designated DoD contract management as a high-risk area (U.S. GAO, 2010). The issues repeatedly noted by the GAO and DoD IG include incomplete and/or insufficient steps and documentation in the determination of requirements, lack of pricing data and insufficient analysis if the price is “fair and reasonable,” and lack of documented oversight and surveillance to ensure efficiency and effectiveness of contractor performance. One of the main reasons for these deficiencies has been identified as inadequate expertise and manning of acquisition personnel. (Stambersky & Rau, 2009)

The focus of applicable best practices in contracting is on market research, utilizing lessons learned, and improving communication and collaboration with all parties involved in the contract. There are DoD statutes and policies in existence that require performance of all these steps (market research, PPIRS review, documenting communications, etc.). However, although these policies exist, in researchers’ opinion, they are not practiced consistently, mainly due to the manning and expertise issues within the acquisition community.

Researchers’ broad recommendation is to improve training and manning of acquisition personnel. As identified in Chapter II, as the DoD acquisition spending had increased dramatically over the last two decades, the acquisition workforce had decreased. Making the training and manning of the acquisition workforce a priority and following up with real steps to solve these issues is necessary for improvement of the DoD acquisition process.

2. Specific Recommendations

a. Contracting Officer Representative (COR)

Higher headquarters (ex. Navy COMFISC) should provide personnel to monitor and provide oversight to ensure that CORs are providing proper surveillance by conduct site visits on installations. Having a qualified representative periodically monitor the job site can positively affect contractor performance, provide training to CORs assigned to active projects, and will help to identify deficiencies or uncover potential problems (McMaster, 2008). These teams would report to the higher headquarters or regional contracting officer regarding the status of site visits within their respective regions. At General Electric, corporate governance states that “Directors must be willing to devote sufficient time to carrying out their duties and responsibilities effectively, and should be committed to serve on the board for an extended period of time” (General Electric, 2010), and they are required to make two site visits to GE businesses each year.

Contracting teams under time or financial constraints forgo the assignment of a COR to their projects. Contract administration errors noted in this report were significant in the areas of providing feedback and supervision. Those of which could be partially alleviated with additional oversight or a properly training CORs.

Attention must be maintained constantly to the government contracting processes. Historically, there are shifts in the IG and GAO requirements, and data presented indicates that the bulk of the analyzed reports were from 2004–2008 and then they trailed off in 2009. As the government continues to increase contracting, the likelihood of contract deficiencies, overspending and fraud will continue to grow. Establishing dedicated personnel to monitor the CORs can sustain constant supervision as the trend continues to grow.

b. Invite Qualified Contractors

Conducting conferences prior to solicitation and/or proposals submission are practiced when time permits. Involving and specifically notifying all of the relevant,

qualified commercial contractors as early as possible can save time later in the source selection process by establishing mutual concerns regarding services requirements. The FAR describes the written form of this correspondence as:

The common practice in the commercial marketplace for both the buyer and seller to propose terms and conditions written from their perspectives. The terms and conditions prescribed in this part seek to balance the interests of both the buyer and seller. These terms and conditions are generally appropriate for use in a wide range of acquisitions. (FAR, 2005)

Once the government defines their requirements, the defense contracting team should invite all qualified contractors to the conference. This would maximize transparency, allow the potential bidders to ask questions of the government contracting team, and begin the collaborative effort of developing a succinct solicitation for bid. Inviting qualified contractors to provide input may entice more or fewer bids for the government contracting team to evaluate.

The government requires all contractors to register with the Central Contractor Registration¹⁶ (CCR) prior to utilization of FedBizOpps.¹⁷ Increased competition could be enhanced by enabling the programming of FedBizOpps to send notices to contractors within a defined section of industry when a requirement in their field of industry is in the planning phase or coming available for bid. The resulting bids would more likely be in-line with the solicitation and the source selection process would be more focused, which would reduce time to award the contract. Transparency would still be maintained with the addition of direct solicitation to proactive commercial contractors that have registered with applicable Commercial and Government Entity (CAGE) codes or North American Industry Classification System (NAICS) codes.

¹⁶ Central Contractor Registration (CCR) is the primary registrant database for the U.S. Federal Government. CCR collects, validates, stores and disseminates data in support of agency acquisition missions

¹⁷ Federal Business Opportunities, www.FedBizOpps.gov is a website that allows contractors to view available government solicitations for bid.

c. Electronic Feedback

Effective July 1, 2009, the FAR requires agencies to post all contractor performance evaluations in PPIRS (PPIRS, 2010). This collection of lessons learned aids the contracting teams to scan candidates during the source selection phase. Expanding the requirements of contracting teams to document contractor performance is as good as the data reported. A format for reporting and follow-up one year following the initial report could add depth to the lessons learned.

Expanding the requirement for all contracting teams and commercial contractors to maintain a digital feedback loop can ensure reporting, promote follow-up, and maintain accountability through digital records.

E. AREAS FOR FURTHER RESEARCH

Additional research should be conducted on the feasibility and benefits of creating Regional COR billets. An analysis of data from contracts that have dedicated CORs could be made to compare the number of deficiencies experienced in contracts without CORs. Additionally, research could be conducted on the contracting teams that did not have a COR and reasons why the COR was not required.

Researchers also suggest an evaluation of the utilization and benefits of the Past Performance Information Retrieval System (PPIRS), as it is currently employed by the Department of Defense.

Further research on training and manning of the DoD acquisition workforce to enable it to meet current and future requirements and to carry out functions prescribed by the statutes and policies is necessary to meet the objectives of the President and DoD leadership.

LIST OF REFERENCES

- Advice for the next U.S. president: Fix military acquisitions.* (2008). Retrieved May 10, 2010, from Defense-Aerospace.com: <http://www.defense-aerospace.com/article-view/feature/99452/advice-for-barack-obama:-fix-military-acquisitions.html>
- Amer, M. (2008). *The CRS report for Congress*. Washington, DC: Library of Congress.
- Apte, A., Apte, U., & Rendon, R. (2008). *Managing the service supply chain in the Department of Defense: An empirical study of current management practices*. Monterey: Unpublished Manuscript.
- Atlanta Journal-Constitution. (2006, November 21). *Few in new Congress were in military*. Retrieved September 18, 2009, from Military Quotes: <http://www.military-quotes.com/forum/few-new-congress-served-military-t28599.html>
- Brealey, R. A., Myers, S. C., & Allen, F. (2008). *Principles of corporate finance* (9th ed.). New York: McGraw-Hill/Irwin.
- Buffet, W., & Munger, C. (2010). *Code of business conduct and ethics*. Retrieved April 23, 2010, from Berkshire Hathaway Corporate Web site: <http://www.berkshirehathaway.com/govern/ethics.pdf>
- Camm, F. (2006). *Federal agencies can adapt best commercial practice to improve their acquisition of services*. Santa Monica: RAND Corporation.
- Chan, D., Lam, P., & Wong, J. (2010). Achieving better performance through target cost contracts: The tale of an underground railway station modification project. *Facilities*, 28 (5/6), 261–277.
- Chi, K. S., Arnold, K. A., & Perkins, H. M. (2003). Privatization in state government: Trends and issues. *Spectrum*, 76(4), 12–21.
- Cohen, S., & Eimicke, W. (2008). *The responsible contract manager*. Washington: Georgetown University Press.
- Contractor Forfeits Contract Balance Based in Employee's Criminal Conduct. (2008). *Contractor's Business Management Report* (9), 8–9.
- Dillenberger, C. (2008). BIM addendum seeks collaboration among all parties. *Contractor's Business Management Report* (10), 1–13.
- DoDI 5000.2. (n.d.). Retrieved May 20, 2010, from DTIC Online: <http://www.dtic.mil/whs/directives/corres/pdf/500002p.pdf>

- DoDI 5010.40. (n.d.). Retrieved May 20, 2010, from DTIC Online:
<http://www.dtic.mil/whs/directives/corres/pdf/501040p.pdf>
- Equity-Efficiency Tradeoff*. (2010, May 1). Retrieved May 1, 2010, from Investopedia
 Web site: <http://www.investopedia.com/terms/e/equityefficiencytradeoff.asp>
- FAR 4.801. (n.d.). Retrieved May 20, 2010, from Federal Acquisition Regulation Site:
http://farsite.hill.af.mil/reghtml/regs/far2afmcfars/fardfars/far/04.htm#P247_36948
- Federal Acquisition Regulation*. (2005). Reston, VA: General Services Administration
 Department of Defense National Aeronautics and Space Administration.
- Fisher, S., Wolf, P., & Wasserman, M. (2006). *Effectively managing professional services contracts: 12 best practices*. Washington: IBM Center for The Business of Government.
- Gansler, J. S. (2009). Achieving 21st Century National Security. Testimony before the Senate Armed Services Committee. Washington, D.C.
- Garrett, G. A. (2001). *World class contracting; how winning companies build successful partnerships in the e-business age*. Chicago: CCH Incorporated.
- General Electric. (2010, April). *GE: Governance principles*. Retrieved April 14, 2010, from General Electric Corporation:
http://www.ge.com/pdf/company/governance/principles/ge_governance_principles.pdf
- Mass Transit Railway Corporation. (2003). *The Tseung Kwan O extension success story*. Hong Kong: Mass Transit Railway Corporation Ltd.
- McMaster, E. M. (2008). *An empirical study of the United States Navy's management and oversight of services acquisition*. Monterey, California: Naval Postgraduate School.
- Microsoft's Top 10 Business Practices for Environmentally Sustainable Data Centers*. (2010, May 1). Retrieved May 1, 2010, from MicroSoft Corporation Web site:
http://www.microsoft.com/environment/our_commitment/articles/datacenter_bp.aspx
- Office of Management and Budget. (n.d.). *Department of Defense 2008*. Retrieved May 20, 2010, from Office of Management and Budget:
<http://www.whitehouse.gov/omb/rewrite/budget/fy2008/defense.html>
- PPIRS. (2010, May). Retrieved May 1, 2010, from Past Performance Information Retrieval System: <http://www.ppirs.gov/default.htm>

- Rendon, R. G., & Snider, K. F. (2008). *Management of defense acquisition projects* N. Allen, (Ed.). Reston, VA: American Institute of Aeronautics and Astronautics, Inc.
- Stambersky, P., & Rau, C. (2009). *Management and oversight of services acquisition within the United States Army*. Monterey, California: Naval Postgraduate School.
- Trench, D. (1991). *On target—A design and manage target cost procurement system*. London: Thomas Telford.
- United States Department of Defense Inspector General. (1999). *Report No. 99-002, Contracting for defense finance and accounting service support*. DoD IG.
- United States Department of Defense Inspector General. (1999). *Report No. 99-116, DoD use of multiple award task order contracts*. DoD IG.
- United States Department of Defense Inspector General. (2000). *Report No. D-2000-100, Contracts for professional, administrative, and management support services*. DoD IG.
- United States Department of Defense Inspector General. (2000). *Report No. D-2000-114, Six information technology services contracts for the defense intelligence community*. DoD IG.
- United States Department of Defense Inspector General. (2000). *Report No. D-2000-129, Air Force contract for installation of radios and antennae*. DoD IG.
- United States Department of Defense Inspector General. (2001). *Report No. D-2001-189, Multiple award contracts for services*. DoD IG.
- United States Department of Defense Inspector General. (2002). *Report No. D-2002-021, Maintenance and repair type contracts awarded by the U.S. Army Corps of Engineers Europe*. DoD IG.
- United States Department of Defense Inspector General. (2002). *Report No. D-2002-139, Naval facilities engineering command environmental services contracting*. DoD IG.
- United States Department of Defense Inspector General. (2003). *D-2003-088, Acquisition of the Chemical Demilitarization Program*. DoD IG.
- United States Department of Defense Inspector General. (2003). *D-2003-112, Contracting practices of the defense security service for personnel security investigations*. DoD IG.
- United States Department of Defense Inspector General. (2003). *Report No. D-2003-099, Service contracts at the National Imagery and Mapping Agency*. DoD IG.

United States Department of Defense Inspector General. (2003). *Report No. D-2003-016, Material distribution services contract at the Defense Distribution Depot Warner Robins, Georgia*. DoD IG.

United States Department of Defense Inspector General. (2003). *Report No. D-2003-029, Contract actions awarded to small businesses*. DoD IG.

United States Department of Defense Inspector General. (2003). *Report No. D-2003-056, Public/private competition for the Defense Finance and Accounting Service military retired and annuitant pay functions*. DoD IG.

United States Department of Defense Inspector General. (2003). *Report No. D-2003-077, Cooperative agreements supporting the Mentor Protégé program*. DoD IG.

United States Department of Defense Inspector General. (2003). *Report No. D-2003-082, Joint operation planning and execution system funding*. DoD IG.

United States Department of Defense Inspector General. (2003). *Report No. D-2003-083, Acquisition of the suite of integrated radio frequency countermeasures*. DoD IG.

United States Department of Defense Inspector General. (2003). *Report No. D-2003-090, Use and control of military interdepartmental purchase requests at the Air Force Pentagon Communications Agency*. DoD IG.

United States Department of Defense Inspector General. (2003). *Report No. D-2003-106, Administration of performance-based payments made to defense contractors*. DoD IG.

United States Department of Defense Inspector General. (2003). *Report No. D-2003-113, Franchise business activity contracts for medical services*. DoD IG.

United States Department of Defense Inspector General. (2003). *Report No. D-2003-115, Allegations concerning the administration of contracts for electronic flight instruments on the C-130H aircraft*. DoD IG.

United States Department of Defense Inspector General. (2003). *Report No. D-2003-120, F/A-18E/F integrated readiness support teaming program*. DoD IG.

United States Department of Defense Inspector General. (2004). *D-2004-006, Acquisition management of the Army's all source analysis system*. DoD IG.

United States Department of Defense Inspector General. (2004). *D-2004-060, Acquisition of the joint chemical agent detector*. DoD IG.

United States Department of Defense Inspector General. (2004). *Report No. D-2004-012, Sole-source spare parts procured from an exclusive distributor*. DoD IG.

United States Department of Defense Inspector General. (2004). *Report No. D-2004-015, Contracts for professional, administrative, and management support services.* DoD IG.

United States Department of Defense Inspector General. (2004). *Report No. D-2004-020, Allegations concerning improprieties in awarding National Guard contracts.* DoD IG.

United States Department of Defense Inspector General. (2004). *Report No. D-2004-037, Defense reutilization and marketing services commercial venture contracts for privatization of the DoD surplus sales program.* DoD IG.

United States Department of Defense Inspector General. (2004). *Report No. D-2004-046, Acquisition of the CH-47F improved cargo helicopter.* DoD IG.

United States Department of Defense Inspector General. (2004). *Report No. D-2004-047, Implementation of the DoD management control program for Army acquisition category II and III programs.* DoD IG.

United States Department of Defense Inspector General. (2004). *Report No. D-2004-052, Sole-source awards for quick disconnect silencers.* DoD IG.

United States Department of Defense Inspector General. (2004). *Report No. D-2004-055, DoD source approval process for Service & Sales, Inc., A small business manufacturer.* DoD IG.

United States Department of Defense Inspector General. (2004). *Report No. D-2004-056, Air Force satellite control network contract.* DoD IG.

United States Department of Defense Inspector General. (2004). *Report No. D-2004-057, Contracts awarded for the coalition provisional authority by the Defense Contracting Command-Washington.* DoD IG.

United States Department of Defense Inspector General. (2004). *Report No. D-2004-064, Acquisition of the Boeing KC-767A tanker aircraft.* DoD IG.

United States Department of Defense Inspector General. (2004). *Report No. D-2004-069, The NATO AWACS mid-term modernization program "Global Solution."* DoD IG.

United States Department of Defense Inspector General. (2004). *Report No. D-2004-070, Small business administration section 8(a) program contracting procedures at the Defense Supply Center, Columbus.* DoD IG.

United States Department of Defense Inspector General. (2004). *Report No. D-2004-073, Public-private competition for the base operating support functions at Picatinny Arsenal, New Jersey.* DoD IG.

United States Department of Defense Inspector General. (2004). *Report No. D-2004-084, Antideficiency Act investigation of the research, development, test and evaluation, defense-wide, appropriation account 97 FY 1989/1990 0400*. DoD IG.

United States Department of Defense Inspector General. (2004). *Report No. D-2004-089, Acquisition of the MH-47G helicopter service life extension program*. DoD IG.

United States Department of Defense Inspector General. (2004). *Report No. D-2004-093, Acquisition and management of specialized shipping and unit-owned containers and related accessories*. DoD IG.

United States Department of Defense Inspector General. (2004). *Report No. D-2004-094, Direct care medical services contracts*. DoD IG.

United States Department of Defense Inspector General. (2004). *Report No. D-2004-102, Contracting for and performance of the C-130J aircraft*. DoD IG.

United States Department of Defense Inspector General. (2004). *Report No. D-2004-103, Contract No. N00024-02-C-6165 for consulting services at the Naval Shipbuilding, Conversion, and Repair Facility*. DoD IG.

United States Department of Defense Inspector General. (2004). *Report No. D-2004-104, Purchase card use and contracting actions at the U.S. Army Corps of Engineers, Louisville district*. DoD IG.

United States Department of Defense Inspector General. (2004). *Report No. D-2004-110, The military departments' implementation of performance-based logistics in support of weapon systems*. DoD IG.

United States Department of Defense Inspector General. (2004). *Report No. D-2004-111, Contracts awarded by the Defense Threat Reduction Agency in support of the cooperative threat reduction program*. DoD IG.

United States Department of Defense Inspector General. (2004). *Report No. D-2004-112, Undefined contractual actions*. DoD IG.

United States Department of Defense Inspector General. (2004). *Report No. D-2004-113, Acquisition of the EA-6B improved capability III program*. DoD IG.

United States Department of Defense Inspector General. (2005). *D-2005-005, Award of the Air Force F-15 trainer support contract*. DoD IG.

United States Department of Defense Inspector General. (2005). *D-2005-009, Pueblo chemical-agent-destruction pilot plant project*. DoD IG.

United States Department of Defense Inspector General. (2005). *D-2005-091, Source selection decisions for the Air Force small diameter bomb program*. DoD IG.

United States Department of Defense Inspector General. (2005). *Report No. D-2005-028, DoD workforce employed to conduct public private competitions under the DoD competitive sourcing program*. DoD IG.

United States Department of Defense Inspector General. (2005). *Report No. D-2005-027, Contract with reliant energy solutions east*. DoD IG.

United States Department of Defense Inspector General. (2005). *Report No. D-2005-037, Implementation of performance-based logistics for the Javelin weapon system*. DoD IG.

United States Department of Defense Inspector General. (2005). *Report No. D-2005-096, DoD purchases made through the General Services Administration*. DoD IG.

United States Department of Defense Inspector General. (2005). *Report No. D-2005-098, Contract award and administration for the improved Navy lighterage system*. DoD IG.

United States Department of Defense Inspector General. (2006). *D-2006-001, Audit of the common submarine radio room*. DoD IG.

United States Department of Defense Inspector General. (2006). *D-2006-029, Financial management, report on potential antideficiency act violations identified during the audit of the acquisition of the Pacific mobile emergency radio system*. DoD IG.

United States Department of Defense Inspector General. (2006). *D-2006-055, Spare parts procurements from TransDigm, Inc*. DoD IG.

United States Department of Defense Inspector General. (2006). *D-2006-061, Source selection procedures for the Navy construction capabilities contract*. DoD IG.

United States Department of Defense Inspector General. (2006). *D-2006-066, Report on the procurement processes and procedures for the C-40 lease and purchase programs and C-22 replacement program (C-40)*. DoD IG.

United States Department of Defense Inspector General. (2006). *D-2006-075, Acquisition of the joint primary aircraft training system*. DoD IG.

United States Department of Defense Inspector General. (2006). *D-2006-078, Defense Information Systems Agency Encore II information technology solutions contract*. DoD IG.

United States Department of Defense Inspector General. (2006). *D-2006-123, Program management of the objective individual combat weapon Increment I*. DoD IG.

United States Department of Defense Inspector General. (2006). *Report No. D-2006-059, Air Force procurement of 60K tonner cargo loader contractor logistics support*. DoD IG.

United States Department of Defense Inspector General. (2006). *Report No. D-2006-004, Acquisition of the objective individual combat weapon*. DoD IG.

United States Department of Defense Inspector General. (2006). *Report No. D-2006-006, Management of the national committee for employer support of the Guard and Reserve*. DoD IG.

United States Department of Defense Inspector General. (2006). *Report No. D-2006-007, Contracts awarded to assist the global war on terrorism by the U.S. Army Corps of Engineers*. DoD IG.

United States Department of Defense Inspector General. (2006). *Report No. D-2006-010, Contract surveillance for service contracts*. DoD IG.

United States Department of Defense Inspector General. (2006). *Report No. D-2006-058, Source selection procedures for the C-5 avionics modernization program*. DoD IG.

United States Department of Defense Inspector General. (2006). *Report No. D-2006-065, Procurement procedures used for F-16 mission training center simulator services*. DoD IG.

United States Department of Defense Inspector General. (2006). *Report No. D-2006-073, DoD acquisition workforce count*. DoD IG.

United States Department of Defense Inspector General. (2006). *Report No. D-2006-080, Use of environmental insurance by the military departments*. DoD IG.

United States Department of Defense Inspector General. (2006). *Report No. D-2006-087, Acquisition of the objective individual combat weapon Increments II and III*. DoD IG.

United States Department of Defense Inspector General. (2006). *Report No. D2006-088, Adjusting the price and restructuring the KC-135 depot maintenance contract*. DoD IG.

United States Department of Defense Inspector General. (2006). *Report No. D2006-093, Contracting and funding for the C-130J aircraft program*. DoD IG.

United States Department of Defense Inspector General. (2006). *Report No. D-2006-097, Source selection for the national polar-orbiting operational environmental satellite system—conical microwave imager/sounder*. DoD IG.

- United States Department of Defense Inspector General. (2006). *Report No. D-2006-100, Procurement procedures used for next generation small loader contracts*. DoD IG.
- United States Department of Defense Inspector General. (2006). *Report No. D-2006-101, Procurement procedures used for C-17 Globemaster III sustainment partnership total system support*. DoD IG.
- United States Department of Defense Inspector General. (2006). *Report No. D-2006-102, Marine Corps governmental purchases*. DoD IG.
- United States Department of Defense Inspector General. (2006). *Report No. D-2006-103, The H-60 Seahawk performance-based logistics program*. DoD IG.
- United States Department of Defense Inspector General. (2006). *Report No. D-2006-104, Contract award process for the financial information resource system*. DoD IG.
- United States Department of Defense Inspector General. (2006). *Report No. D-2006-105, Implementation of performance-based logistics for the joint surveillance target attack radar system*. DoD IG.
- United States Department of Defense Inspector General. (2006). *Report No. D-2006-109, Response to Congressional requests on the water delivery contract between the Lipsey Mountain Spring Water Company and the United States Army Corps of Engineers*. DoD IG.
- United States Department of Defense Inspector General. (2006). *Report No. D-2006-111, Expanded micro-purchase authority for purchase card transactions related to Hurricane Katrina*. DoD IG.
- United States Department of Defense Inspector General. (2006). *Report No. D-2006-115, Commercial contracting for the acquisition of defense systems*. DoD IG.
- United States Department of Defense Inspector General. (2006). *Report No. D-2006-122, Commercial contract for noncompetitive spare parts with Hamilton Sundstrand Corporation*. DoD IG.
- United States Department of Defense Inspector General. (2007). *D-2007-005, Army acquisition executive's management oversight and procurement authority for acquisition category I and II programs*. DoD IG.
- United States Department of Defense Inspector General. (2007). *D-2007-007, FY 2005 DoD purchases made through the General Services Administration*. DoD IG.
- United States Department of Defense Inspector General. (2007). *D-2007-008, Acceptance and surveillance of F-16 mission training center simulation services*. DoD IG.

United States Department of Defense Inspector General. (2007). *D-2007-009, Internal controls over inventory stored at Defense Logistics Agency distribution depots.* DoD IG.

United States Department of Defense Inspector General. (2007). *D-2007-023, FY 2005 DoD purchases made through the National Aeronautics and Space Administration.* DoD IG.

United States Department of Defense Inspector General. (2007). *D-2007-025, Acquisition of the Pacific mobile emergency radio system.* DoD IG.

United States Department of Defense Inspector General. (2007). *D-2007-026, Competition of the 5.56-millimeter carbine.* DoD IG.

United States Department of Defense Inspector General. (2007). *D-2007-032, Report on FY 2005 DoD purchases made through the Department of the Treasury.* DoD IG.

United States Department of Defense Inspector General. (2007). *D-2007-057, Use and controls over military interdepartmental purchase requests at the National Geospatial-Intelligence Agency.* DoD IG.

United States Department of Defense Inspector General. (2007). *D-2007-100, Contract for logistics support services for Special Operations Forces.* DoD IG.

United States Department of Defense Inspector General. (2007). *D-2007-106, Air Force network-centric solutions contract.* DoD IG.

United States Department of Defense Inspector General. (2007). *D-2007-115, Army information technology enterprise solutions-2 services contract.* DoD IG.

United States Department of Defense Inspector General. (2007). *Report No. D-2007-079, Performance-based service contract for environmental services at the Navy Public Works Center, San Diego, California.* DoD IG.

United States Department of Defense Inspector General. (2007). *Report No. D2007-036, Report on contracting practices at the Major Range and Test Facilities Base.* DoD IG.

United States Department of Defense Inspector General. (2007). *Report No. D-2007-038, U.S. Army Corps of Engineers' "Operation Blue Roof" project in response to Hurricane Katrina.* DoD IG.

United States Department of Defense Inspector General. (2007). *Report No. D-2007-042, Potential Antideficiency Act violations on DoD purchases made through non-DoD agencies.* DoD IG.

United States Department of Defense Inspector General. (2007). *Report No. D-2007-044, FY 2005 DoD purchases made through the Department of the Interior*. DoD IG.

United States Department of Defense Inspector General. (2007). *Report No. D-2007-047, Air Force acquisition executive's management oversight and procurement authority for acquisition category I and II programs*. DoD IG.

United States Department of Defense Inspector General. (2007). *Report No. D-2007-055, Contract administration of the water delivery contract between the Lipsey Mountain Spring Water Company and the United States Army Corps of Engineers*. DoD IG.

United States Department of Defense Inspector General. (2007). *Report No. D-2007-062, Department of the Navy purchases for and from governmental sources*. DoD IG.

United States Department of Defense Inspector General. (2007). *Report No. D-2007-066, Navy acquisition executive's management oversight and procurement authority for acquisition category I and II programs*. DoD IG.

United States Department of Defense Inspector General. (2007). *Report No. D-2007-075, Department of the Army purchases from governmental sources*. DoD IG.

United States Department of Defense Inspector General. (2007). *Report No. D-2007-078, Audit practices for the C-17 Globemaster III sustainment partnership contract*. DoD IG.

United States Department of Defense Inspector General. (2007). *Report No. D-2007-084, Acquisition of the Navy rapid airborne mine clearance system*. DoD IG.

United States Department of Defense Inspector General. (2007). *Report No. D-2007-098, The use and control of intragovernmental purchases at the Defense Intelligence Agency*. DoD IG.

United States Department of Defense Inspector General. (2007). *Report No. D-2007-103, Air Force KC-X aerial refueling tanker aircraft program*. DoD IG.

United States Department of Defense Inspector General. (2007). *Report No. D-2007-107, Procurement policy for armored vehicles*. DoD IG.

United States Department of Defense Inspector General. (2007). *Report No. D-2007-109, Special Operations Command governmental purchases*. DoD IG.

United States Department of Defense Inspector General. (2007). *Report No. D-2007-110, Identification and reporting of improper payments through recovery auditing*. DoD IG.

United States Department of Defense Inspector General. (2007). *Report No. D-2007-112, World-wide satellite systems program*. DoD IG.

United States Department of Defense Inspector General. (2007). *Report No. D-2007-117, Missile Defense Agency purchases for and from governmental sources*. DoD IG.

United States Department of Defense Inspector General. (2007). *Report No. D-2007-118, Contract administration of the ice delivery contract between international American products, worldwide services and the U.S. Army Corps of Engineers during the Hurricane Katrina recovery effort*. DoD IG.

United States Department of Defense Inspector General. (2007). *Report No. D-2007-119, Procurement of propeller blade heaters for the C-130 aircraft*. DoD IG.

United States Department of Defense Inspector General. (2007). *Report No. D-2007-124, Report on purchases made using the U.S. Joint Forces command limited acquisition authority*. DoD IG.

United States Department of Defense Inspector General. (2007). *Report No. D-2007-128, Hotline allegations concerning the defense threat reduction agency advisory and assistance services contract*. DoD IG.

United States Department of Defense Inspector General. (2007). *Report No. D2007-130, Contracting practices at Air Force laboratory facilities*. DoD IG.

United States Department of Defense Inspector General. (2008). *D-2008-064, Defense hotline allegations concerning the biometric identification system for access omnibus contract*. DoD IG.

United States Department of Defense Inspector General. (2008). *Report No. D-2008-007, Task orders on the Air Force network-centric solutions contract*. DoD IG.

United States Department of Defense Inspector General. (2008). *Report No. D2008-022, FY 2006 DoD purchases made through the National Institutes of Health*. DoD IG.

United States Department of Defense Inspector General. (2008). *Report No. D-2008-030, Management of the defense security assistance management system training module*. DoD IG.

United States Department of Defense Inspector General. (2008). *Report No. D2008-032, Acquisition of the surface-launched advanced medium range air-to-air missile*. DoD IG.

United States Department of Defense Inspector General. (2008). *Report No. D-2008-036, FY 2006 DoD purchases made through the U.S. Department of Veterans Affairs*. DoD IG.

United States Department of Defense Inspector General. (2008). *Report No. D-2008-037, U.S. Army Corps of Engineers administration of emergency temporary roofing repair contracts*. DoD IG.

United States Department of Defense Inspector General. (2008). *Report No. D-2008-038, The Army's procurement and conditional acceptance of medium tactical vehicles*. DoD IG.

United States Department of Defense Inspector General. (2008). *Report No. D-2008-048, Report on procuring noncompetitive spare parts through an exclusive distributor*. DoD IG.

United States Department of Defense Inspector General. (2008). *Report No. D-2008-050, Report on FY 2006 DoD purchases made through the Department of the Treasury*. DoD IG.

United States Department of Defense Inspector General. (2008). *Report No. D-2008-051, Surface deployment and distribution command Hawaii/Guam shipping agreement*. DoD IG.

United States Department of Defense Inspector General. (2008). *Report No. D-2008-057, Contractor past performance information*. DoD IG.

United States Department of Defense Inspector General. (2008). *Report No. D-2008-066, Report on FY 2006 and FY 2007 DoD purchases made through the Department of the Interior*. DoD IG.

United States Department of Defense Inspector General. (2008). *Report No. D-2008-082, Summary report on potential antideficiency act violations resulting from DoD purchases made through non-DoD agencies (FY 2004 Through FY 2007)*. DoD IG.

United States Department of Defense Inspector General. (2008). *Report No. D-2008-086, Report on challenges impacting Operations Iraqi Freedom and Enduring*. DoD IG.

United States Department of Defense Inspector General. (2008). *Report No. D-2008-089, Planning armor requirements for the family of medium tactical vehicles*. DoD IG.

United States Department of Defense Inspector General. (2008). *Report No. D-2008-094, Air Force air combat command contracts*. DoD IG.

United States Department of Defense Inspector General. (2008). *Report No. D-2008-097, Hurricane relief effort costs on the Navy construction capabilities contract*. DoD IG.

- United States Department of Defense Inspector General. (2008). *Report No. D-2008-099, Effect of payments into Boeing pension funds on economic price adjustment clauses in DoD contracts*. DoD IG.
- United States Department of Defense Inspector General. (2008). *Report No. D-2008-100, Contract procedures for educational support services acquired by the National Defense University*. DoD IG.
- United States Department of Defense Inspector General. (2008). *Report No. D2008-107, Contracts issued by TACOM life cycle management command to BAE Systems Land and Armaments, Ground Systems Division*. DoD IG.
- United States Department of Defense Inspector General. (2008). *Report No. D-2008-122, Follow-up on DoD purchases made through the Department of the Interior*. DoD IG.
- United States Department of Defense Inspector General. (2008). *Report No. D-2008-127, Spider XM-7 network command munition*. DoD IG.
- United States Department of Defense Inspector General. (2008). *Report No. D2008-129, Acquisition of the Army airborne surveillance, target acquisition, and minefield detection system*. DoD IG.
- United States Department of Defense Inspector General. (2008). *Report No. D-2008-134, Acquisition of the B-1 fully integrated data link*. DoD IG.
- United States Department of Defense Inspector General. (2008). *Report No. D-2008-135, Requiring radio frequency identification in contracts for supplies*. DoD IG.
- United States Department of Defense Inspector General. (2009). *D-2009-095, Contracting for transportation services for U.S. Army Corps of Engineers, Gulf region division*. DoD IG.
- United States Department of Defense Inspector General. (2009). *Report D-2009-083, Logistics support contracting for the United States Special Operations Command*. DoD IG.
- United States Department of Defense Inspector General. (2009). *Report No. D-2009-045, Security guard services contract at Naval Weapons Station Earle*. DoD IG.
- United States Department of Defense Inspector General. (2009). *Report No. D-2009-061, Controls over reporting transportation costs in support of the Global War on Terror*. DoD IG.
- United States Department of Defense Inspector General. (2009). *Report No. D-2009-091, Information operations contracts in Iraq*. DoD IG.

United States Department of Defense Inspector General. (2009). *Report No. D-2009-096, Contracts for the U.S. Army's heavy-lift VI program in Kuwait*. DoD IG.

United States Department of Defense Inspector General. (2009). *Report No. D-2009-114, Transition planning for the logistics civil*. DoD IG.

United States Department of Defense Inspector General. (D-2009-071). *Report No.D-2009-071, Summary of DoD Office of Inspector General audits of acquisition and contract administration*. DoD IG.

United States General Accounting Office. (1999). *GAO/N&AD 99-235R, DoD Competitive sourcing, DoD competitive sourcing: Air Force Reserve Command A-76 competitions*. GAO.

United States General Accounting Office. (2000). *GAO/NSIAD-00-225, Contingency operations, Army should do more to control contract cost in the Balkans*. GAO.

United States General Accounting Office. (2000). *GAO/NSIAD-00-29, Contract management, DoD begins new effort to improve reporting of contract service costs*. GAO.

United States General Accounting Office. (2001). *GAO-01-295, Contract management, No DoD proposal to improve contract service costs reporting*. GAO.

United States General Accounting Office. (2002). *GAO-02-502, Contract management, DoD needs better guidance on granting waivers for certified cost or pricing data*. GAO.

United States General Accounting Office. (2003). *GAO-03-695, Military operations, contractors provide vital services to deployed forces but are not adequately addressed in DoD Plans*. GAO.

United States Government Accountability Office. (2003). *GAO-03-935, Contract management, high-level attention needed to transform DoD services acquisition*. GAO.

United States Government Accountability Office. (2004). *GAO-04-854, Military operations, DoD's extensive use of logistics support contracts requires strengthened oversight*. GAO.

United States Government Accountability Office. (2005). *GAO-05-201, Interagency contracting, problems with DoD's and interior's orders to support military operations*. GAO.

United States Government Accountability Office. (2005). *GAO-05-274, Contract management, opportunities to improve surveillance of Department of Defense service contracts*. GAO.

United States Government Accountability Office. (2005). *GAO-05-328, Defense logistics, high-level DoD coordination is needed to further improve the Management of the Army's LOGCAP contract*. GAO.

United States Government Accountability Office. (2006). *GAO-06-800T, DoD acquisitions, contracting for better outcomes*. GAO.

United States Government Accountability Office. (2006). *GAO-06-830, Contract management, service contract approach to aircraft simulator training has room for improvement*. GAO.

United States Government Accountability Office. (2006). *GAO-06-838R, DoD contracting, contract management: DoD vulnerabilities to contracting fraud, waste, and abuse*. GAO.

United States Government Accountability Office. (2007). *GAO-07-1039T, Military construction, observations on mismanagement of the Kaiserslautern military community center*. GAO.

United States Government Accountability Office. (2007). *GAO-07-145, Military operations, high-level DoD action needed to address long-standing problems with management and oversight of contractors supporting deployed forces*. GAO.

United States Government Accountability Office. (2007). *GAO-07-20, Defense acquisitions, tailored approach needed to improve service acquisition outcomes*. GAO.

United States Government Accountability Office. (2007). *GAO-07-273, Defense contracting, improved insight and controls needed over DoD's time-and-materials contracts*. GAO.

United States Government Accountability Office. (2007). *GAO-07-359T, Defense acquisitions, DoD needs to exert management and oversight to better control acquisition of services*. GAO.

United States Government Accountability Office. (2007). *GAO-07-631, Defense budget, trends in operation and maintenance costs and support services contracting*. GAO.

United States Government Accountability Office. (2007). *GAO-07-745, Defense acquisitions, success of advanced SEAL delivery system hinges on establishing a sound contracting strategy and performance criteria*. GAO.

United States Government Accountability Office. (2007). *GAO-07-832T, Defense acquisitions, improved management and oversight needed to better control DoD's acquisition of services*. GAO.

- United States Government Accountability Office. (2008). *GAO-08-1087, Military operations, DoD needs to address contract oversight and quality assurance issues for contracts used to support contingency operations*. GAO.
- United States Government Accountability Office. (2008). *GAO-08-436T, Military operations, implementation of existing guidance and other actions needed to improve DoD's oversight and management of contractors in future operations*. GAO.
- United States Government Accountability Office. (2008). *GAO-08-572T, Defense management, DoD needs to reexamine its extensive reliance on contractors and continue to improve management and oversight*. GAO.
- United States Government Accountability Office. (2008). *GAO-08-621T, Defense acquisitions, DoD's increased reliance on service contractors exacerbates long-standing challenges*. GAO.
- United States Government Accountability Office. (2008). *GAO-08-753R, Department of Defense pilot authority for acquiring information technology services under OMB Circular A-76*. GAO.
- United States Government Accountability Office. (2008). *GAO-08-923T, Military construction, Kaiserslautern military community center project continues to experience problems*. GAO.
- United States Government Accountability Office. (2009). *GAO-09-1040T, Defense acquisitions, sound practices critical to ensuring value for the Defense Logistics Agency's acquisitions*. GAO.
- United States Government Accountability Office. (2009). *GAO-09-362T, Defense management, actions needed to overcome long-standing challenges with weapon systems acquisition and service contract management*. GAO.
- United States Government Accountability Office. (2009). *GAO-09-643T, Defense acquisitions, actions needed to ensure value for service contracts*. GAO.
- United States Government Accountability Office. (2009). *GAO-09-362T, Defense management, actions needed to overcome long-standing challenges with weapon systems acquisition and service contract management*. GAO.
- Whitney, L. (2010, March 23). Security. Retrieved May 5, 2010, from CNET News: http://news.cnet.com/8301-1009_3-10470186-83.html
- Wong, A. (2006). The application of a computerised financial control system for the decision support of target cost contracts. *Journal of Information Technology in Construction (ITcon)*, 11 (special issue on decision support systems for infrastructure management), 257–68.

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BIBLIOGRAPHY

- Burt, D. N., Petcavage, S. D., & Pinkerton, R. L. (2010). *Supply management*. New York: McGraw-Hill/Irwin.
- Eastman, D. (2008, September). *Boeing frontiers: The Boeing Company*. Retrieved April 20, 2010, from The Boeing Company Web site:
http://www.boeing.com/news/frontiers/archive/2008/september/i_ids04.pdf
- Federal Activities Inventory Reform Act of 1998. (1998, October 1). Washington, D.C., United States of America: Office of Management and Budget.
- Garrett, G. A. (1997). *World-class contracting: 100+ BEST practices for building successful business relationships*. Arlington: ESI International.
- GASB. (2006, March 16). *GASB white paper: Why governmental accounting and financial reporting is—and should be—different*. Retrieved May 21, 2010, from Governmental Accounting Standards Board:
http://www.gasb.org/white_paper_full.pdf
- Microsoft's top 10 business practices for environmentally sustainable data centers*. (2010, May 1). Retrieved May 1, 2010, from Microsoft Corporation Web site:
http://www.microsoft.com/environment/our_commitment/articles/datacenter_bp.aspx
- Naussbaum, D. (2010, January). *Cost estimation*. Monterey, CA.
- Nelson, D., Moody, P. E., & Stegner, J. (2001). *The purchasing machine: How the top ten companies use best practices to manage their supply chains*. New York: Free Press.
- Obama, B. H. (2009, March 4). Memorandum for the Heads of Executive Departments and Agencies, Subject: Government Contracting. Retrieved May 20, 2010, from The White House: <http://www.whitehouse.gov/the-press-office/memorandum-heads-executive-departments-and-agencies-subject-government-contracting/>
- Panel on Defense Acquisition Reform, The. (2010, March 23). *House Armed Services Committee panel on defense acquisition reform findings and recommendations*. Retrieved May 15, 2010, from the Naval Postgraduate School Web site:
http://faculty.nps.edu/danussba/docs/DefenseAcquisitionWorkforce_report_032310.pdf
- U.S. GAO. (2010, May 11). *GAO high risk and other major government challenges*. Retrieved May 11, 2010, from U.S. Government Accountability Office:
<http://www.gao.gov/highrisk/agency/dod/contract-management.php>

United States Department of Defense Inspector General. (2008). *Best practices: Increased focus on requirements and oversight needed to improve DoD's acquisition environment and weapon system quality*. GAO.

United States Department of Defense Inspector General. (2009). *Defense acquisitions: Actions needed to ensure value for service contracts*.

United States Department of Defense Inspector General. (2009). *Department of Defense: Additional actions and data are needed to effectively manage and oversee DoD's acquisition workforce*.

United States Government Accountability Office. (2010). *Defense acquisitions: Further actions needed to address weaknesses in DoD's management of professional and management support contracts*. GAO.

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